



Plagiatserkennung bei wissenschaftlichen Abschlussarbeiten

Eine Analyse des State of the Art aus technischer, rechtlicher und organisatorischer Perspektive

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Plagiarism Detection in Scientific Theses

A State-Of-The-Art Analysis from the Technical, Legal and Organizational Point of View

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Kurzfassung

Plagiate und Ghostwriting stellen wahrscheinlich die beiden bekanntesten Formen von wissenschaftlichem Fehlverhalten dar und tatsächlich ist keines der beiden ein Kavaliersdelikt im akademischen Bereich. Das Vortäuschen einer fremden Leistung, die als die eigene ausgegeben wird, stellt sich nicht nur als eine unfaire Methode heraus, sondern untergräbt auch die Regeln der wissenschaftlichen Gesellschaft. Der Schaden, der durch akademisches und wissenschaftliches Fehlverhalten verursacht wird, kann auch schwerwiegende rechtliche Konsequenzen mit sich ziehen und es können strafrechtliche, zivilrechtliche und hochschulrechtliche Sanktionen im Falle eines bestätigten Plagiatsvorwurfs drohen.

Die Medien zeigen mit der Aufdeckung einer immer steigenden Anzahl an berühmten Plagiatsverdachtsfällen, dass die Problematik rund um die Themen “Plagiate”, sowie auch “Ghostwriting”, immer relevanter und omnipräsenter wird. Wahrscheinlich stellen diese enthüllten Fälle aber nur die Spitze des Eisbergs eines allgegenwärtigen Problems dar.

Diese Masterarbeit liefert daher eine Zusammenfassung der Themen Plagiate und Ghostwriting, in Form einer State-of-the-Art-Analyse, aus technischer, rechtlicher und organisatorischer Sicht und beleuchtet Aspekte, die für die Erkennung von Plagiaten in wissenschaftlichen Arbeiten besonders relevant sind.

Die vorliegende Arbeit liefert einen detaillierten Überblick über die aktuellen gesetzlichen Bestimmungen, welche für Plagiate und Ghostwriting gelten. Dabei bildet die umfassende Untersuchung der Thematik die Grundlage für die Gestaltung eines organisatorischen Workflows, welcher für das Institut für Raumplanung an der TU Wien entworfen wurde. Dieser Workflow wurde im Rahmen eines webbasierten Workflow-Portals implementiert. Dieser wurde ausführlich in einem Pilotversuch, welcher sich über zwei Semester erstreckte und vier Einreichtermine von Abschlussarbeiten abdeckte, evaluiert. Basierend auf dem Ergebnis dieser Evaluierung identifiziert die Arbeit wiederkehrende Probleme in den eingereichten Arbeiten von Studierenden und versucht des Weiteren Hinweise zu geben, wie auf diese Befunde zu reagieren ist.

Abstract

Plagiarism and ghostwriting are probably the two most well-known manifestations of scientific misbehavior and, indeed, neither of the two is a trivial offense in academia. Pretending that a foreign work is one's own is not only unfair, it also undermines the rules of the scientific community. The damage that is caused by academic and scientific misconduct can also have serious legal consequences and sanctions on the accused based on civil or penal law and academic regulations can be imposed.

The exposure of prominent cases of plagiarism through the media led to the fact that the topic of "plagiarism" and "ghostwriting" becomes more and more attention in the public. Probably, these unveiled cases are just the tip of the iceberg of a ubiquitous problem.

This Master's thesis provides a state-of-the-art analysis of the topics plagiarism and ghostwriting from the technical, legal and organizational point of view and sheds some light at aspects which are especially relevant for detecting plagiarism in scientific theses.

A detailed overview over the current legal regulations concerning plagiarism and ghostwriting is given in the thesis at hand. This broad survey lies the foundation for the design of an organizational workflow for the Institute of Spatial Planning at the TU Wien. This workflow was implemented in a web-based workflow portal and extensively evaluated in a pilot experiment spanning two semesters covering four thesis submission dates. Based on the outcome of this evaluation, the thesis identifies recurring problems in the submitted theses and tries to give hints on how to react to those findings.

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“Unrecht tut, wer an einem fremden Buch erfinderisch ist.”

Marcus Valerius Martial
(genannt Martialis)

“

*Wissenschaftliches Plagiat:
Man kann sich zwar mit fremden Federn schmücken,
aber man kann nicht mit ihnen fliegen.*

”

Gerhard Uhlenbruck

Introduction

1.1 Motivation

In modern days, information is available around-the-clock in various forms and there is an almost infinite number of sources (especially on the Internet) to obtain facts and details on every topic one can possibly think of. Knowledge is among the most important assets of human beings in a globalized and bustling world in which more and more tasks are to be performed in smaller and smaller amounts of available time. From the omnipresence of information in form of the Internet there arises the tendency to use sources without proper citation. This becomes apparent especially in the context of scientific publications and academic theses. For instance, it is obvious that at least some students who are about to finish their studies and who are not used to scientific writing (as it is needed for the final thesis), tend to think about committing plagiarism.

Roughly speaking, the term “plagiarism” in the academic context refers to all situations in which ideas or contents which originate from the work of others are used without proper citation. This also includes those cases in which arguments brought by others are paraphrased without mentioning and/or highlighting the sources. Although there seems to be no consensus about a general definition of plagiarism, there are several attempts to formalize this term. An overview of possible definitions is given in the book “*False Feathers: A Perspective on Academic Plagiarism*”¹.

It is important to mention that plagiarism in the academic context is absolutely not a trivial offense as it undermines scientific standards and is a typical example of academic and scientific misconduct. Apart from violating common rules of scientific practice, there is also a strong legal background to this topic. For instance, in the case of plagiarism, it is obvious that the rights of the original author(s) are violated.

¹[Web14c]: Weber-Wulff. 2014. *False Feathers: A Perspective on Academic Plagiarism*, p. 3-6.

Most universities have specific points regarding plagiarism in their academic statutes, Codes of Conduct or related documents. Violating these rules can lead to serious consequences for students who fail to cite all sources their work is based on or who fail to mention potential co-authors. The characteristics of these consequences depend on the severity of the violations and the point in time when the suspected case of plagiarism emerges. For instance, it makes a difference if violations to scientific rules are detected before or after the submission of a thesis or if the academic degree is already issued and the plagiarized content is detected after the final assessment the student needed to pass.

Furthermore, there are several specific fields of law which are relevant for the topic of plagiarism in Austria, like the Copyright Act (*Urheberrechtsgesetz: UrhG*)², the Universities Act 2002 (*Universitätsgesetz 2002: UG*)³, the Higher Education Act of 2005 (*Hochschulgesetz 2005: HG*)⁴, the University of Applied Sciences Studies Act (*Fachhochschul-Studiengesetz: FHStG*)⁵ as well as the Austrian Criminal Code (*Strafgesetzbuch: StGB*)⁶. Hence, the damage that is caused by scientific and academic misconduct can also have serious legal consequences and it is possible to impose sanctions on the accused based on civil law, penal law or academic regulations.

Although universities often do not publish official material from which the actual number of theses containing evidence of plagiarism can be estimated^{7,8}, it is assumed that plagiarism in the context of scientific theses is a rapidly growing problem nowadays.⁹

A special kind of scientific misconduct is ghostwriting, i.e., using the workforce of others to fulfill a task and withholding the information about the actual originators. Ghostwriting is common practice especially in politics as many speeches given by politicians are not written by themselves. Ghostwriting in the academic context refers to cases in which a person, the ghostwriter, produces some scientific contribution (e.g., a thesis or a seminar paper) for another person who then claims authorship of this work.¹⁰ While the reward of the ghostwriter is in most cases of financial nature, the incentives for the person who makes use of the ghostwriter's work are manifold. Two rather obvious reasons for hiring

²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl. 111/1936 idF I 105/2018.

³[UG19]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019.

⁴[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 – HG)*. BGBl. I 30/2006 idF I 101/2018.

⁵[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG)*. BGBl. 340/1993 idF I 31/2018.

⁶[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. BGBl. 60/1974 idF I 111/2019.

⁷Parliamentary information request about accusations of plagiarism in Austria (Requestor: Werner Neubauer and colleagues / Recipient: Austrian Ministry of Science / No.: (9746/J) / Date: 06.07.2016), see [The16b] for details.

⁸Reply to parliamentary information request of 21 universities and institutions of higher education (No.: (9407/AB) / Date: 06.09.2016), see [The16a] for details.

⁹[Hag16]: Hager. 2016. *Kurier*: “Bis zu 30 Prozent der Arbeiten sind unsauber”.

¹⁰See [UG19] for the exact definition in the Austrian University Act of 2002: § 51, Paragraph 2, Sentence 32 UG.

a ghostwriter and/or custom writing services could be, for instance, time pressure or missing know-how on the topic of the expected publication.

Nowadays, the sensibility of the public for plagiarism and ghostwriting in academia grows and the relevant legislation is adapted accordingly. There are prominent cases where politicians had to step down after it became known that large parts of their theses were plagiarized, like Karl-Theodor zu Guttenberg, Annette Schavan and many more. While there exist many tools for detecting missing citations to existing literature (like, e.g., iThenticate, Plagiarism Checker X and Viper)¹¹, judging whether a given work is based on ghostwriting needs a different toolset.

One possible attempt to detect ghostwriting is “stylometry”. This approach tries to quantify and categorize the writing style of a person based on various statistical measures (like, e.g., the list of favorite words, often-used sequences of words, characteristic mistakes or the average length of sentences) with the goal to determine the real author(s) of a given document. The idea underlying this approach is that every person has its own, unique writing style and that the stylometric fingerprint taken from a document allows identifying the original author(s) just like a real fingerprint allows determining its owner with relatively high accuracy.

1.2 Problem Definition

The goal of this thesis is to provide valuable insights into the topic of plagiarism and ghostwriting by means of answering the following research questions:

1. What are the current legal regulations regarding different forms of plagiarism and ghostwriting in Austria?
2. How could a potential workflow for detecting plagiarism in the academic context look like?
3. What are observations and potential trends concerning plagiarism in the academic context?
4. What are typical mistakes by students regarding scientific writing?

1.3 Aim of the work

This Master’s thesis provides a state-of-the-art analysis from the technical, legal and organizational point of view with the focus on detecting plagiarism in scientific theses. The goal is not only to investigate the topic of plagiarism in general, but also to provide a brief overview on the area of ghostwriting.

¹¹[JDG16]: Jain, Das, and Garg. 2016. “Google versus other text similarity tools in detection of plagiarism: a pilot study in the Journal of Clinical and Diagnostic Research”.

The thesis at hand concentrates solely on plagiarism in the context of writing scientific theses. This distinction is necessary due to the fact that plagiarism is a problem occurring in various forms and fields. The focus of this work is therefore on plagiarism and ghostwriting in the context of Master's and PhD theses.

A thorough state-of-the-art analysis on the legal background in terms of the regulations in Austrian law shall give the reader an appreciation of the essential legal foundations. As defined in the research questions, the analysis will not only cover plagiarism in general, but also the special case of ghostwriting. In this context, the thesis will provide answers to the question about which legal consequences one has to expect in the case of plagiarized scientific thesis (e.g., if a student forgot to include or to highlight the original publisher of some text snippet). Apart from investigating the case of general plagiarism, we will also provide a detailed overview of the consequences which the legislation prescribes for students who submit a ghostwritten text.

After we provide the reader with important insights into legal basics regarding the topic of plagiarism as well as ghostwriting, the thesis at hand will additionally give a qualitative overview on the current situation of how the TU Wien is dealing with the problem of academic misconduct (especially plagiarism) and which plagiarism procedures and actual policies are actually applicable. Furthermore, concrete strategies for a interdisciplinary prevention as well as detection of academic misconduct, especially plagiarism, at the university level will be defined. The outcome of these steps is a thorough description of an organizational workflow process for spotting possible cases of plagiarism in the academic context. To cover the technical and organizational part of the thesis at hand, we design a prototype for a standardized and organizational workflow system which handles the plagiarism detection process at the TU Wien. The design and realization are based on the findings of a state-of-the-art analysis. As an additional contribution, also the characteristics of such a workflow will be thoroughly evaluated and discussed.

The main goal of the thesis is a vital contribution to quality assurance in the academic field and also to increase sensitivity of the public regarding the topics of plagiarism and ghostwriting.

1.4 Methodological Approach

To cover the aforementioned points and questions which we want to discuss in this Master's thesis, the following methodological approach will be used:

- 1. Literature review and definitions:** In the first step, it is essential to define the terminology of plagiarism and ghostwriting, which represent serious forms of academic misconduct. A thorough analysis of different types and dimensions of plagiarism is provided. Additionally, the reasons for scientific misconduct, especially plagiarism, are elaborated in order to determine possible challenges for universities.

- 2. Review of legal instruments:** To shed light on the legal background, this task comprises an in-depth analysis of current Austrian regulations regarding ghostwriting and plagiarism in general. In this context, different legal acts are analyzed with respect to their exact area of application, their content and the consequences they prescribe for violations.
- 3. Design of an organizational workflow:** As part of this Master's thesis and based on a state-of-the-art analysis of the situation at the TU Wien, an organizational workflow on how to detect plagiarism in scientific theses is designed and thoroughly described. The technical perspective of the thesis at hand is covered by the implementation of a prototype in form of a (web-based) workflow portal, which can potentially be extended to any university.
- 4. Pilot experiment:** To evaluate the designed workflow process and our workflow portal, a pilot experiment in the context of the plagiarism review process of scientific theses at the Institute of Spatial Planning at the TU Wien is conducted. The goal of the practical example is not only to analyze typical mistakes in theses submitted by students, but also to provide some trends which are relevant for the development of further plagiarism procedures and strategies.

1.5 Methods and Methodology

This section is devoted to describe how scientific research was conducted in this work and additionally which methods were used to find answers for the given research questions.

The essential core of this Master's thesis is based on an extensive literature review including not only a review on the general background of the topic of plagiarism and ghostwriting, but also providing an extensive analysis of the legal situation regarding committed cases of scientific misconduct. The obtained insights from the literature review were used to design a standardized and organizational workflow process for the detection as well as prevention of cases of plagiarism in the academic context.

Therefore, "business process modeling" was used as a method to design a "Workflow Management System (WfMS)". This makes the following implementation of the workflow, which resulted in the "Plagiarism Workflow Portal", more straightforward.

The realization of the workflow portal was done by prototyping in an agile, incremental development process in order to achieve the best possible solution. Here, it has to be noted, that the thesis at hand does not focus on technical aspects (like, e.g., used technologies and concepts).

Furthermore, to investigate plagiarism from a practical point of view, we give insights into the organizational handling of plagiarism checks at the TU Wien. Hence and in order to verify and test the designed workflow, a pilot experiment at the Institute of Spatial Planning was conducted. Our approach for identifying possible cases of text plagiarism was tested in a practical example. It consists not only of a plagiarism review

process (including the corresponding workflow as well as a plagiarism check done with an external plagiarism detection system) for scientific theses, but also a manual and qualitative review of submitted students' theses was performed. Even though it can be difficult to explicitly decide whether a underlying student's thesis is plagiarized or not, the goal was to quantify these results as good as possible.

To challenge the results presented in the thesis and to gain additional insights into the respective topic of student plagiarism, several test runs (in form of four theses submission dates) were performed in the described pilot project. In a broader sense, a case study was conducted by evaluating multiple students' theses "case-by-case" during the pilot experiment. With every case, further insights were gained, which helped not only to improve the employed techniques to detect plagiarism, but also to refine the underlying workflow process.

To put it in a nutshell, all obtained results from the performed pilot experiment represent relevant findings from practice for practice regarding existing and future expectations and possible challenges for the topic and problem field of plagiarism in the academic context.

1.6 Structure of the Master's thesis

The Master's thesis at hand is structured as follows:

In **Chapter 2** we make the reader familiar with the basic concepts of the topics of plagiarism as well as ghostwriting. Therefore, we provide a brief overview in form of a state-of-the-art analysis of the current situation regarding these mentioned key issues. Furthermore, different tools for detecting cases of plagiarism and ghostwriting are discussed. A thorough definition of the aforementioned problem fields is done to provide the reader with a common vocabulary for the following parts of the thesis.

In **Chapter 3** we introduce the term of academic misconduct, which comprises different forms of scientific misconduct, in particular plagiarism but also ghostwriting. This chapter is devoted to discuss different definitions, forms and dimensions of plagiarism. We also shed some light at reasons why students are possibly attempted to plagiarize. Furthermore, several entities (like, e.g., professional plagiarism researchers, whistle-blowing platforms, institutions) which deal with and pursue cases of scientific misconduct, are discussed. Finally, we provide the terminology for the topic of ghostwriting.

In **Chapter 4** we give important insights into the relevant legislation and the current legal situation in Austria regarding the topics of plagiarism and ghostwriting. Therefore, we focus on the legal aspects of specific regulations which are applicable, dependent on their concrete scope of application (like, e.g. universities, university colleges of teacher education, universities of applied sciences), in cases of scientific misconduct. The analysis

of the legal background is completed with the discussion of possible legal consequences and imposed sanctions (under university, copyright or penal law) which one has to expect in confirmed cases of plagiarism and ghostwriting in scientific theses.

In **Chapter 5** we present our approach for a standardized detection and prevention of plagiarism at the TU Wien. The obtained findings of an in-depth analysis of the current situation with regard to applied plagiarism procedures and actual policies contribute to the design of an organizational workflow process for the handling and detection of cases of plagiarism, especially tailored for the TU Wien. Furthermore, the technical realization and concrete implementation of our proposed plagiarism review process results in a workflow portal, which was tested and evaluated in practice in form of a pilot experiment in the context of the submission procedure of scientific theses. Apart from the findings of reviewed students' theses which results in a summary of typical signs for student plagiarism, also experiences which were gained through the roll-out process of the system are provided. Finally, based on the obtained knowledge of the tested plagiarism detection procedure, existing and future expectations and possible challenges for the topic and problem field of plagiarism in the academic context are presented.

In **Chapter 6** we summarize our work in form of a conclusion and give a perspective for potential future work in the context of plagiarism research as well as for investigations in the area of ghostwriting.

State-of-the-Art

2.1 Plagiarism

The term “plagiarism” is rather old. It originates from the Latin word “plagiarius” which stands for “kidnapper” or “one who kidnaps the child or slave of another”.^{12,13} This notion was coined, in the common sense of current days (namely as “literary theft”), by the Roman poet Marcus Valerius Martialis, known for short as Martial, who accused another poet of stealing parts of one of Martial’s poems.¹⁴ Nowadays, the term “plagiarism” gains more and more interest as one of the main problems in academia.

Although copying and paraphrasing text snippets in order to obtain scientific appreciation (in terms of good grades and/or academic titles) under false pretenses probably exists since the first universities had been founded, the legal definition of the topic of plagiarism in Austria for the academic context is relatively young.¹⁵ The respective legal definition was approved by the National Assembly of Austria in the year 2014 and is applied since 2015¹⁶. For universities of applied sciences, the corresponding legal act is the Austrian Federal Act on University of Applied Sciences Degree Programmes (University of Applied Sciences Studies Act – FHStG).

As previously there was a lack of material to estimate the actual number of theses which contain plagiarized content, in 2008 the Austrian Agency for Research Integrity, OeAWI (“Österreichische Agentur für wissenschaftliche Integrität”) for short, was founded. The

¹²[Dud20]: Duden. 2020. *Definition of the term “plagiarism”*.

¹³[Dic20d]: Dictionary.com. 2020. *Word Origin and History for “plagiarism”*.

¹⁴[Kel11]: Kelly. 2011. “Plagiarism versus Copyright Infringement: When Attribution Isn’t Enough”.

¹⁵See § 51, Paragraph 2, Sentence 31 of the Austrian Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG), see [UG 19] for details.

¹⁶[UG15]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 21/2015 (Änderung des Universitätsgesetzes 2002 und des Hochschulgesetzes 2005).

ambition of this agency is to investigate and to evaluate cases of scientific misconduct.¹⁷ Since the beginning in 2008, the agency analyzed a total of 152 cases¹⁸ and in several allegations of scientific misconduct, an in-depth investigation was initiated due to strong evidence for plagiarism.^{19,20} Noteworthy is the fact that this agency is open to inquiries from anybody (like individuals as well as institutions) who suspects plagiarism in the context of a particular thesis written in Austria.

Plagiarism is a problem which becomes more and more attention in the public as many theses of famous politicians and other prominent persons have been shown to contain evidence for plagiarism. Among these cases we find the PhD thesis of Karl-Theodor zu Guttenberg (former Defense Minister of Germany) or the PhD thesis of Annette Schavan (former Minister for Education and Research of Germany). Further theses which (have at least been suspected to) contain plagiarized or paraphrased text snippets are the Master's thesis of Karl-Heinz Grasser (former Minister of Finances of Austria), the PhD thesis of Johannes Hahn (a political commissioner of the European Union) and the PhD thesis of Mario-Max zu Schaumburg-Lippe (hereditary prince of the aristocratic family Schaumburg-Lippe). One of the more recent cases, detected in January 2017, is the PhD thesis of Christian Buchmann, a member of the government in Styria, Austria.²¹ Another fascinating disclosure, discovered in March 2017, is the case of Bogdan Rošćić, the designated director of the Vienna State Opera. He has been suspected of having plagiarized his PhD thesis from the year 1988.²² The aforementioned examples illustrate that cases which contain evidence of plagiarism did not expire by limitation and they are ubiquitous.

It can be assumed that the cases listed above are just the tip of the iceberg. This concern is shared by leading experts for the detection of plagiarism, like Stefan Weber (expert witness for plagiarism detection and Austrian media scholar) or Debora Weber-Wulff, the author of the book "False Feathers: A Perspective on Academic Plagiarism"²³. Debora Weber-Wulff not only investigated the PhD thesis of Karl-Theodor zu Guttenberg but she also provides online courses (e.g. the online platform "Fremde Federn Finden"²⁴) in which she teaches how to detect cases of plagiarism.

Gerhard Fröhlich, an Austrian expert for ethics in science, pleads for harder consequences in cases where violations to scientific misconduct are found.^{25,26} Plagiarism in principle may fulfill the criteria of the Austrian criminal law. In particular, § 108 of the Austrian

¹⁷[OeA18a]: OeAWI. *Homepage of the Austrian Agency for Research Integrity*. 2018.

¹⁸[OeA19b]: OeAWI - Austrian Commission for Research Integrity. 2019. *Annual Report of 2018*, p. 4.

¹⁹For instance in 30 cases of 91 inquiries. Seen in the annual report of 2015 in [OeA16a].

²⁰[OeA16a]: OeAWI - Austrian Commission for Research Integrity. 2016. *Annual Report of 2015*, p. 3.

²¹[NN17a]: N.N. 2017. *ORF: "Buchmann-Doktor: Gutachter für Aberkennung"*.

²²[Nik17]: Nikbakhsh. 2017. *ORF: "Affäre um designierten Staatsoperndirektor Bogdan Rošćić weitete sich aus"*.

²³[Web14c]: Weber-Wulff. *False Feathers: A Perspective on Academic Plagiarism*.

²⁴[Web16a]: Weber-Wulff. *E-Learning platform "Fremde Federn Finden" (Overview)*.

²⁵[Frö06]: Fröhlich. 2006. "Plagiate und unethische Autorenschaften".

²⁶[Wal12]: Walger. 2012. "Plagiate & Co-Wissenschaftliches Fehlverhalten ist (k) ein Kavaliersdelikt".

Criminal Code may also be applied in cases of scientific deceit/fraud.²⁷ The article was relevant for plagiarism in the scientific context especially until the year 1987. Since 1988, there have been no criminal penalties for cases of plagiarism in general (compare the Austrian Criminal Code as amended in 1974²⁸, which is the principal version of this act, with the Austrian Criminal Code as amended in 1988²⁹). Currently, it is discussed whether the current legislation is sufficient^{30,31} as ghostwriting finds its way into academia.³²

A possible cause for the fact that the number of theses with plagiarized content increases nowadays may be the wide variety of tools for detecting plagiarism. For instance, for detecting plagiarism, there are (among others) the following tools available:

- Docoloc (<https://www.docoloc.de/>)
- PlagScan (<http://www.plagscan.com/>)
- PlagAware (<https://www.plagaware.com/de/>)
- Plagiarism Finder Pro (<https://plagiarism-finder-pro.en.softonic.com>)
- turnitin (<http://turnitin.com>)

In 2013, a subset of the aforementioned tools was compared in an experimental evaluation by Debora Weber-Wulff.³³ An overview of the obtained reporting results of the tested systems is provided in form of a brief summary.³⁴ Since this analysis, the features of the tools were extended and their accuracy improved.

The various plagiarism detection systems differ in terms of their functionality, licensing, pricing, search and comparison methods and many other features.

²⁷[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019.*

²⁸[StG74]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974.*

²⁹[StG88]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 605/1987 (Strafrechtsänderungsgesetz 1987: StRÄG) idF 398/1988.*

³⁰Parliamentary information request about measures against ghostwriting and plagiarism in Austria (Requestor: Douglas Hoyos-Trauttmansdorff and colleagues / Recipient: Austrian Ministry of Science / No.: (738/J) / Date: 06.02.2020), see [The20a] for details.

³¹Reply to parliamentary information request by the Austrian Minister of Education (No.: (786/AB) / Date: 06.04.2020), see [The20b] for details.

³²[Fab16]: Fabry. 2016. *Die Presse: “Plagiatsjäger: Ghostwriting an Unis ist am Vormarsch”.*

³³[Web+13a]: Weber-Wulff et al. 2013. *Report 2013 of the “Plagiarism detection software test 2013”.*

³⁴[Web+13b]: Weber-Wulff et al. 2013. *Summary of the “Results of the Plagiarism Detection System Test 2013”.*

2.2 Ghostwriting

A small selection of companies providing custom writing services is given in the following list:

- G Writers (<https://gwriters.at/ghostwriting/ghostwriting-agentur>)
- ACAD Write (<https://www.acad-write.com/>)
- ghostwriter.at (<https://ghostwriter.at/>, <https://ghostwriter.de>)
- Ghostwriter Dr. Ulrich (<http://www.ghostwriter-diplomarbeit.at/>)
- Dr. Franke-Consulting (<https://www.drfranke.de/ghostwriting-agentur/>)
- The Ghostwriting Agency (<http://www.theghostwritingagency.com/wp/>)

Stylometry

“Stylometry” is an essential approach to define and quantify countable (language) features to recognize certain characteristics on the (individual) writing style of a person.³⁵

Various statistical and countable language analysis measures in terms of stylometric features like the list of favorite words, the frequency of words, the average length of a sentence or a paragraph, average usage of function words, syntactical or characteristic mistakes and many other characteristics are used in order to create a stylometric profile.³⁶

Furthermore, a small overview of tools for stylometric categorization (useful for detecting cases of ghostwriting) is provided in the following, non-exhaustive list:

- AICBT Online Tool (<http://www.aicbt.com/authorship-attribution/online-software/>)
- Signature (<http://www.philocomp.net/humanities/signature.htm>)
- JStylo Anonymouth
(<https://psal.cs.drexel.edu/index.php/JStylo-Anonymouth>)
- WordMetry (<http://wordmetry.software.informer.com/1.5/>)
- JGAAP³⁷ (<https://github.com/evllabs/JGAAP>)

³⁵[Hol98]: Holmes. 1998. “The evolution of stylometry in humanities scholarship”.

³⁶[Sta09]: Stamatatos. 2009. “A survey of modern authorship attribution methods”.

³⁷Short form for “Java Graphical Authorship Attribution Programme”.

Background

In this section, we give the reader important insights into basic concepts of the topic of plagiarism and ghostwriting. Foremost, we introduce the terms of “scientific misconduct” and discuss which concrete practices constitute serious forms of academic misconduct. Here, it has to be mentioned that we focus solely on plagiarism and ghostwriting.

Hence, we first shed some light on the problem field of plagiarism. Therefore, we subsequently provide several explanations of causes and reasons for plagiarizing in order to better understand why students are possibly attempted to commit cases of plagiarism in written works. Additionally, relevant definitions and the historical background of the term “plagiarism” are provided. Furthermore, the next section is then devoted to discuss various classifications of different types and forms of plagiarism. Afterwards, we explain the dimensions of an assumed case of plagiarism (based on a predefined framework by Gerhard Reichmann), on whose basis one can decide whether a given case is indeed plagiarism or not. The previous sections deal with the information about how plagiarism was conducted and how it can be identified, therefore the subsequent chapter covers the topic of who can detect cases of scientific misconduct, especially plagiarism. Finally, we present a brief overview of important terms, concepts and types of ghostwriting.

3.1 Academic and Scientific Misconduct

Nowadays, there exists quite a lot of literature about the topic and problem field of scientific misconduct.^{38,39} This also provides a strong evidence for the importance of this issue. The misbehavior in form of scientific and research misconduct represents a widespread phenomenon, which is often and especially observed in the academic context.⁴⁰

³⁸[GN18]: Gross and Nebe. 2018. *Forschung zwischen Freiheit und Verantwortung. Die wissenschaftshistorische Perspektive*.

³⁹[DC02]: Decoo and Colpaert. 2002. *Crisis on Campus: Confronting Academic Misconduct*.

⁴⁰[Wal12]: Walger. 2012. “Plagiate & Co–Wissenschaftliches Fehlverhalten ist (k) ein Kavaliersdelikt”, p. 385.

Many cases of scientific misconduct, in which unethical methods are used in order to obtain a benefit, are often associated with the terms of “scientific deceit/fraud”⁴¹ and “academic dishonesty”⁴². Furthermore, the undesirable behavior which is observed in such cases not only undermines scientific standards, but also (especially considered in the academic context) damages the reputation of a university (where the academic misconduct had been committed) in the public.^{43,44}

Applied on the academic context, it can be stated that apart from using unfair methods which do not comply with scientific standards, also additional academic regulations (for instance, the “Code of Conduct”⁴⁵, university statutes and other binding directives) are violated.⁴⁶

Therefore, particular guidelines for ensuring good scientific practice are available and have to be followed by the scientific community.⁴⁷ Such common rules provide basic obligations but also clarify essential requirements for the behavior of its members.⁴⁸ Examples are, according to the Guidelines for Good Scientific Practice of the Austrian Agency for Research Integrity (OeAWI), the comprehensible documentation of the results of a scientific contribution as well as the thorough description of the methodological approach which was used.⁴⁹ Those details should be provided in a scientific work in order to comply with rules of scientific standards.⁵⁰

Noteworthy is the fact that there exists no uniform nor a global definition of the term “scientific misconduct”.^{51,52} Based on the definition of what demeanor constitutes scientific misconduct, various forms and manifestations of scientific misconduct (depending on their classifications and characteristics), can be distinguished.⁵³ Due the fact that there exists many definitions of the notion of “scientific misconduct”, which emphasize various aspects of an underlying misbehavior, it is important to provide an explanation what concrete activities represent such cases of research misconduct.⁵⁴

⁴¹[DC02]: p. 3 f.

⁴²[Fis09]: Fishman. 2009. ““We know it when we see it” is not good enough: Toward a standard definition of plagiarism that transcends theft, fraud, and copyright”, p. 1.

⁴³[GN18]: p. 47.

⁴⁴[Org18]: Organisation for Economic Co-Operation and Development (OECD) and Global Science Forum (GSF). 2018. *Best Practices for Ensuring Scientific Integrity and Preventing Misconduct*, p. 4.

⁴⁵[MCD16]: McHaney, Cronan, and Douglas. 2016. “Academic Integrity: Information Systems Education Perspective”, p. 154.

⁴⁶[ENE19]: ENERI Consortium in Close Cooperation with ENRIO and OeAWI (2019). 2019. *ENRIO Handbook: Recommendations for the Investigation of Research Misconduct*, p. 1, 7 f.

⁴⁷[GN18]: p. 47.

⁴⁸[OeA19a]: OeAWI - Austrian Agency for Research Integrity. 2019. *Guidelines for Good Scientific Practice (Effective 2015)*, p. 3.

⁴⁹[OeA19a]: p. 9 (§ 2 Standards of Good Scientific Practice).

⁵⁰[ENE19]: p. 1.

⁵¹[ENE19]: p. 2.

⁵²[OeA19a]: p. 13 (§ 3 Research misconduct).

⁵³[Org18]: p. 2 f.

⁵⁴[ENE19]: p. 2.

Therefore, in what follows we provide a non-exhaustive list of practices (often related to a consciously and non-negligently committed action⁵⁵), which constitute scientific and academic misconduct:

- Falsification (in terms of manipulating, modifying, excluding and misinterpreting data, statistics, statements and research findings)⁵⁶
- Fabrication (in terms of performing, providing and reporting of new data, statements and results, but also in relation to producing false data results)⁵⁷
- Plagiarism (in terms of using another’s words and ideas without giving appropriate acknowledgment to the original author or the original source)⁵⁸
- Other forms of violating intellectual property rights⁵⁹ (in terms of claiming undeserved (co-)authorship⁶⁰, withholding the information as well as the contributions of co-authors)⁶¹
- Sabotaging and eliminating of primary and original data⁶²
- Other unethical practices and methods (in terms of conflicts of interests, honorary-authorship and other errors in the scientific context)⁶³

Nevertheless, also an important aspect which should not be forgotten is the co-responsibility for involved parties regarding academic dishonesty (especially in committed cases of scientific misconduct).⁶⁴ These co-responsibility for academic misconduct not only includes the active participation of other persons, but also the joint knowledge of cases of wrongdoings as well as a possible negligent duty of supervision of the respective thesis supervisor.⁶⁵

Based on the fact that there are various definitions of the term “scientific misconduct”, it is obvious that there is no commonly used definition of the term “scientific misconduct”.⁶⁶ Instead, underlined by international discussion results, there exists a kind of “inofficial”

⁵⁵[Org18]: p. 5.

⁵⁶[DC02]: p. 37 f.

⁵⁷[Org18]: p. 3 f.

⁵⁸[Org18]: p. 4.

⁵⁹[TU 07]: TU Wien: Chancellor’s Office. 2007. “Code of Conduct – Rules to Ensure Good Scientific Practice: Decision by the Chancellor’s Office of 23 October 2007”, p. 5 f (*Article 2: Scientific misconduct*).

⁶⁰Also the utilization of custom writing services offered by a ghostwriter are subsumed under these forms.

⁶¹[ALL17b]: ALLEA - All European Academies, European Commission. 2017. “The European Code of Conduct for Research Integrity (Revised Edition)”, p. 8 f.

⁶²[OeA19a]: p. 13 (§ 3 *Research misconduct, Paragraph 2, Sentence 4*).

⁶³[Org18]: p. 3 (Table).

⁶⁴[GN18]: p. 48 f.

⁶⁵[TU 07]: p. 6 (*Article 3: Co-responsibility for misconduct*).

⁶⁶[Org18]: p. 2.

agreement⁶⁷ on the definition of research misconduct which definitely includes and refers to the already described types of misconduct, like fabrication, falsification and plagiarism (often, so-called “FFP”).⁶⁸

The aforementioned definition approaches of scientific misconduct are also commonly used in the academic field. Still, although every country and institution has a different interpretation about which misbehavior results in scientific misconduct, the first question one should always ask when discussing this topic is whether there is a shared notion of the term which all parties in the discussion agree on.⁶⁹ As a result, this circumstance has to be especially taken into account in the academic context since, based on the definition and categorization of academic misconduct further recommendations and handling procedures (like, e.g., in form of binding guidelines, directives, Code of Conduct, provisions according the statutes of a university) must be applied.⁷⁰

Although, there exist many types of scientific misconduct, it is often stated in the scientific community that plagiarism probably represents one of the most important and serious forms⁷¹ of academic misconduct⁷². Therefore, in this thesis at hand we concentrate mainly on plagiarism but also on ghostwriting. In what follows, we discuss different definitions and forms of plagiarism and, finally, in Section 3.10 we provide the terminology for the topic of ghostwriting.

3.2 Plagiarism

Nowadays, the apparent rise in academic misconduct⁷³, especially in terms of committed cases of plagiarism, turns out to be as one of the main problems in academia.

Plagiarism is the act of acquiring foreign thoughts, ideas or the like in the scientific field which are then claimed as one’s own.⁷⁴ It is the exploitation and assumption of intellectual property.⁷⁵ In most cases, this directly implies copyright infringement, but it is hard to draw the “red line” between illegality and “simple” unethical behavior.^{76,77} In some contexts, plagiarism is a matter of courts (e.g., in product plagiarism). Especially in the academic field, plagiarism is judged by institutions (like universities)⁷⁸ and, despite

⁶⁷[ENE19]: p. 2.

⁶⁸[Org18]: p. 3 f.

⁶⁹[Org18]: p. 2.

⁷⁰[ALL17b]: p. 9.

⁷¹[DC02]: p. 8 f.

⁷²[YRB16]: Yadav, Rawal, and Baxi. 2016. “Plagiarism - A Serious Scientific Misconduct”, p. 364.

⁷³[Moh+14]: Mohan et al. 2014. “Rising from Plagiarising”, p. 538.

⁷⁴[SR18]: Singh and Remenyi. 2018. “Plagiarism and ghostwriting: The rise in academic misconduct”, p. 2.

⁷⁵[Frö06]: Fröhlich. 2006. “Plagiate und unethische Autorenschaften”, p. 81.

⁷⁶[Kel11]: Kelly. 2011. “Plagiarism versus Copyright Infringement: When Attribution Isn’t Enough”, p. 18.

⁷⁷[Fis09]: p. 4.

⁷⁸[Web14c]: Weber-Wulff. 2014. *False Feathers: A Perspective on Academic Plagiarism*, p. 6.

the fact that plagiarism is not per-se illegal in this context, it constitutes a serious offense against scientific integrity⁷⁹.

Even though the exact number of plagiarism cases is not exactly known, there are various **speculations and case studies**:

- Stefan Weber, a well-known plagiarism researcher, which has many years of experience in the field of plagiarism detection, assumes that about 10 to 30 percent of submitted works in Austria (including Master's theses and dissertations) show signs of scientific misconduct.^{80,81} Furthermore, he estimates that about 1 to 5 percent of the aforementioned theses contain significant evidences of plagiarism.⁸²
- Donald McCabe, is often referred as the “founding father” of research on academic integrity.⁸³ He investigated the general cheating behavior of college and university students, especially in the context of plagiarism, in a timespan of three years (2002-2005)⁸⁴. The surveyed participants of the study were over 80.000 students and 12.000 faculty members in the United States and Canada.⁸⁵ One interesting point which turned out was that about over 90 percent of the questioned students (“*undergraduate as well as graduate students*”) which admitted that they had committed plagiarism in form of an almost “one-to-one word copy” from a written source without mentioning a sufficient citation, did not realize that this misbehavior constitutes a serious form of cheating.⁸⁶ McCabe conducted various research surveys over many years⁸⁷, these also include research projects for the “International Center for Academic Integrity (ICAI)”⁸⁸.
- Gerhard Reichmann, an Austrian university professor, engages with the problem area of text plagiarism in the academic context. He conducted an empirical study on plagiarism⁸⁹ with indicates that about a third of questioned persons admit that they have plagiarized at least once, especially in form of text plagiarism in the

⁷⁹[Web+09]: Weber-Wulff et al. 2009. *Gewissensbisse: Ethische Probleme der Informatik. Biometrie-Datenschutz-geistiges Eigentum*, p. 40-45 (*Fall 2: Plagiat und Datenschutz*).

⁸⁰[Web07]: Weber. 2007. *Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*, p. 56 f.

⁸¹[Hag16]: Interview Stefan Weber with the newspaper Kurier (2016).

⁸²Ibid.

⁸³[Don16]: Donald McCabe. 2016. “Cheating and Honor: Lessons from a Long-Term Research Project”, p. 188.

⁸⁴[McC05]: McCabe. 2005. “Cheating among college and university students: A North American perspective”.

⁸⁵[McC05]: p. 1.

⁸⁶[McC05]: p. 7 (Table 5: Perceived Seriousness of Different Behaviors Related to Written Work).

⁸⁷[Don16]: p. 187-198.

⁸⁸[McC05]: p. 1.

⁸⁹[Rei13]: Reichmann. 2013. “Textplagiate in der Wissenschaft und deren Verhinderung – Theoretische Überlegungen und empirische Befunde”.

academic context⁹⁰. About 72 university teachers and more than 600 students participated in this study.⁹¹

Another reason for a seemingly rise on the detection of cases of academic misconduct is certainly the increased public interest arising from recent – and heavily publicized – cases of misconduct on the part of prominent politicians (like Karl-Theodor zu Guttenberg, Johannes Hahn and Christian Buchmann).^{92,93}

Furthermore it has to be stated that the plagiarism detection rate is increasing, possible also due the fact of the higher availability of resources, the possibilities of plagiarism detections software and the global networking based on the Internet.⁹⁴

In this section we presented a brief overview over important facts and figures around the topic of plagiarism. Before we give more detailed insights into the problem field of plagiarism, we provide answers on the question “What are possible reasons and causes for students to plagiarize in the academic context?”.

3.3 Causes and Reasons for Plagiarizing

Cheating at universities is a well-known and wide-spread phenomenon.⁹⁵ It is also obvious that there exist many forms of cheating, especially in the academic context. A common opinion about what exactly falls under the definition of “cheating” is that these activities and behaviors always refer to test situations or examinations.⁹⁶ Examples include the usage and consultation of (unauthorized) crib notes during an exam, writing exams for other people, the consultation of co-students during an exam as well as other cases and forms of cheating in the context of the assessment of learnings (for example cheating in courseworks).⁹⁷

All these described situations are subsumed under the heading of cheating.⁹⁸ But nowadays an even bigger problem that universities have to face is plagiarism⁹⁹ which represents the central¹⁰⁰ and one of the most common forms of scientific misconduct¹⁰¹.

Therefore, the following section not only gives an overview over possible causes, but also provides some explanatory approaches to shed some light on why people are increasingly

⁹⁰[Rei13]: p. 180 f (*Abb. 3: Verbreitung studentischer Plagiate*).

⁹¹[Rei13]: p. 175.

⁹²[Rei13]: p. 175 f.

⁹³[Rei12]: p. 126.

⁹⁴[SR18]: p. 2.

⁹⁵[SR18]: p. 1.

⁹⁶Ibid.

⁹⁷[SR18]: p. 1.

⁹⁸[SR18]: p. 1 (Introduction).

⁹⁹[SR18]: p. 2, p. 5.

¹⁰⁰[GN18]: p. 71 f, p. 77 ff.

¹⁰¹[DC02]: Decoo and Colpaert. 2002. *Crisis on Campus: Confronting Academic Misconduct*, Section Overview and Summary of the book, p. 10.

tempted to plagiarize in written works, especially in academic as well as scientific papers and theses¹⁰². Here the focus clearly lies on committing text plagiarism and therefore on theses as well as dissertations violating scientific integrity. It has to be noted that the thesis at hand refers to all situations and cases in which academic people are involved (like, e. g., students, researchers, research associates or professors) with special attention on the question why many students are motivated to plagiarize in the context of the preparation of written works.

It is obvious that plagiarism is an international problem which probably every university of the world faces.¹⁰³ Therefore, there is an international interest in this topic which itself is also an important interdisciplinary issue as it is not bound to a specific field of study. Due to this fact, there are numerous international case studies about possible motives for students violating scientific rules, like, e.g., the empirical study “*Toward an Analytical Model of Ethical Decision Making in Plagiarism*” of students in Hong Kong about the analysis of factors to understand the (ethical) behavior in the context of the decision-making process in plagiarism¹⁰⁴. This is also the reason why we do not concentrate here solely on national surveys and hypotheses about possible plagiarism reasons which are published. Instead, we also include international case studies and do not focus on one specific study about possible reasons which are given for plagiarizing. The book “*Student Plagiarism in an Online World: Problems and Solutions*” discusses numerous case studies in order to give an overview of student attitudes towards the topic of plagiarism, especially in an “Online World”.¹⁰⁵

In what follows, we combine the most important factors from different studies and the result represents possible causes why students commit plagiarism in a comprehensive listing. Nevertheless, it has to be noted that every person acts as an individual and the concrete reasons, occasions as well as decisions for violating scientific integrity are always dependent on this respective individual. Another important point which one should take into account is that the results of the (empirical) studies and surveys (around the question how many students as well as why they plagiarize) in the most cases are biased because most students do not admit easily that they actually have cheated in assessments.¹⁰⁶ In other words, it is very likely that the real number of cases of alleged plagiarism is much higher.¹⁰⁷

According to the vast literature there exist many factors that influence student’s copying behaviors which contribute to commit cases of plagiarism.¹⁰⁸ The causes and reasons for students to plagiarize in scientific theses, especially in the academic context, are manifold.

¹⁰²[HAM17]: p. 171.

¹⁰³See [HAM17] which represents a (world-wide) review of different studies regarding the problem field of plagiarism.

¹⁰⁴[LYP13]: Lau, Yuen, and Park. 2013. “Toward an Analytical Model of Ethical Decision Making in Plagiarism”.

¹⁰⁵[Rob08b]: Roberts. 2008. *Student Plagiarism in an Online World: Problems and Solutions*.

¹⁰⁶[Rob08a]: Roberts. 2008. “Chapter: Student plagiarism in an online world: An introduction”, p. 2.

¹⁰⁷[Frö06], p. 81

¹⁰⁸[HAM17]: p. 182-185.

The scope of possible explanations why students plagiarize ranges from simple and pragmatic reasons like the convenience/laziness of students¹⁰⁹ to complex issues of scientific fraud such as the personal fame¹¹⁰, including also the lack of confidence of the student with his/her submitted thesis. As one can easily see, many motives are much more complex and far-reaching. Regarding many other (individual) reasons and motivating factors to commit plagiarism, however, one can only speculate.

But one thing that has to be mentioned is that all students who are plagiarizing have in common that there is always a goal they want to achieve, e.g., a benefit like an academic degree.

The following (non-exhaustive) list attempts to highlight some reasons why people, especially students, are in temptation to plagiarize:

- Lack of time (relating to a closing delivery deadline of a thesis or homework)¹¹¹
- Problem of time management¹¹²
- Desire to get good or even better grades^{113,114}
- Out of sheer laziness/convenience due to pragmatic reasons¹¹⁵
- 24/7 Availability of information in various forms and almost infinite number of sources (especially on the Internet which is seen as a free and global library)¹¹⁶ including the temptation of copying and pasting of foreign texts (for example from other publications)¹¹⁷
- Lack of ideas, creativity and motivation (in context of the discussed topic of a thesis)^{118,119}
- Missing know-how about the rules and standards of scientific integrity¹²⁰
- General understanding of citation rules is not given by the plagiarist¹²¹

¹⁰⁹[Web07], p. 95.

¹¹⁰[GN18], p. 80.

¹¹¹[FN95]: Franklyn-Stokes and Newstead. 1995. "Undergraduate cheating: Who does what and why?", p. 168.

¹¹²[HAM17]: p. 183 (Table 2: The five factors contributing to plagiarism derived from the literature reviewed).

¹¹³[FN95]: p. 168.

¹¹⁴[Deb06]: Debora Weber-Wulff and Gabriele Wohnsdorf. 2006. "Strategien der Plagiatsbekämpfung", p. 91 f. (3.1. *Plagiat für Punkte*).

¹¹⁵[Web07], p. 98.

¹¹⁶[GN18], p. 85 f.

¹¹⁷[Web07], p. 91.

¹¹⁸[Alt11]: Althaus. 2011. "Zwischen Disziplinierung und „Teaching Moment“ – Lernen, Lehre, Plagiate in internationaler Perspektive", p. 116 f.

¹¹⁹[Rei13], p. 179-181.

¹²⁰[SR18], p. 3.

¹²¹[McC08]: p. 156.

- Lack of interest in the given subject of a thesis (subject specification as well as table of content is predefined by supervisor)
- Lack of know-how and experience about scientific working methods and working techniques (especially in scientific writing)¹²²
- Goal of education is seen as title marketing and exam factories, i.e., finishing the university and earning a scientific degree is considered to be more important than the actual educational as well as learning path^{123,124}
- Fundamental lack of distinction of own and foreign intellectual property¹²⁵
- Plagiarist's opinion that plagiarism is still a trivial offense which is not penalized by serious (legal as well as institutional) consequences¹²⁶
- Lack of awareness of plagiarism issues¹²⁷
- Plagiarism is in some sense "accepted" and tolerated by the plagiarist's social environment^{128,129}
- Unconscious action regarding the copying of foreign texts like described by the phenomenon "cryptomnesia"^{130,131,132}
- Missing support of the thesis supervisor^{133,134}
- The plagiarist has the opinion that a committed case of plagiarism will not be discovered¹³⁵ (possible due to the anonymity of the student crowd)
- Terminology of "plagiarism" is not known by plagiarist: There is possibly a general uncertainty about when we are speaking of a concrete case of plagiarism¹³⁶

¹²²[Alt11], p. 109.

¹²³[Deb06]: p. 92.

¹²⁴[Hof16]: Hofmann. 2016. *Promotionsfabriken: Der Dokortitel zwischen Wissenschaft, Prestige und Betrug*, p. 69-75.

¹²⁵[Web07]: p. 99 f.

¹²⁶[Wal12]: p. 385.

¹²⁷[Rei13]: p. 181.

¹²⁸[Frö06], p. 87.

¹²⁹[Lam08]: Lampert. 2008. *Combating Student Plagiarism: An academic librarian's guide*, p. 17-34 (Chapter 1: Society's pervasive culture of copying).

¹³⁰[Deb06]: p. 90.

¹³¹[Frö06], p. 81.

¹³²More detailed described in Section 3.5

¹³³[CS10]: Comas-Forgas and Sureda-Negre. 2010. "Academic plagiarism: Explanatory factors from students' perspective", p. 226.

¹³⁴[McC08]: p. 155.

¹³⁵[Deb06]: p. 98.

¹³⁶[McC08]: p. 155.

- Uncertainty and missing knowledge about the use as well as about the uniform identification of citations¹³⁷ (like, e.g., highlighting with quotation marks) and sources in theses according to a correct and scientific way
- Lack of moral incentives relating to scientific works¹³⁸
- Hope for the acceptance of the scientific community¹³⁹
- Pressure in context of time and career (self-imposed or imposed through externals such as parents, professors, supervisor(s)¹⁴⁰ or clients)
- Pressure to succeed¹⁴¹ (self-imposed but also dictated by society¹⁴²)
- Completing the fastest path from university to the job¹⁴³
- Psychological, emotional and other social factors¹⁴⁴ like a fear of failure, perfectionism, lack of self-confidence, self-consciousness or lack of trust (in context of the working process which has to be done before submitting the thesis¹⁴⁵)¹⁴⁶
- Other intrinsic and individual motivation factors of the plagiarist, which are very important behavioral factors for the competence of learning, like the outlook or commitment for a good job¹⁴⁷

Furthermore, there are also combinations of the aforementioned factors that contribute to plagiarism. For instance, possible combinations are reasons like time pressure and the existing desire to get better grades for a submitted thesis. A potential scenario is that the student might feel overwhelmed by the workload (in this concrete case, the entire writing process) and therefore decides to take a “shortcut”.

In addition, there exists a study about possible causes of plagiarism, namely “*Plagiate in Hausarbeiten. Erklärungsmodelle mit Hilfe der Rational Choice Theorie*”, by Sebastian Sattler.¹⁴⁸ Beside reasons why students commit plagiarism, he also investigated how many

¹³⁷[McC08]: p. 156.

¹³⁸[Wal12]: p. 391.

¹³⁹[GN18], p. 80.

¹⁴⁰[McC08]: p. 155.

¹⁴¹[Lod18]: Lodhia. 2018. *The Guardian*: “More university students are cheating – but it’s not because they’re lazy”.

¹⁴²Seen in the context of our achievement-oriented society where “results and grades are more important than scholarship and intellectual development”. For more details, see *The Guardian*: [Lod18].

¹⁴³[GN18], p. 81 f.

¹⁴⁴[Alt11]: p. 115 f.

¹⁴⁵[Wal12]: p. 386.

¹⁴⁶Taking into account of the view that the writing process can be also seen as part of the personal development.

¹⁴⁷[Web14c]: p. 6.

¹⁴⁸[Sat07]: Sattler. 2007. *Plagiate in Hausarbeiten. Erklärungsmodelle mit Hilfe der Rational Choice Theorie*.

of them used such techniques which violate scientific integrity.¹⁴⁹ The findings presented in this study suggest that trading the possible penalties arising from plagiarism for the potential advantages gained through finishing a thesis may sometimes seem beneficial for students.¹⁵⁰ The result is obvious and is additionally explained in an extended version of the study with the name “*Explaining the Decision to Plagiarize: An Empirical Test of the Interplay Between Rationality, Norms, and Opportunity*”, which shows that “*the higher the expected utility derived from plagiarism, the more often students plagiarize*”.¹⁵¹

An interesting approach by Richard McCuen is that the decision of plagiarizing is based on pressure (in any form like time or success) in combination with rationalization.¹⁵² Taken together, these results, suggest that there can be a (strong) correlation between these factors.¹⁵³

It has to be noted, that the higher the pressure is, the more likely it is to begin to make the rational decision to commit scientific misconduct.¹⁵⁴

Noteworthy is the fact, that many students, which were suspected to have included plagiarized content in their theses, have the following excuses for plagiarizing: “The act of plagiarism happened unconsciously”. Gerhard Reichmann distinguishes two different manifestations of plagiarism which are depending on the intent.¹⁵⁵ On the one side there exists “intentional action”¹⁵⁶, while there is “unintentional plagiarism” on the other side.¹⁵⁷ Unintentional plagiarism describes cases of plagiarism where the decision of and the intent to plagiarize is missing. Often an uncertainty about the origins is given in such cases.¹⁵⁸ While convenience, lack of creativity/ideas and time savings suggest “intention” of the respective plagiarist, uncertainty about origins may also indicate the absence of intent of plagiarism.¹⁵⁹

One possible reason for the “uncertainty about origin sources” and therefore the decision to commit plagiarism for students is that many students do not exactly know where plagiarized content starts and where it ends.^{160,161} Here, it has to be noted that numerous students are not familiar with the terminology and definition of plagiarism. In this context,

¹⁴⁹[Sat07].

¹⁵⁰[Sat07]: p. 208.

¹⁵¹[SGW13]: Sattler, Graeff, and Willen. 2013. “Explaining the Decision to Plagiarize: An Empirical Test of the Interplay Between Rationality, Norms, and Opportunity”, Section “*Conclusion and Recommendations*”.

¹⁵²[McC08]: McCuen. 2008. “The Plagiarism Decision Process: The Role of Pressure and Rationalization”.

¹⁵³Ibid.

¹⁵⁴[McC08]: p. 154.

¹⁵⁵[Rei13]: Reichmann. 2013. “Textplagiate in der Wissenschaft und deren Verhinderung – Theoretische Überlegungen und empirische Befunde”, p. 179.

¹⁵⁶[Rei13]: p. 179.

¹⁵⁷[Rei13]: p. 181.

¹⁵⁸[Rei13]: p. 181.

¹⁵⁹[Rei13]: p. 181.

¹⁶⁰[Deb06]: p. 90.

¹⁶¹[McC08]: p. 156.

there exists an uncertainty about when one speaks of a case of possible plagiarism or also from which text acquisition and from which extent it constitutes a case of plagiarism (text takeover of individual sentences, paragraphs, text passages or entire chapters).¹⁶² A possible explanation for this might be, that there is no homogeneous definition of the term plagiarism.¹⁶³ Despite the legal definition of this topic in Austria¹⁶⁴, every institution and university can decide on itself, whether a present work is a case of plagiarism or not (depending on a concrete case).^{165,166}

This is exactly where the university's area of responsibility begins: Measures for education, prevention and detection to combat student plagiarism are particularly important and required.¹⁶⁷ Furthermore the public handling regarding the topic of plagiarism is also a non-trivial factor which should not be forgotten.^{168,169} Maybe this circumstance is reinforced by the decisions of universities regarding to suspected plagiarism cases of prominent persons of public interest (like, e.g., Johannes Hahn, Bogdan Rošćić) and their relatively weak consequences¹⁷⁰.

As one can see, also universities are important factors which contribute to the rise in academic misconduct and they possibly have a partial fault why students are motivated to plagiarize. The following list provides examples why students are in temptation to commit plagiarism (in relation to universities) and which universities could possibly use to improve their educational system:

- Missing knowledge about the answer to the question which extent of text takeover constitutes a case of plagiarism¹⁷¹
- The unauthorized use of own publications¹⁷²
- Wrong or missing imparting of knowledge and values (in context of scientific standards)¹⁷³
- No clear rules and serious consequences for the violation of scientific standards are provided¹⁷⁴

¹⁶²[Rei13]: p. 178, 183.

¹⁶³More in Section 3.5

¹⁶⁴For the exact definition, see [UG19]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

¹⁶⁵[Web14c], p. 6.

¹⁶⁶[Rei13]: p. 176.

¹⁶⁷[Rei13]: p. 181 ff.

¹⁶⁸[Deb06]: p. 98.

¹⁶⁹[SR18]: p. 5.

¹⁷⁰Exactly, this problem area is discussed in Stefan Weber's article, see [Web11c]: p. 34 f, p. 37 f.

¹⁷¹[Rei13]: p. 178 f.

¹⁷²[Web14c]: p. 13.

¹⁷³[JTT15]: Juyal, Thawani, and Thaledi. 2015. "Plagiarism: An Egregious Form of Misconduct", p. 78.

¹⁷⁴[JTT15]: p. 78-80.

- No offer of lectures and courses teaching scientific work techniques¹⁷⁵
- Visible and public consequences are missing¹⁷⁶
- Increase in PhD rate / thesis rate (in relation to “publish or perish”)¹⁷⁷
- Lack of creativity/ideas¹⁷⁸ of a given topic of a thesis (imposed by the supervisor): Subject of a thesis already exists. Why should the student reinvent the wheel?¹⁷⁹
- Missing incentives for education are provided¹⁸⁰

Here, the aforementioned reasons show that an intervention of involved universities is required. Of course, it has to be mentioned that there are already more and more universities which tackle these points.¹⁸¹

After we provided a detailed discussion of possible reasons and causes for plagiarism, in what follows we give an overview of definitions of plagiarism in this field which allows to identify such offenses against ethics in academia.

3.4 Definitions of Plagiarism

The term “plagiarism” is rather old. As already mentioned before it originates from the Latin word “plagiarius” which stands for “kidnapper” or “one who kidnaps the child or slave of another”.^{182,183} This notion was coined in the 1st century¹⁸⁴, in the common sense of current days (namely as “literary theft”), by the Roman poet Marcus Valerius Martialis, known for short as Martial, who accused another poet of stealing parts of one of Martial’s poems.¹⁸⁵ Martials’ understanding of the term, mentioned in *Epigrams 1, 52*¹⁸⁶, is likely based on the metaphoric interpretation that the ideas and verses written by Martial which were stolen and kidnapped can be seen as his mind’s children.¹⁸⁷ Probably, the act of plagiarism has always existed. Still, Martial was the first person who used the term in today’s context as literary theft and for copycats,

¹⁷⁵[Web07]: p. 92.

¹⁷⁶[SR18]: p. 2.

¹⁷⁷[GN18]: p. 83 f.

¹⁷⁸[Rei13]: p. 179-181.

¹⁷⁹[Alt11]: p. 116 f.

¹⁸⁰[GN18]: p. 84 f.

¹⁸¹For more information: Replies to parliamentary information request of 21 universities and institutions of higher education in Austria (No.: (9407/AB) / Date: 06.09.2016), see [The16a] for details.

¹⁸²[Dud20]: Duden. *Online: Definition of the term “plagiarism”*.

¹⁸³[Dic20d]: Dictionary.com. *Online: Word Origin and History for “plagiarism”*.

¹⁸⁴[Bai11]: Bailey. *Online: “More university students are cheating – but it’s not because they’re lazy”*.

¹⁸⁵[Kel11]: p. 18.

¹⁸⁶[Mar97]: Martial. 1897. *Epigrams. Book 1*. Section “LII. TO QUINCTIANUS.”, “LXIII. TO CELER.” and “LXVI. TO A PLAGIARIST.”.

¹⁸⁷[Kel11]: p. 18.

especially in the context of using other words without mentioning the real name(s) of the author(s).¹⁸⁸

One must remember that, in times where no copyright act or any legal consequences against copycats existed, Martial's only chance for a reaction against his literary opponent was to use his texts to express his antipathy for such practices.

An interesting side remark here is that there were different opinions about the exact year in which the term "plagiarism" found its way into the English language. The potential candidate years range from the 16th to the early 17th century.

- Dictionary.com states that the expression "plagiary"¹⁸⁹ was first used between 1590 and 1600, meanwhile the term "plagiarism"¹⁹⁰ was first recorded in 1615-1625.
- The Online Etymology Dictionary lists that the word "plagiary" (plagiarist) was first used in 1590 and that the term "plagiarism", which we still understand today in a figurative sense as a theft of intellectual property, was first mentioned in 1620.¹⁹¹
- The Dictionary Merriam-Webster reports that the word "plagiary" was first used in 1660.¹⁹²

One special theory is that the word "plagiary", a derivative of the notion "plagiarus" was introduced into English in 1601 by Ben Jonson (using the term in the sense of kidnapper).¹⁹³ Over the years, a further adoption of the word took place, leading to the nowadays commonly used term "plagiarism".^{194,195} Nowadays, the word "plagiary" which refers to a "literary thief" is often replaced by its synonym "plagiarist" (commonly referring to a person which commits plagiarism).¹⁹⁶

The world's first legal text with the focus on establishing a set of rules for ensuring authorship rights, similar to today's copyright laws, was the so-called Statute of Anne ("An Act for the Encouragement of Learning, by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies") from 1710.¹⁹⁷ Although the Statute of Anne was put into practice in the early years of the 18th century in London, it still took quite some time, more precisely until the year 1755, before the first reference to the word "plagiary" was published in a dictionary for a broader audience.¹⁹⁸

¹⁸⁸[Bai11]

¹⁸⁹[Dic20c]: Dictionary.com. *Online: Definition for the term "plagiarism"*.

¹⁹⁰[Dic20d]: Dictionary.com. *Online: Word Origin and History for "plagiarism"*.

¹⁹¹[Dic20b]: Dictionary. *Online: Etymology for "plagiarism"*.

¹⁹²[Dic20a]: Dictionary. *Online: Definition of "plagiarism"*.

¹⁹³[Isa11]: Isaacs. 2011. "Plagiarism is not OK", p. 159.

¹⁹⁴Word Origin and History for plagiarism: see [Dic20d].

¹⁹⁵[Dic20b].

¹⁹⁶[Isa11]: p. 159.

¹⁹⁷[Ell97]: Ellins. 1997. *Copyright Law, Urheberrecht und ihre Harmonisierung in der Europäischen Gemeinschaft*, p. 40 f.

¹⁹⁸[Bai11]

The Statute of Anne was the first legal text which represents a primal form of “copyright law”.¹⁹⁹ It targeted the growing problem of “literary pirates” which make money by selling reprints, i.e., one-to-one copies of the original books, documents and other texts, without paying royalties to the original author(s).²⁰⁰ Therefore, the notion of “literary pirates” as used in the Statute of Anne is not synonymous with the modern interpretation of the word “plagiarist”. Still, the Statute of Anne introduces a set of rules which shall prevent that unauthorized copies of another’s work are made. It defines that – for authorized reprints – it is necessary that the original author grants the right to copy the specific text. Hence, the name “copyright”.²⁰¹ In this sense, the Statute of Anne can be seen as a first attempt to give the notion of “intellectual property” and originality of ideas and works a higher value.²⁰²

Plagiarism is found in almost every imaginable area, like in literature, the music or film industry, academia and scientific context, journalism, arts, architecture, economy and many more fields.²⁰³ A more fine-grained distinction can be made based on the type of manifestation like text and other forms of representation, ideas, products or combinations thereof.²⁰⁴ The following non-exhaustive list gives some examples of these manifestations:

- Texts, newspapers, articles, books, images, illustrations, graphics, photos, songs, films, sound or video recordings, inventions, patents, (scientific) publications, computer programs, choreography, paintings, slogans, symbols, designs, visual presentations, structure and layout of websites, goods and products of everyday life, artworks, buildings, ...

While for many fields there are rather strict rules and sometimes very high penalties for copyright infringements (e.g. in the area of product plagiarism), in academia, although plagiarism is known to be one of the major threats to scientific quality²⁰⁵, the consequences are (in most cases) relatively harmless as the chances to be revealed as a plagiarist are currently quite low.²⁰⁶ This is the reason why the thesis at hand concentrates on text plagiarism in academic theses (especially Master’s and PhD theses).

From the above it can be concluded that the term “plagiarism” gains more and more interest as one of the main problems in academia nowadays.²⁰⁷ Even though the exact number of plagiarism cases is not known precisely, there are various case studies (like

¹⁹⁹[Ell97]: p. 41, 44.

²⁰⁰[Ell97]: p. 41.

²⁰¹[Ell97]: p. 41-44.

²⁰²[Ell97]: p. 41.

²⁰³[Web16b] gives an short overview.

²⁰⁴[Gre09]: Greubel. 2009. “Vom Fehlverhalten zum Plagiator–fördert das Internet den Wissensklaue”, p. 3.

²⁰⁵[Moh+14]: p. 538.

²⁰⁶[Web11c]: Weber. 2011. “Das akademische Textplagiat in Österreich – Zwischen Rechtssprechung und LehrbuchVorgaben einerseits und gelebter Praxis andererseits”, p. 37 f.

²⁰⁷[SR18]: Singh and Remenyi. 2018. “Plagiarism and ghostwriting: The rise in academic misconduct”.

Donald McCabe’s long-term research project, conducted over a time span of 15 years, including his key findings about plagiarism²⁰⁸) and speculations about the topic.^{209,210}

It has to be noted that there exist many definitions of the term “plagiarism” which differ especially in their focus on the specific aspects and manifestations of the theft of intellectual property.²¹¹ Probably, everybody has a slightly different interpretation what plagiarism is, so the first question one should always ask when discussing this topic is whether there is a shared notion of the term which all parties in the discussion agree on. It is very important to understand the difference between the multitude of definitions, which can be distinguished, because every definition emphasizes various aspects of the term “plagiarism”. The following (non-exhaustive) list provides a small selection of the most commonly used definitions regarding the term “plagiarism”:

- The German Duden²¹² describes plagiarism as follows:

“Unrechtmäßige Aneignung von Gedanken, Ideen o.Ä. eines anderen auf künstlerischem oder wissenschaftlichem Gebiet und ihre Veröffentlichung; Diebstahl geistigen Eigentums” (Duden)

“Unlawful appropriation of thoughts, ideas or similar of another person in art or science and the publication thereof; theft of intellectual property”
(Translation by the author)

- According to Dictionary.com²¹³ plagiarism is ...

“An act or instance of using or closely imitating the language and thoughts of another author without authorization and the representation of that author’s work as one’s own, as by not crediting the original author” (Dictionary.com)

- The Legal-Dictionary by Farlex²¹⁴ states that plagiarism is ...

“The act of appropriating the literary composition of another author, or excerpts, ideas, or passages therefrom, and passing the material off as one’s own creation.” (legal-dictionary.com)

²⁰⁸[Don16]: Donald McCabe. 2016. “Cheating and Honor: Lessons from a Long-Term Research Project”, p. 190 f.

²⁰⁹See Section 3.2 but also [Web07] for more details.

²¹⁰[Web07]: p. 53-57.

²¹¹[GN18]: p. 87.

²¹²[Dud20]: Duden. *Online: Definition of the term “plagiarism”*.

²¹³[Dic20d]: Dictionary.com. *Online: Word Origin and History for “plagiarism”*.

²¹⁴[The20c]: TheFreeDictionary: Legal Dictionary by Farlex. TheFreeDictionary: Legal Dictionary by Farlex. *Online: Explanation of “Plagiarism”*.

- Gerhard Fröhlich, a well-known plagiarism expert defines plagiarism in the following sense:

“Unter Plagiat wird die unbefugte Übernahme fremden Geistesguts, der „Diebstahl“ geistigen Eigentums verstanden.” (Gerhard Fröhlich)²¹⁵

“Plagiarism is the unauthorized acquisition of foreign thoughts, the "theft" of intellectual property.”

(Translation by the author)

- Sebastian Sattler, another plagiarism expert, proposes the following interpretation, which also includes foreign thoughts or quotes that are not marked in a recognizable way:

“Plagiate sind beabsichtigte direkte oder indirekte Übernahmen fremder Inhalte. Diese Inhalte können Argumente/Erklärungen/Fakten/Interpretationen/Entdeckungen/Konklusionen oder die Struktur einer anderen Arbeit sein. [...] Die Übernahme wird nicht kenntlich gemacht, das heißt es gibt keine Quellenangabe beziehungsweise Anführungsstriche bei wörtlicher Übernahme, folglich erscheinen sie als eigene Arbeit.” (Sebastian Sattler)²¹⁶

“Plagiarism is the intended, direct or indirect acquisition(s) of foreign content. This content may be arguments, explanations, facts, interpretations, inventions, conclusions or the structure of a foreign work. [...] The acquisition is not properly highlighted, i.e., it lacks proper citation and/or quotation marks (in case of direct quotes), hence it appears to the reader as own work.”

(Translation by the author)

- The legal definition of this topic in Austria regarding the academic context is relatively young. The Austrian law, more precisely, the Austrian University Act 2002²¹⁷, has the following legal definition of the term “plagiarism”:

*“§ 51 Abs 2 Z 31
Ein Plagiat liegt jedenfalls dann vor, wenn Texte, Inhalte oder Ideen übernommen und als eigene ausgegeben werden. Dies umfasst insbesondere die Aneignung und Verwendung von Textpassagen, Theorien, Hypothesen, Erkenntnissen oder Daten durch direkte, paraphrasierte oder übersetzte Übernahme ohne entsprechende Kenntlichmachung und Zitierung der Quelle und der Urheberin oder des Urhebers.” (§ 51, Paragraph 2, Sentence 31 UG)*

²¹⁵[Frö06]: p. 81.

²¹⁶[Sat08]: p. 5447.

²¹⁷[UG19]: Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

“§ 51, Paragraph 2, Sentence 31

An act of plagiarism is unquestionably committed, when text, content, or ideas are used and presented as one’s own. This encompasses in particular the appropriation and use of text, theories, hypotheses, findings or data by directly quoting, paraphrasing or translating them without appropriate acknowledgement and reference to the source and the original author.”

(Translation by RIS)²¹⁸

- Teddi Fishman, former director of the International Center for Academic Integrity (ICAI), provides the following definition of the term “plagiarism”:

“Plagiarism occurs when someone

- 1. Uses words, ideas, or work products*
- 2. Attributable to another identifiable person or source*
- 3. Without attributing the work to the source from which it was obtained*
- 4. In a situation in which there is a legitimate expectation of original authorship*
- 5. In order to obtain some benefit, credit, or gain which need not be monetary”*

(Teddi Fishman)²¹⁹

- Debora Weber-Wulff, a well-known scientist in the context of plagiarism research, proposes to slightly adapt Fishman’s notion²²⁰ by making Point 3 a bit clearer by replacing it with the text *“without properly attributing the work”* in order to comprise the intent, i.e., the conscious decision to commit plagiarism, of the plagiarist²²¹. Furthermore, she suggests removing Point 5 completely, because the lack of a benefit does not change the fact that there is no reference to the original source of a text or idea.²²²

One point which is common to all of the aforementioned definitions is that they all agree – in a broader sense – to the fact that “plagiarism” is a kind of theft, regardless of whether it refers to intellectual property (like in text plagiarism) or concrete goods (like in product plagiarism).

²¹⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.*

²¹⁹[Fis09]: p. 5.

²²⁰[Fis09]: p. 5.

²²¹[Web14c]: p. 5 f.

²²²[Web14c]: p. 6.

The general understanding of plagiarism (which is depending on type, intention and other factors) is the unauthorized takeover or the “theft” of intellectual property.²²³ Often someone else’s text, images or ideas (also other types are possible) are utilized without referencing the original author and under presumption of own authorship.²²⁴ It is important to distinguish between plagiarism and citation (like, e.g., mentioned in the book *Zitat, Paraphrase, Plagiat*²²⁵). While a (proper) citation always mentions the (correct and obtained) source and/or author²²⁶, this reference is missing or, at least, insufficient (not highlighted in a correct way) in the case of plagiarized content.^{227,228}

We can see that, due to the different definitions and their interpretations, the distinction between plagiarism and non-plagiarism is often quite difficult.

After some key definitions have been clarified, plagiarism can also be distinguished and categorized by its nature. The classification is relevant because it provides information about how plagiarism was conducted and how plagiarism can be identified. In conclusion, this section provides some answers to the questions of “what content has been plagiarized”, which corresponds to the plagiarism type of manifestation, and “in which context or area has been plagiarized”. In the following section we will now give answers to the question “How and in which form has been plagiarized?”.

3.5 Typology of Plagiarism

The aforementioned section already stated that there exists plagiarism in many different areas which becomes apparent in various forms and types of manifestations (like text plagiarism in literature or in the academic and scientific context). Some are immediately recognizable as plagiarism, others are often seen as gray areas where one can discuss whether they are plagiarized or not. That is the reason why, in this section, we deal with different forms and types of plagiarism.

In order to stick to the terms and notions used in the corresponding literature, we will base the following overview on relevant work by Debora Weber-Wulff. In the book “*False Feathers: A Perspective on Academic Plagiarism*”²²⁹ she introduced a typology of plagiarism which is also referenced by various other researchers (like, e.g., Stefan Weber²³⁰ and Gerhard Reichmann²³¹, adapted these taxonomy) and therefore can be seen as one of the major sources for the categorization of plagiarism.

²²³See definition of Fröhlich: [Frö06]: p. 81.

²²⁴[Web07]: p. 41.

²²⁵[LM15]: Chapter “Zur Zitierweise in den Naturwissenschaften” by Ferdinand Hucho, p. 35, p. 40.

²²⁶[Web07]: p. 33-34.

²²⁷[Brü07]: Brünner. 2007. “Studienrechtliche Konsequenzen von Plagiaten”, p. 207-210.

²²⁸See also legal definition of the term “plagiarism”: [UG19]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

²²⁹[Web14c]: Weber-Wulff. 2014. *False Feathers: A Perspective on Academic Plagiarism*, p. 6-14.

²³⁰[Web07]: p. 44-49.

²³¹[Rei13]: p. 177-179.

Afterwards, we will also summarize additional notions which are also commonly used in the area of plagiarism research.

3.5.1 A Typology of Plagiarism defined by Debora Weber-Wulff

Weber-Wulff's taxonomy/typology²³² is a classification system used to define and distinguish different forms of plagiarism which also gives hints how to detect different types of plagiarism.²³³ This system of classifications (= typology) helps to distinguish various forms of plagiarism with special attention to their differences and also discusses the potential strengths and weaknesses regarding the detection of the respective form of plagiarism.

In the following, we will give an overview of the (generally accepted) types, forms and categories of plagiarism as introduced by Debora Weber-Wulff and Gabriele Wohnsdorf.²³⁴ This overview, which represents a summary of Weber-Wulff's defined typology²³⁵, is a non-exhaustive one and will not describe all types of plagiarism in detail. The main types of plagiarism are mentioned and explained in detail. Furthermore, we will also shed some light on how to detect them and discover (potentially) plagiarism.

- **Copy & Paste (*in toto*):**²³⁶ This form of plagiarism is the most obvious form of plagiarism in the big picture of fraud because it is the easiest form to create and to detect among all forms of plagiarism. It refers to a "one-to-one copy" of an (online) text or the entire work.²³⁷ The special focus here lies on the text, which is literally taken over in a (almost) one-to-one form which is exactly the cause why this form of plagiarism is relatively easy to detect. In this probably most extreme form of plagiarism, a given text is copied word for word, with exception of the author's name, which is substituted with the name of the plagiarist, and after that process the work or thesis will be released as the plagiarist's own work.²³⁸ The disadvantage for the plagiarist – which turns out to be an advantage for plagiarism researchers – is that the plagiarist is not only copying text so that the resulting passages are (almost) identical to their source, but also (potential) spelling and grammatical errors, (unnecessary) punctuation marks or unusual terms and phrases as well as layout and structure.²³⁹ Apart from these strong hints for plagiarism, also the presence of copied page numbers, hyperlinks and advertisements, can be seen as "copy accidents" made by the plagiarist.²⁴⁰

²³²[Web14c]: p. 6-14.

²³³[Deb06]: p. 90.

²³⁴[Deb06]: p. 90 f.

²³⁵[Web14c]: p. 6-14.

²³⁶[Web14c]: p. 7.

²³⁷[Deb06]: p. 91 (2.1 Copy & Paste in toto).

²³⁸[Web16c]: Weber-Wulff. Online: E-Learning platform "Fremde Federn Finden": 3.2 Wie wird plagiiert?, Section "Copy & Paste".

²³⁹[Web14c]: p. 7.

²⁴⁰[Deb06]: p. 91 (2.1 Copy & Paste in toto).

In order to avoid the drawbacks (for the plagiarist) of one-to-one copies, they often introduce very small changes from the original so that deception is not noticeable easily.²⁴¹

The situation is best described by assuming a person who presses the keys *CTRL* + *C* (for copying) on a text and pastes all text snippets (word for word) by the use of the keyboard shortcut *CTRL* + *V* in the blank document and then this person pretends that the result is its own work. This form of plagiarism is often called “total plagiarism”.²⁴²

- **Translations:**²⁴³ Besides “simple” copy and paste, translation (without proper citation and/or reference of the original source) constitutes another type of plagiarism. This form of plagiarism is present when a given text – which is available in a particular language – is translated into another language and, afterwards, it is pretended that the translated text is the plagiarist’s own creation.²⁴⁴

The translation can be done either manually (“translation by hand”), which is much more effort for the plagiarist, or automatically by using an online tool.²⁴⁵ When the translation is done with an translation tool, it is often the case that translations errors (like unusual combinations of words or incorrect grammar) made by the program are taken over. These errors can act as indications for a suspicion (as evidence of suspicion) in the final work and this is also the reason for the fact that a low-quality translation done by an online tool is much “easier” to detect than a translation done by hand with the plagiarist’s own (translation) capabilities.²⁴⁶

Nowadays (free and online) translation services such as Google Translate²⁴⁷, DeepL²⁴⁸, Babelfish²⁴⁹, WorldLingo²⁵⁰, Lingenio combined with wwwtranslate²⁵¹ and many more are available on the market like sand by the sea. This specific form of plagiarism seems to be very popular in the scientific field (especially in the context of doctoral theses).²⁵²

The simplest way to describe the situation is by assuming a plagiarist who takes a text from an (afterwards uncited) source, which acts as the input for an online translation tool. After the translation was done, the translated text represents the (seemingly) “own” work of the plagiarist.²⁵³

²⁴¹[Web14c]: p. 7.

²⁴²[Web14c]: p. 7.

²⁴³[Web14c]: p. 7 f.

²⁴⁴[Web14c]: p. 7 f.

²⁴⁵[Deb06]: p. 91 f (2.2 Übersetzungsplagiat).

²⁴⁶[Web14c]: p. 7 f.

²⁴⁷See <https://translate.google.com/> for more details.

²⁴⁸See <https://www.deepl.com/de/translator> for more details.

²⁴⁹See <https://www.babelfish.de/> for more details.

²⁵⁰See <https://www.worldlingo.com/> for more details.

²⁵¹See <https://wwwtranslate.eu/> for more details.

²⁵²[Deb06]: p. 91 (2.2 Übersetzungsplagiat).

²⁵³[Web16c]: Weber-Wulff. *Online: E-Learning platform “Fremde Federn Finden”: 3.2 Wie wird plagiiert?*, Section “Übersetzungsplagiat”.

- **Disguised Plagiarism:**²⁵⁴ In this form of plagiarism, text passages (which can be both sentences and/or half sentences) are taken from different (usually a high number of) foreign sources, which are assembled in different order and after that, minor (or even major) changes are made by the plagiarist.²⁵⁵ At the same time, the adopted sentence (or half sentence) is neither made recognizable as a paraphrase nor as a citation. Commonly, only “small” changes, such as changes of words or the word order, changes in sentence structure, half-sentences are edged in, changes of the enumeration order, insertion or deletion of a phrase or paraphrase, or simply the replacement of certain words by synonyms, are made. The goal of the plagiarist is to hide or literally disguise from the original source of the sentence.²⁵⁶ Therefore, this type of plagiarism is called “disguised plagiarism” (“Verschleierungsplagiat” or even “Halbsatzflickerei”²⁵⁷ in German).²⁵⁸ The disguised plagiarism is relatively difficult to detect²⁵⁹, especially because of the fact that the character or word order is no longer identical to the original source, but the meaning of the text is still the same. Unfortunately, there are currently no plagiarism detection programs that recognize such contextual relationships.²⁶⁰

On the other hand, there are even some free programs (often mentioned as “Paraphrasing tools”) available with which it is possible to substitute a word with a synonym (often from an underlying thesaurus) like, e. g., Magic Article Rewriter²⁶¹, WordAi²⁶², Paraphrasing Tool²⁶³, Rewriter Tools²⁶⁴ and Best Paraphrase Tool 2020 - Sentence Rephraser²⁶⁵ by SEO Tools. A good overview over the “best (re-)paraphrasing tools”, which includes sentence rephraser as well as sentence rewriter tools, is given on the website “www.ref-n-write.com”²⁶⁶.

The surface changes or edits of this type of plagiarism were actively taken by the plagiarist in order to cover the case of plagiarism or to disguise the origin source.²⁶⁷ This process turns out to be a vast and time-consuming effort for the plagiarist.²⁶⁸ In most cases it probably would have been easier to write the text or the work

²⁵⁴[Web14c]: p. 8.

²⁵⁵[Web16c]: Weber-Wulff. *Online: E-Learning platform “Fremde Federn Finden”: 3.2 Wie wird plagiiert?*, Section “Halbsatzflickerei”.

²⁵⁶[Web14c]: p. 8.

²⁵⁷[Deb06]: p. 91 (2.4 Halbsatzflickerei).

²⁵⁸[Web14c]: p. 8.

²⁵⁹[Web16c]: Weber-Wulff. *Online: E-Learning platform “Fremde Federn Finden”: 3.2 Wie wird plagiiert?*, Section “Halbsatzflickerei”.

²⁶⁰[Web14c]: p. 8.

²⁶¹See <https://magic-article-rewriter.soft112.com/> for more details.

²⁶²See <https://wordai.com/> for more details.

²⁶³See <https://paraphrasing-tool.com/> for more details.

²⁶⁴See <https://www.rewritertools.com/paraphrasing-tool> for more details.

²⁶⁵See <https://seotoolscentre.com/paraphrase-tool> for more details.

²⁶⁶See [Blo19] for more details.

²⁶⁷[Web16c]: Weber-Wulff. *Online: E-Learning platform “Fremde Federn Finden”: 3.2 Wie wird plagiiert?*, Section “Halbsatzflickerei”.

²⁶⁸[Deb06]: p. 91 (2.4 Halbsatzflickerei).

completely anew.²⁶⁹ Although the plagiarist adapts the text by himself/herself, it is not really a “self-accomplishment” in the sense of scientific work²⁷⁰, and it remains plagiarism.

This form of plagiarism is a type of plagiarism with modifications, in which text parts are paraphrased and adapted with minor changes.²⁷¹ The idea behind this method is to disguise the fraudulent intent of the plagiarist.

- **Shake and Paste Collections:**²⁷² In contrast to the “disguised plagiarism”, which was described in the previous point, in this type of plagiarism normally entire text segments (according to Weber-Wulff, usually paragraphs, but also sections or sentences are possible²⁷³) from a variety of different sources, are taken and copied by the plagiarist.²⁷⁴ Then, these acquired sections are, as the name of the plagiarism type already suggests, well mixed and then put together and copied (one after another) in a new document in an arbitrary order.²⁷⁵ Therefore, Weber-Wulff used this pun with an American spice mixture called “Shake’n Bake”.²⁷⁶

As the order of the text segments is sometimes indeed arbitrary (depending on the plagiarist’s effort), it often seems that the resulting text has an indefinite structure and sometimes no particular logical order.²⁷⁷

Of course, the idea behind this method is to deceive the readers and plagiarism hunters by supplementing the copied portions (from different foreign sources) which are arranged in a random order with some new words and/or sentences.²⁷⁸ Here, it has to be mentioned that in this very common form of plagiarism an important factor is the usage of many different sources from which the resulting text is composed. By using the variety of sources, the plagiarist hopes that the plagiarism case stays covered and unnoticed.²⁷⁹

The “Shake and Paste Collection” is rather easy to detect.²⁸⁰ However, it is apparent to the reader of a work that the resulting text is comparable to a collage or a “colorful” patchwork, because there are always changes in (writing) style (like in the different paragraphs/sections) and also different language levels (referring to the difficulty of the employed language) are used. Often, for the reader of the work, the

²⁶⁹[Web14c]: p. 8.

²⁷⁰See Austria’s legal definition for Bachelor’s thesis, Master’s thesis, PhD thesis in [UG19]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 7, Sentence 8, Sentence 13 UG.

²⁷¹[Web14c]: p. 8.

²⁷²[Web14c]: p. 8 f.

²⁷³[Deb06]: p. 91 (2.3 Shake & Paste).

²⁷⁴[Web14c]: p. 8 f.

²⁷⁵[Web14c]: p. 9.

²⁷⁶[Deb06]: p. 91 (2.3 Shake & Paste).

²⁷⁷[Deb06]: p. 91 (2.3 Shake & Paste).

²⁷⁸[Web16c]: Weber-Wulff. *Online: E-Learning platform “Fremde Federn Finden”: 3.2 Wie wird plagiiert?*, Section “Shake & Paste”.

²⁷⁹[Deb06]: p. 91 (2.3 Shake & Paste).

²⁸⁰[Web14c]: p. 9.

logical order of the assembled sections does not really fit together and no consistent concept can be found, i.e., the reader does not recognize a common theme.²⁸¹ But not only the recognizable changes in the (linguistic) style are apparent, but also changes in diction or formatting can be clearly noticed.²⁸²

Here, the intrinsic plagiarism analysis²⁸³ can be seen as an relatively new approach for the recognition of the real author, especially useful for the detection of this type of plagiarism.²⁸⁴ However, in the author of this thesis' opinion, this technique, especially the method "stylometry" is still in its early stages of development. With stylometry, it is possible to calculate statistical data, so-called "style characteristics" (like, e. g., the average length of sentences, the average word frequencies and many more) for a given paper.²⁸⁵ The result of this mentioned method provides information about whether a document was recognizable written by one person or by several people (based on the person's writing style). More details and the history about this approach are provided in Holmes' article "*The evolution of stylometry in humanities scholarship*"²⁸⁶.

- **Structural Plagiarism:**²⁸⁷ Another category of plagiarism introduced by Debora Weber-Wulff is the "structural plagiarism". In this form of plagiarism, no (word by word) text adoption is present, but instead only the structure of a foreign text or a foreign work is copied.²⁸⁸ The plagiarist makes use of the (same) order of arguments or thoughts (including, but not limited to, structures, listings, research questions, sources, footnotes and many more) of a foreign source and therefore of another author and reproduces them in the plagiarist's own words.²⁸⁹

Due to the fact that the plagiarist's resulting text almost certainly contains a different word choice than the original source, it is often seen as questionable whether structural plagiarism is indeed plagiarism²⁹⁰, since in most cases no identical (text) adoptions take place.²⁹¹ Hence, this is also one reason why this type of plagiarism cannot be detected by software plagiarism programs or other automatic plagiarism detection systems.²⁹²

²⁸¹[Web14c]: p. 8 f.

²⁸²[Web16c]: Weber-Wulff. *Online: E-Learning platform "Fremde Federn Finden": 3.2 Wie wird plagiiert?*, Section "Shake & Paste"

²⁸³[Deb16]: : Debora Weber-Wulff. 2016. "Plagiarism Detection Software: Promises, Pitfalls, and Practices", p. 633 f.

²⁸⁴[Web14c]: p. 9.

²⁸⁵[Sta09]: Stamatatos. 2009. "A survey of modern authorship attribution methods", p. 538.

²⁸⁶[Hol98]: Holmes. 1998. "The evolution of stylometry in humanities scholarship".

²⁸⁷[Web14c]: p. 10.

²⁸⁸[Web16c]: Weber-Wulff. *Online: E-Learning platform "Fremde Federn Finden": 3.2 Wie wird plagiiert?*, Section "Strukturübernahme".

²⁸⁹[Web14c]: p. 10.

²⁹⁰[GN18]: p. 75.

²⁹¹[Deb06]: p. 91 (2.5 Strukturübernahme).

²⁹²[Web14c]: p. 10.

In some cases, it can be deduced and showed, based on exactly matching or copied errors (e. g., in enumerations, lists, literature references, etc.) in the work, that structural plagiarism is present.²⁹³ The plagiarist does not create the structure of the work himself/herself, but instead one is simply using another author's one without naming or mentioning the original author.²⁹⁴ It is clear that in the case of structural plagiarism, the plagiarist's own "self-accomplishment" (relating to the academic context and the legal definition of scientific theses²⁹⁵) is (at least partially) missing.

- **Pawn Sacrifice:**²⁹⁶ Another interesting plagiarism category is the so-called "Pawn Sacrifice" (in German "Bauernopfer-Referenz"), which represents a very common type of plagiarism.²⁹⁷ The term, in the context of plagiarism, was first coined by the German law professor Benjamin Lahusen in 2006.²⁹⁸ He describes with this form of plagiarism cases in which the reference of the original source respectively the original author (for example in the footnote or in the bibliography) is given, but not in a correct, scientific way.²⁹⁹

Pawn Sacrifice is among those forms of plagiarisms which allows for a wide variety of different manifestations³⁰⁰ and degrees of severity of the case.³⁰¹ In what follows, we will shed some light on the flavors of this type of plagiarism. It has to be noted, that this type of plagiarism is explained in greater detail (in comparison to the other described plagiarism categories), because "Pawn Sacrifice" is often revealed and discussed in the academic context.³⁰² This is probably dependent on the particular field of study, because the perceptions and ways of dealing with the problem of citations and paraphrasing differ fundamentally in different disciplines. The book *Zitat, Paraphrase, Plagiat*³⁰³ thoroughly discusses this concrete issue in a structured way. Although the source citation is provided in the paper, it still violates principles of good scientific writing.³⁰⁴ Possible specific manifestations are, for instance, the source reference is provided either misleadingly in a footnote at the wrong position or in the text at the wrong position.^{305,306} Furthermore, it is

²⁹³[Web14c]: p. 10.

²⁹⁴[Web16c]: Weber-Wulff. *Online: E-Learning platform "Fremde Federn Finden": 3.2 Wie wird plagiiert?*, Section "Strukturübernahme".

²⁹⁵[UG19]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 7, Sentence 8, Sentence 13 UG.*

²⁹⁶[Web14c]: p. 10 f.

²⁹⁷[Web14c]: p. 10 f.

²⁹⁸[Lah06]: p. 405.

²⁹⁹[Lah06]: p. 411 ff.

³⁰⁰[Lah06]: p. 405.

³⁰¹[Rie10]: Rieble. 2010. *Das Wissenschaftsplagiat - Vom Versagen eines Systems*, p. 20-24.

³⁰²[Web14c]: p. 10 f.

³⁰³[LM15]: Lahusen and Marksches. 2015. *Zitat, Paraphrase, Plagiat*.

³⁰⁴[Rie10]: p. 21 f.

³⁰⁵[GN18]: p. 75.

³⁰⁶[Lah06]: [Lah06]: Lahusen. 2006. "Goldene Zeiten: Anmerkungen zu Hans-Peter Schwintowski, Juristische Methodenlehre, UTB basics Recht und Wirtschaft 2005", p. 411 f.

also bad practice to just reference the source in the first footnote while subsequent footnotes are no longer marked as citation although text has been reused.³⁰⁷ Other manifestations include source references in which not the complete extent of the citation (or cited text) is marked and therefore also not recognizable as well as references which are only listed in the bibliography but not referenced in the text.³⁰⁸

Although there is a reference to the source, however, the extent of the text acquisition is not marked, sufficiently identified or even “highlighted” in a specific way.³⁰⁹ That means, it is not clear where the takeover starts and where it ends, but also there is no sign which text portions are copied (one-to-one) from the original source and which text portions are copied with minor modifications.³¹⁰

In some cases, the footnote is also specified to look like that it only refers to one sentence in the middle text section of the plagiarism case, but in reality, the entire passage was taken over in paragraphs.³¹¹ Although the alibi footnote mentions the original text as “*cf.*”, it suggests independent phrasing for the reader of the text, although the resulting text was plagiarized.

Also, it is not always apparent if a word-to-word copy took place and the necessary identification is missing (for example, identification of one-to-one text portions by using quotation marks). This is another reason why in this kind of plagiarism very often large takeovers (possibly all from the same source with large-scale use of foreign paragraphs) with minor text changes and without proof of citation are possible.³¹² Another important point is that in this specific type of plagiarism often variations of one-to-one sections of the original source mixed with the plagiarist’s own words and sentences are used. There is no clear indication or clear assignment where the one-to-one text or the paraphrase of the author starts and where it ends (the citation is missing partly or completely).³¹³

In many cases, exact word-for-word copies (without marking them as quotes) are used and only one reference to the original source is given in the footnote.³¹⁴ Another method is to take over the original text and to modify it only slightly and to masquerade it in this way as the plagiarist’s own creative work. Minor changes (like insertions or, among other things, that a comma is replaced with a dot or other filler words are used) are also possible to disguise the case of plagiarism.^{315,316} In general, there are no limits to the plagiarist when obfuscating the plagiarized text.³¹⁷

³⁰⁷[Web14c]: p. 10.

³⁰⁸[Lah06]: p. 403 f.

³⁰⁹[Rie10]: p. 21.

³¹⁰[Web14c]: p. 10 f.

³¹¹[Lah06]: p. 411 ff.

³¹²[Rie10]: p. 23.

³¹³[Web14c]: p. 11.

³¹⁴[Lah06]: p. 405 f.

³¹⁵[Rie10]: p. 21 ff.

³¹⁶[Lah06]: p. 413.

³¹⁷[Web14c]: p. 10 f.

Currently there is also criticism of this plagiarism type.³¹⁸ Some scientists do not agree on whether this rewriting of foreign work is actually a case of plagiarism.³¹⁹ One reason for this is that in the legal field this type of reference is a very common practice, especially in legal texts, and there is no reason for complaint as the original author is (well) mentioned.³²⁰ On the other hand, many agree that “Pawn Sacrifice” is a serious form of plagiarism, because small changes of the plagiarist do not constitute a work of one’s own.³²¹

For the reader of a work or paper it must be obvious, which parts were taken one-to-one of the original source and which parts correspond to a paraphrase.³²² In principle, either one uses one-to-one words without changes of the text with quotation marks (or equivalent with other kind of identification of the text) or textual changes of the plagiarist must be clearly recognizable.³²³ In any case, the citations (especially for one-to-one text copies), paraphrases or even changes to one-to-one passages should be used uniformly in the same document as well as paper.

- **Cut & Slide:**³²⁴ A related plagiarism category to “Pawn Sacrifice” mentioned by Debora Weber-Wulff is the category “Cut & Slide”.

In this type of plagiarism the original source is referenced in some way, however only one part of the text is properly quoted and the other part of the text (in most cases “word-for-word” text) is shifted in a footnote or moved to the appendix, but not highlighted as “one-to-one” text.³²⁵ Another possible manifestation of this particular form of plagiarism is that only one part of the original source is mentioned in a correct scientific way (e.g. highlighted with quotation marks).³²⁶ The rest of the source (statements of the original author) is not given in quotation marks but “slided” to another position in the resulting text, hence hiding the connection between the correctly cited part of the text and its counterpart, which is missing correct citation of the original source.³²⁷

- **Self-plagiarism:**³²⁸ Another very common, probably fascinating type of plagiarism is the so-called “self-plagiarism”, which constitutes an ubiquitous problem, especially in the scientific/academic publishing area.

Many students and researchers, especially authors of scientific publications like articles, journals or papers, believe that they can reuse their text compositions from

³¹⁸[LM15]: p. 12.

³¹⁹See discussions in the book [LM15]: Lahusen and Marksches. 2015. *Zitat, Paraphrase, Plagiat*.

³²⁰[Web14c]: p. 11.

³²¹[Web14c]: p. 10 f.

³²²[Rie10]: p. 21 ff.

³²³[Web14c]: p. 11.

³²⁴[Web14c]: p. 12.

³²⁵[Web14c]: p. 12.

³²⁶[Web14c]: p. 12.

³²⁷[Web14c]: p. 12.

³²⁸[Web14c]: p. 13.

another publication or submitting an identical or almost identical paper repeatedly to different conferences or journals without referencing the original work. By doing so, they – in fact – commit self-plagiarism.³²⁹

At this point, it can be stated that, although there is a legal right to reuse a text – especially if someone is the owner of the work – the text must nevertheless be cited and preferably marked as text reuse (begin and end of the copied text chunks) of the original work.³³⁰ Otherwise, the author violates the rules of good scientific/academic practice. Besides committing scientific misconduct, also potential copyright infringements of the author are possible, if the copyright was transferred to the publisher.

Not only for the readers of the work, it is easier to read the text if it is marked as reuse or if a reprint notice is available (for this case, the reader does not have to read the same passages twice), but also the author is on the safe side with this method without committing a possible copyright infringement.³³¹ In some cases, an identical or an almost identical paper or journal is submitted to different conferences (in parallel) in order to increase the author’s publication count.^{332,333} Unfortunately, this procedure and form of scientific misconduct happens far too often.³³⁴

In addition to the redundantly submitted publications, also “recycling text” and the reuse of methods can also be forms of self-plagiarism (which is also referred to as “autoplagerism”³³⁵) if the original source is not cited correctly.³³⁶

Many authors have the opinion that once they have written a text, they are the authors and owners of it and that, therefore, they can reuse it as often as they want, even without the appropriate citation of the original work.³³⁷ But this is not only a copyright issue, but also a matter of good scientific practice.³³⁸ Of course, it is possible to reuse an already written text, but it must be clear what is the original work and it must be marked where the text takeover starts and where it ends.³³⁹ Otherwise, the author of a work will be rewarded with the same work several times - and this method is the opposite with which scientific integrity can be guaranteed.

- **Other forms of Plagiarism:** Furthermore Debora Weber-Wulff distinguishes two other types of plagiarism like “**Clause Quilts**” and “**Bound Renaming**”, which

³²⁹[Web14c]: p. 13.

³³⁰[Web14c]: p. 13.

³³¹[Web14c]: p. 13.

³³²[Sch11]: Schimmel. 2011. *Von der hohen Kunst ein Plagiat zu fertigen - Eine Anleitung in 10 Schritten (Geleitwort Karl-Theodor zu Guttenberg)*, p. 35 f (*Sonderfall: Selbstplagiate*).

³³³[Web14c]: p. 13.

³³⁴[Rie10]: p. 32 ff.

³³⁵[Frö06]: p. 82.

³³⁶[Web14c]: p. 13.

³³⁷[Rie10]: p. 32 ff.

³³⁸[GN18]: p. 75 f.

³³⁹[Web14c]: p. 13.

are only briefly explained in the following paragraphs. “**Clause Quilts**” represents a type of plagiarism in which a variation of paraphrasing (like “*patchwriting*”³⁴⁰) from different sources takes place.³⁴¹ To a certain extent this is similar to the aforementioned explained plagiarism type of “Disguised Plagiarism”. Often, the term “*mosaic plagiarism*” is used as a synonym.³⁴²

The other form of plagiarism is “**Bound Renaming**”, which is occurring especially in the context of programming, by using the program structure and just renaming of variables.³⁴³ This type of plagiarism is not mentioned in Weber Wulff’s book³⁴⁴, but in an earlier publication (in cooperation with Gabriele Wohnsdorf)³⁴⁵, which acts as the basis for the chapter “*A Typology of Plagiarism*” of the book “*False Feathers: A Perspective on Academic Plagiarism*”.³⁴⁶

There also exist, besides the aforementioned plagiarism forms, other dimensions of plagiarism which are also important for the categorization and classification of possible plagiarism types. For example, it can be distinguished whether a text snippet is plagiarized only from one source (using only a single source for plagiarism) or from different sources. So it can be distinguished between single vs. multiple used sources which contribute to a possible case of plagiarism.³⁴⁷

Another important issue in plagiarism detection is to determine which type of plagiarism (intrinsic or extrinsic plagiarism) was applied.³⁴⁸ In plagiarism detection, for example, it is possible that an intrinsic or an extrinsic approach is used. Depending on the subject matter of the plagiarism detection and what exactly should be checked (text recognition or text comparison vs. authorship), a different approach (intrinsic vs. extrinsic comparison method) is used. A good overview is presented in Carnahan’s work “*Plagiarism Detection*”³⁴⁹.

Also combinations of several different types of plagiarism, which were explained previously, are possible (like, e.g., “Shake and Paste Collections” may be combined with “Translation Plagiarism” or it is also possible that “Disguised Plagiarism” is supplemented and mixed with “Translation Plagiarism”).³⁵⁰ In general, there are no limits to the plagiarist when combining a variety of different combinations of various plagiarism types.³⁵¹

³⁴⁰According to Weber-Wulff, the term “patchwriting” was first used in this context by Rebecca Moore Howard. For more details: see [Web14c]: p. 9.

³⁴¹[Web14c]: p. 9.

³⁴²[Web14c]: p. 9.

³⁴³[Deb06]: p. 91 (2.6 In der Programmierung: gebundene Umbenennungen).

³⁴⁴[Web14c]: Weber-Wulff. *False Feathers: A Perspective on Academic Plagiarism*.

³⁴⁵[Deb06]: Debora Weber-Wulff and Gabriele Wohnsdorf. “Strategien der Plagiatsbekämpfung”.

³⁴⁶[Web14c]: p. 7.

³⁴⁷[Web14c]: p. 13.

³⁴⁸[Web14c]: p. 7.

³⁴⁹[Car+17]: Carnahan et al. 2017. *Plagiarism Detection*.

³⁵⁰[Web14c]: p. 13 f.

³⁵¹[Web14c]: p. 14.

The first question which arises: Are the citations given and secondly, if so, were the citations also given in a correct and scientific way?³⁵² A potential source for a negative answer to this question could be that the citation is misplaced or if it hides a quotation (possibly due to the absence of quotation marks or the missing identification of the copied text sections). Furthermore also citations spanning over several pages or citations which are only recognizable when inspecting the bibliography are problematic according to Weber-Wulff.³⁵³

Another interesting question is, whether the source(s) of the work, especially the original author, are missing or whether they have been mentioned correctly.³⁵⁴ Another important question is, if the original source was given and if it is also specified in the bibliography.³⁵⁵

It is also important to recognize whether literal takeovers of text passages have been uniformly highlighted and whether they are labeled accordingly.³⁵⁶ Word-for-word copies as well as one-to-one text takeovers are relatively easy to detect, but these forms of copies are difficult to detect when editing or paraphrasing has taken place, sentences have been changed, a bulleted list has been resorted or words have been replaced by synonyms.³⁵⁷ These are also difficult to recognize when the argument chain or the text structure has been adopted or sentences have been smoothed. In these situations, it is hard to give a well-defined limit for this type of plagiarism and to identify such methods.

Furthermore, the question regarding the quotation can even be extended: Was a quote or the identification thereof just forgotten (accidental approach) or was it made on purpose (intentional approach) and, accordingly, was the original text supplemented with paraphrasing (without reference to the original author)?³⁵⁸ The resulting text is pretending to be the plagiarist's own work, so one wants to hide or literally disguise from the original source or the original text as well as the original author's statements.³⁵⁹

In the literature the unconscious forgetting that one is not the original author of a text is also known under the term **“cryptomnesia”**.³⁶⁰ In more detail, the term refers to the fact that authors sometimes simply forget that ideas, methods or even the essence of a text were already proposed by others³⁶¹ and that they therefore need to cite the respective sources.³⁶² Due to the “forgotten memory” this process (of adopted text sections and ideas) is done in an accidental way.^{363,364}

³⁵²[Web14c]: p. 13 f.

³⁵³[Web14c]: p. 5.

³⁵⁴[Web14c]: p. 13.

³⁵⁵[Web14c]: p. 14.

³⁵⁶[Web14c]: p. 5.

³⁵⁷[Deb06]: p. 90.

³⁵⁸[Web14c]: p. 5, 14.

³⁵⁹[Web14c]: p. 5.

³⁶⁰[Deb06]: p. 90.

³⁶¹[Frö06]: p. 87.

³⁶²[GN18]: p. 74.

³⁶³[Deb06]: p. 90.

³⁶⁴[Web14c]: p. 5 f.

Here, it should be mentioned that in Weber-Wulff's defined typology of plagiarism, the question of the intention of the respective plagiarist was not considered.³⁶⁵ In order to check and determine whether a concrete work actually contains signs of (text) plagiarism or not, Gerhard Reichmann has defined five dimensions of plagiarism. Different influences and factors in the respective dimensions (according to Reichmann) are incorporated in order to provide support in decision making whether the suspicion to commit plagiarism can actually be confirmed or not (in a specific case).³⁶⁶ In addition to acting as decision support, the framework of Reichmann, especially the dimension "Intent"³⁶⁷, which was particularly emphasized by Reichmann, can be seen in a broader sense as an extension of Weber-Wulff's typology of plagiarism, in which the intent of the plagiarist is considered too. Further details on the five dimension (according to Reichmann) can be found in Section 3.6. According to Weber-Wulff, it is difficult to determine whether a plagiarist is aware of committing fraud or disguising the original source(s) or is acting unconsciously (by forgetting and therefore not highlighting the beginning and ending of the citation).³⁶⁸ Nevertheless, it is clear when an "author" is making minor changes in a text and not only the quotation marks were forgotten, but the text was copied and then changed or adapted.³⁶⁹ Only these changes can provide an indication that the plagiarist made a decision that the copying process and the cover-up have been deliberately done.³⁷⁰ Another possible indication that a plagiarist acts with intent is when references from the original source have been copied, but the source includes bibliographic errors.³⁷¹ The author claims to have done research and "self-accomplishment", which did not actually happen. This potential case could be considered a possible fraud.³⁷²

Furthermore, an important detail is that scientists are convinced that it is always necessary to use a human reader in order to decide whether a text is plagiarized or not.^{373,374}

For some time now, there has been a controversial debate about whether plagiarism exists only when the text is actually intentionally copied and the output (= resulting text) is issued as the plagiarist's "own" work.³⁷⁵ The next question which arises is whether the text is used as a private (text) copy (which is not published and issued as a separate work and which does not contain references to the original source) and whether this is also a potential case of plagiarism (private vs. public use as well as the question of intent).³⁷⁶ Another interesting question is if it always needs a purpose (for instance, compare the

³⁶⁵[Web14c]: p. 14.

³⁶⁶[Rei13]: Reichmann. 2013. "Textplagiate in der Wissenschaft und deren Verhinderung – Theoretische Überlegungen und empirische Befunde": p. 177 ff.

³⁶⁷[Rei13]: p. 179.

³⁶⁸[Web14c]: p. 14.

³⁶⁹[Web14c]: p. 5 f.

³⁷⁰[Deb06]: p. 90.

³⁷¹[Web14c]: p. 5.

³⁷²[Web14c]: p. 5 f.

³⁷³[Web14c]: p. 14.

³⁷⁴[Web19c]: p. 435.

³⁷⁵[Deb06]: p. 90.

³⁷⁶[Web14c]: p. 5.

definition of Teddi Fisherman³⁷⁷) for a submitted thesis (better grades, graduation, capital gains and many more purposes) to justify this behavior as plagiarism.³⁷⁸ Exactly this is the reason why this question always depends on the definition of the term of plagiarism that is used. Nevertheless, plagiarism is and will always be a problematic issue (especially in the academic and scientific field), which requires and presupposes a question of proof.³⁷⁹

In many cases, the plagiarist will not successively plan if, when and where to plagiarize.³⁸⁰ There is no special (critical) turning point at which the plagiarist decides for himself/herself that from this point in time on he/she plagiarizes and uses certain types of plagiarism.³⁸¹ This process is strived in a continuous way, the writing process or the text results are adjusted depending on, like e.g, how fast the submitting deadline is approaching.³⁸² It can be assumed that a close deadline increases the likelihood that people think about plagiarizing.³⁸³ Finally, a patchwork or a collage is published, comprising scientific misconduct (for example in containing deficiencies in references, referencing the original-source and no highlighting of word-for-word takeovers, etc.) which furthermore contains and reflects an entire spectrum of various plagiarism activities.

Depending on the type of the text, the length of the text, the extent of the adopted and/or word-for-word sections as well as the type of plagiarism, above a certain limit, a case of plagiarism is no longer acceptable.³⁸⁴ Nevertheless, this limit is hard to identify and, in general, it varies depending on the investigator.

The aforementioned fact shows that it is not sufficient to base the plagiarism detection or the decision making whether a given work is confirmed to contains signs of plagiarism³⁸⁵ only on software solutions. Therefore, it is obvious that the detection and decision making always requires a human entity or an institution (like universities)³⁸⁶ that decides whether a resulting text (including thesis, dissertations etc.) is a case of plagiarism or not.

But it needs to be emphasized that there are no clear rules to classify whether a work is plagiarized, but there are several approaches and attempts to detect plagiarism.³⁸⁷ There are differences between the detection and the assessment of whether a given text is containing signs of plagiarism.³⁸⁸ The decision of whether or not there is plagiarism is

³⁷⁷[Fis09]: p. 5.

³⁷⁸[Web14c]: p. 6.

³⁷⁹[Web14c]: p. 5.

³⁸⁰[HAM17]: p. 169 f.

³⁸¹[Web14c]: p. 14.

³⁸²[Web14c]: p. 14.

³⁸³[FN95]: p. 168.

³⁸⁴[Web14c]: p. 14.

³⁸⁵[SR18]: p. 2 (Section: Plagiarism).

³⁸⁶[Web14c]: p. 14.

³⁸⁷[Deb06]: p. 93-96.

³⁸⁸[Web14c]: p. 92 ff.

depending on the discretion of the reader of the work or institution to which the work was submitted.³⁸⁹

Another interesting fact, which can be easily seen is, that there is a wide range of plagiarism activities and it is not always easy to grasp all their facets because cases of plagiarism often involve many complex dimensions. Therefore, this situation is extremely difficult to detect and to analyze.

Additionally, Weber-Wulff also discusses phenomena of other types of academic misconduct, like “Ghostwriting”, “Contract Cheating”, “Honary Authorship”, “Falsifying Data”, which also represents serious forms of scientific dishonesty.³⁹⁰

Here, it is essential, that the author of the book “*False Feathers: A Perspective on Academic Plagiarism*”³⁹¹, clearly distinguishes between plagiarism and scientific misconduct. This is in contrast to the wide-spread opinion that every case of scientific misconduct is also, at the same time, plagiarism.³⁹² Debora Weber-Wulff classifies, especially ghostwriting, into the category of academic and scientific misconduct.³⁹³

Many literature sources (Stefan Weber³⁹⁴, Gerhard Reichmann³⁹⁵ and Dominik Gross³⁹⁶, are only a few examples) referred to this typology defined by Debora Weber-Wulff and Gabriele Wohnsdorf.

3.5.2 A Typology of Plagiarism defined by Gerhard Fröhlich

Another distinction of different types of plagiarism is proposed by the Austrian scientist Gerhard Fröhlich. He provides another approach for defining common types of plagiarism. In the following we will give an overview of different plagiarism types defined by Gerhard Fröhlich.³⁹⁷ He draws special attention to the legal traceability of each type of plagiarism.

The first category of a plagiarism types introduced by Fröhlich is the “**total plagiarism**”.³⁹⁸ The content and structure of the plagiarism is congruent with the previously described plagiarism type by Debora Weber-Wulff. In this most extreme form of plagiarism there are unmodified “one-to-one word” copies or even takeovers in form of large text chunks present. The entire work is considered as a case of plagiarism. This type of plagiarism is relatively easy to recognize by various methods of text comparison with databases and search engines by readers of the work as well as plagiarism experts.³⁹⁹

³⁸⁹[Web14c]: p. 6.

³⁹⁰[Web14c]: p. 14-18.

³⁹¹[Web14c]: Weber-Wulff. 2014. *False Feathers: A Perspective on Academic Plagiarism*.

³⁹²[Web14c]: p. 14 (Section: 2.3 Other Types of Academic Misconduct).

³⁹³[Web14c]: p. 14 f.

³⁹⁴[Web07]: p. 44-48.

³⁹⁵[Rei13]: p. 177 ff.

³⁹⁶[GN18]: p. 74 f.

³⁹⁷[Frö06]: p. 81 f (2.1 Plagiate: Varianten).

³⁹⁸[Frö06]: p. 81.

³⁹⁹[Frö06]: p. 81.

Total plagiarism was discovered according to Fröhlich, as of 2006, most often in dissertations.⁴⁰⁰ The chances of legal tracing of plagiarists would be the highest here, since the use of identical and unmodified text chunks without mentioning or highlighting the original source or real author is a clear indication of this form of plagiarism.⁴⁰¹

A special form of the plagiarism type “**total plagiarism**” is the category “**translation plagiarism**”⁴⁰², which also counts as plagiarism and which was previously explained in Weber-Wulff’s typology of plagiarism. This form is a lower-risk variant of plagiarism (for the plagiarist) in comparison to total plagiarism, because the probability to detect the work as a case of plagiarism is lower than it is in the case of total plagiarism, in which the entire work or text is copied in a one-to-one way.⁴⁰³ It has to be noted, that the number of available translation services and the quality of these (online) translation tools are steadily increasing.

The next plagiarism type established by Gerhard Fröhlich, is the “**partial plagiarism**”, which can be also seen, according to Fröhlich, as “scientific cuvée”.⁴⁰⁴ Partial plagiarism can be seen as a similar type or mixed type of “Disguised Plagiarism” and “Shake and Paste Collections”, as defined by Weber-Wulff.⁴⁰⁵ In this manifestation of plagiarism, text passages are taken from one or more different (foreign) sources by the plagiarist without referencing the original source. Later on the text chunks are combined, which results in a “text collage” or “text cuvée”, according to Fröhlich.⁴⁰⁶ It is also possible that only some parts are literally taken over from one source. According to Fröhlich, some plagiarized text snippets can be detected relatively easy with some anti-plagiarism software.⁴⁰⁷ Nevertheless, Fröhlich highlights that it is hard to establish legal traceability of this type of plagiarism and that legal consequences are therefore hard to achieve.⁴⁰⁸

“**Idea plagiarism**” constitutes another type of plagiarism in the typology defined by the Austrian scientist Gerhard Fröhlich.⁴⁰⁹ Here, the opinions of popular scientists on counting “idea plagiarism” as an additional plagiarism category are not uniform⁴¹⁰, because of the fact that it is hard to detect and solid evidence of possible cases of plagiarism is often missing.⁴¹¹ Since this type of plagiarism represents a takeover of ideas (like the meaning of a text, not copying the text or written words itself) without reference to the (intellectual) “owner”, plagiarists have only minimal chances of being caught when using this form of plagiarism. This form of plagiarism is similar to Weber-Wulff’s type

⁴⁰⁰[Frö06]: p. 81.

⁴⁰¹[Frö06]: p. 81.

⁴⁰²[Frö06]: p. 81.

⁴⁰³[Frö06]: p. 81.

⁴⁰⁴[Frö06]: p. 81.

⁴⁰⁵[Reu15]: Reuschel. 2015. *Tradition oder Plagiat?: Die ‘Stilkunst’ von Ludwig Reiners und die ‘Stilkunst’ von Eduard Engel im Vergleich*, p. 70.

⁴⁰⁶[Frö06]: p. 81 f.

⁴⁰⁷[Frö06]: p. 81.

⁴⁰⁸[Frö06]: p. 82.

⁴⁰⁹[Frö06]: p. 82.

⁴¹⁰[Reu15]: p. 71.

⁴¹¹[Frö06]: p. 82.

of “structural plagiarism”. Fröhlich also explains some examples and gives advice on how to protect one’s own ideas and how to implement this process⁴¹². In particular, he recommends the use of metaphors as well as the awareness of the author to increase the chances of being able to prove the authorship of one’s own work.⁴¹³

Another form of plagiarism, which is known to the scientific community, is so-called **“altruistic plagiarism”**⁴¹⁴. In some sense, this form of plagiarism is a reversal of the other types of plagiarism we studied previously. Here, a text is written and published under a false author name. In the scientific field this practice could be used in order to disguise some possible appreciation as well as some possible criticism against scientific colleagues.⁴¹⁵ These authors are not automatically ghostwriters, even if this association is tempting. According to Fröhlich, the border between authors of an altruistic plagiarism and ghostwriters run very closely together.⁴¹⁶ Ghostwriters write on behalf of other people who finally put their name under the work of the ghostwriters. More details about ghostwriting will be given in Section 3.10.

Another form of plagiarism constitutes the type **“auto plagiarism”**, in which successful formulations, representations as well as research designs are reused in another work without mentioning the original source.⁴¹⁷ The reuse of own textual scientific work should not be seen too strict in Fröhlich’s opinion, because it represents in many cases the usual working practice of scientists, where a constant improvement and further development of a text work is important.⁴¹⁸ Regarding this specific form of plagiarism, there exist different and controversial opinions. Nevertheless, Fröhlich states that a reference to the source of the earlier text should always be given in a footnote.⁴¹⁹ Anyway, Fröhlich takes this type of plagiarism very seriously if identical graphics, images or curves are used in different publications and given in a different context, especially in such cases if identical graphics are used to represent different (scientific) statements.⁴²⁰ Referring to Weber-Wulff’s Typology, this form of plagiarism could be classified as the type “self-plagiarism”.

The next form of plagiarism defined by Fröhlich is **“verbal plagiarism”**, in which text segments and passages are taken and copied (without any indication of the original source) for a specific speech by the plagiarist. The use of this plagiarism type is conceivable in any form of speeches, like, e.g., inaugural speeches.⁴²¹

The next form of plagiarism is **“image plagiarism”**. Here, as the name already implies, images (pictures, but also animations) are taken by the plagiarist and copied without any

⁴¹²For more details: see [Frö06]: p. 88 f.

⁴¹³[Frö06]: p. 82.

⁴¹⁴[Frö06]: p. 82.

⁴¹⁵[Frö06]: p. 82.

⁴¹⁶[Frö06]: p. 82.

⁴¹⁷[Frö06]: p. 82.

⁴¹⁸[Frö06]: p. 82.

⁴¹⁹[Frö06]: p. 82.

⁴²⁰[Frö06]: p. 82, 86.

⁴²¹[Frö06]: p. 82.

reference to the original source.⁴²² These copy process can be done (as already mentioned in cases of text plagiarism) in a total (unchanged and one-to-one copy of the image) or partial (partially modified images or only special parts of a graphic are used) way. Fröhlich here especially focuses on digital images, which are particularly easy to copy and to edit in the 21st century, and on proves of their digital revisions.⁴²³

Noteworthy is the fact that Gerhard Fröhlich was one of the first plagiarism researches in Austria, who deals with the topic of “unethical authorships”, especially with ghostwriting. In summary, it can be stated that the focus of Fröhlich’s publication *“Plagiate und unethische Autorenschaften”*⁴²⁴ lies on **“Ghoswriting”**, **“Unethical Authorships”**⁴²⁵, **“Honory Authorships”**⁴²⁶ and **“Co-Authorships”**⁴²⁷, as well as on **“Professional Ghostwriting”**⁴²⁸. Especially the group of people acting as professional ghostwriters is making big profits by operating this (unethical) business.⁴²⁹

Additionally, Gerhard Fröhlich distinguishes between “scientific” and “academic” misconduct.⁴³⁰ While scientific misconduct includes frauds such as inventing and manipulating visualizations and data, academic misconduct refers to all situations of “cheating” in academia, such as plagiarism, ghostwriting or the corruption/bribery of university teachers.⁴³¹

3.5.3 A Typology of Plagiarism defined by Stefan Weber

Like the authors in the previous sections, also the well-known Austrian “plagiarism hunter” and plagiarism researcher, Stefan Weber is discussing different types and forms of plagiarism.⁴³²

Weber’s approach combines the typology views of the two scientists Debora Weber-Wulff and Gerhard Fröhlich and thus represents a fusion and extension of the two approaches mentioned above.⁴³³ Here, the focus lies on the type of the original source (= basis of the plagiarism) as well as on the type the resulting text (= case of plagiarism, like, e. g., online vs offline).⁴³⁴

⁴²²[Frö06]: p. 82.

⁴²³[Frö06]: p. 82.

⁴²⁴[Frö06]: p. 81-89.

⁴²⁵[Frö06]: p. 84.

⁴²⁶[Frö06]: p. 83.

⁴²⁷[Frö06]: p. 83 f.

⁴²⁸[Frö06]: p. 84.

⁴²⁹[Frö06]: p. 84.

⁴³⁰[Wal12]: p. 2.

⁴³¹[Frö06]: p. 84 (*3.5 Wozu die Aufregung?*).

⁴³²[Web07]: Weber. 2007. *Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*, p. 41-49.

⁴³³[Web07]: p. 44-49.

⁴³⁴[Web07]: p. 47 f.

The resulting fusion (including Stefan Weber’s extension) of the differentiations of plagiarism types refers to Weber-Wulff’s plagiarism typology⁴³⁵, which including the following forms: Copy & Paste (*in toto*), translation plagiarism, “Shake and Paste Collections”, disguised plagiarism and structural plagiarism.⁴³⁶ Also Fröhlich’s differentiations⁴³⁷ like total plagiarism, partial plagiarism and the idea plagiarism are taken into account in Weber’s typology.⁴³⁸ It has to be mentioned that not all types of the two scientists are existing and relevant in Weber’s approach.

The fusion and extension of Stefan Weber’s typology of text plagiarism contains the following types of plagiarism:

- **Copy/Paste - total plagiarism:**⁴³⁹ As already mentioned in the previous sections, this type of plagiarism represents a word-for-word copy or one-to-one copy (with the exception of the author name) of an entire work. It is also possible that the text of an entire work is part of another scientific work. This aforementioned scenario also describes and defines the totality of a case of plagiarism.⁴⁴⁰
- **Copy/Paste - partial plagiarism (“Cuvée”):**⁴⁴¹ In this type of plagiarism different text passages from different sources are combined and mixed with each other in order to “create” a new resulting text/work. This manifestation or method to commit plagiarism is very popular in works containing non-empirical literature.⁴⁴²
- **“Shake & Paste” - plagiarism:**^{443,444} This type of plagiarism constitutes a special form of plagiarism. Here, text passages are not copied as whole segments of foreign works, instead a text patchwork or text collages of numerous sources are created by the plagiarist.⁴⁴⁵
- **Structural plagiarism:**⁴⁴⁶ In this plagiarism category an already existing structure (e.g., the table of contents) of a foreign work is copied by the plagiarist. A case of this type of plagiarism represents, to a certain extent, a redundancy of an existing scientific work. In most cases, structural plagiarism occurs in combination with “Shake & Paste”- plagiarism.⁴⁴⁷

⁴³⁵[Deb06]: p. 90 f.

⁴³⁶[Web07]: p. 44.

⁴³⁷[Frö06]: p. 81 f.

⁴³⁸[Web07]: p. 44.

⁴³⁹[Web07]: p. 45.

⁴⁴⁰[Web07]: p. 45.

⁴⁴¹[Web07]: p. 45.

⁴⁴²[Web07]: p. 45.

⁴⁴³The term was originally coined by Debora Weber-Wulff. For more details: see [Deb06]: p. 91.

⁴⁴⁴[Web07]: p. 46.

⁴⁴⁵[Web07]: p. 46.

⁴⁴⁶[Web07]: p. 46.

⁴⁴⁷[Web07]: p. 46.

- **Idea plagiarism:**⁴⁴⁸ The idea plagiarism, in which foreign thoughts and ideas are acquired by the plagiarist, is relatively difficult to detect. Referring to Weber, it is possible that these cases of plagiarism often take place when reviewers are involved in research project applications. According to Weber, this plagiarism form often occurs in combination with structure and/or “Shake & Paste” plagiarism. This often goes hand in hand with redundancies in the resulting scientific text.⁴⁴⁹

According to Weber, further differentiations of the aforementioned five plagiarism types, based on the technical support of a text, can be done.⁴⁵⁰ Therefore it can be distinguished whether the *source of plagiarism* is an **online text** or an **offline text** and whether the resulting text (= *result of plagiarism*) represents an online or an offline plagiarism.⁴⁵¹ With this new distinction, again four possible combinations are available.⁴⁵² For instance, copying text from one website to another without referencing the original source is an example of online plagiarism from an online original.⁴⁵³

Furthermore, Weber differentiates plagiarism types according to their “genesis” and their manifestation of the acquisition.⁴⁵⁴ The focus here is on the plagiarist’s method of appropriating the text. For example, the plagiarist can simply use “*Google Copy Paste*” from the Web (this methodology is discussed in detail in Weber’s book “*Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*”).⁴⁵⁵ Also, plagiarism can occur by copying e-mail attachments⁴⁵⁶ or by scanning a foreign text (and text recognition using an OCR software)⁴⁵⁷. Of course, it is also conceivable that plagiarism can arise using the method of traditional transcribing and copying of offline texts (e.g., from books in libraries).⁴⁵⁸ Stefan Weber also points out that plagiarism as well as the act of writing scientific theses can be carried out by helpful third parties or by professional ghostwriters and that this fact should never be disregarded when examining such works.⁴⁵⁹

It is also an interesting fact that Weber regards the “**translation plagiarism**” as a special case of every kind of plagiarism, which he expresses with the introduction of a new level in his typology.⁴⁶⁰ This special form can occur as a “special case” of each of the five aforementioned plagiarism types and is therefore to be considered with each plagiarism category.⁴⁶¹ The translation plagiarism is not uncommon, especially in combination

⁴⁴⁸[Web07]: p. 47.

⁴⁴⁹[Web07]: p. 47.

⁴⁵⁰[Web07]: p. 47.

⁴⁵¹[Web07]: p. 47.

⁴⁵²[Web07]: p. 47.

⁴⁵³[Web07]: p. 47.

⁴⁵⁴[Web07]: p. 48 f.

⁴⁵⁵[Web07]: p. 48.

⁴⁵⁶[Web07]: p. 48.

⁴⁵⁷[Web07]: p. 49.

⁴⁵⁸[Web07]: p. 49.

⁴⁵⁹[Web07]: p. 49.

⁴⁶⁰[Web07]: p. 47.

⁴⁶¹[Web07]: p. 48.

with the “Copy/Paste - total plagiarism” and the “Copy/Paste - partial plagiarism”.⁴⁶² Weber’s book, “*Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*”, was published in 2007 and the category translation plagiarism at that time already represented a gray area.⁴⁶³ Even today, this trend⁴⁶⁴ is apparent, because the access to scientific works including the international exchange of these through the Internet has become extremely easy⁴⁶⁵ and the proof of a translation plagiarism is still difficult to provide⁴⁶⁶.

Weber always points out that the syntactic (coincidental) congruence of a text with an existing text must be excluded.⁴⁶⁷ Furthermore, Weber sees critically that Google is regarded by many plagiarists as the “*global brain*”⁴⁶⁸ and thus used for text production. Exactly, this issue is detailed discussed in Weber’s book in *Chapter 5: Textkultur ohne Hirn statt Global Brain*⁴⁶⁹. Since the content is already widely available on the Web, the brain activity is outsourced and reduced by the plagiarist, as the latter may only have to adapt and format the text after the copy/paste process is finished.^{470,471}

⁴⁶²[Web07]: p. 47.

⁴⁶³[Web07]: p. 47.

⁴⁶⁴[Web07]: p. 47.

⁴⁶⁵[Web06]: Weber. 2006. “Das Textplagiat in den Kulturwissenschaften: Varianten, mutmaßliche empirische Trends, theoretische Verwirrungen. Ein Problemaufriss”, p. 103, 105 f.

⁴⁶⁶[Web14c]: p. 8.

⁴⁶⁷[Web07]: p. 41 f.

⁴⁶⁸[Web07]: p. 117 f.

⁴⁶⁹[Web07]: p. 117-157.

⁴⁷⁰[Web07]: p. 3 ff.

⁴⁷¹[Web07]: p. 118.

The Figure 3.1, based on Stefan Weber’s book “*Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*”^{472,473}, provides a summary of Weber’s plagiarism typology, including the merged plagiarism types defined by Fröhlich und Weber-Wulff:

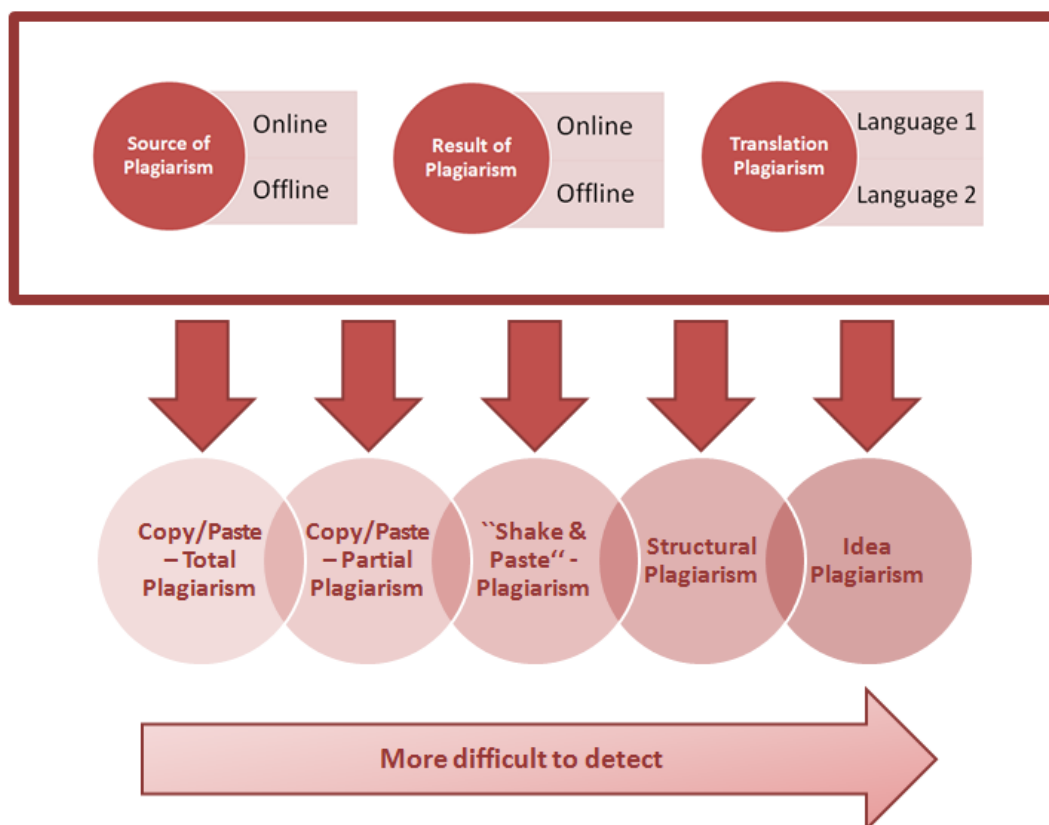


Figure 3.1: Overview of Stefan Weber’s Typology of Plagiarism
(Source: Own representation based on ⁴⁷⁴ ⁴⁷⁵)

A more detailed view and a description of case studies of the various plagiarism types can be found in Table 1 of Weber’s book.⁴⁷⁶

⁴⁷²[Web07]: p. 44-49.

⁴⁷³[Web07]: p. 48 (Tab. 1: Typologie wissenschaftlicher Textplagiate: Original -> Plagiat).

⁴⁷⁴[Web07]: p. 44-49.

⁴⁷⁵[Web07]: p. 48 (Tab. 1: Typologie wissenschaftlicher Textplagiate: Original -> Plagiat).

⁴⁷⁶[Web07]: p. 48 (Tab. 1: Typologie wissenschaftlicher Textplagiate: Original -> Plagiat).

3.6 Five Dimensions of Plagiarism (according to Reichmann)

A systematic analysis of a given case of (assumed) plagiarism is possible based on the five dimensions proposed by Reichmann^{477,478}. The framework by Reichmann focuses on plagiarism in the academic context⁴⁷⁹ (which itself is a subset of the fields mentioned in Section 3.4). Here, the candidates for the groups of persons who (potentially) commit plagiarism are both students as well as (academic) researchers.⁴⁸⁰ Possible targets of those (potential) plagiarists are amongst others research and seminar papers, books, lectures and talks, homeworks as well as theses (Bachelor's thesis, Master's thesis, PhD thesis).⁴⁸¹ Subsequently, we will give an overview of those dimensions on whose basis one can decide whether a given case is indeed plagiarism or not.^{482,483}

Basis/Source of the Plagiarism The main focus of this dimension lies on the decision to which (academic) field the (assumed) case of plagiarism belongs and of which type the original source is (e.g., book, paper, music, etc.).⁴⁸⁴ In the academic field, the type/manifestation of plagiarism is in most cases literary⁴⁸⁵ or text plagiarism⁴⁸⁶. Depending on the source and manifestation of plagiarism, different strategies are used for its detection.⁴⁸⁷ Regardless of the concrete case, in order to “successfully” detect plagiarism, it is always necessary to find the uncited origin of a given content.⁴⁸⁸ We will give more details on plagiarism detection in the subsequent chapters of the thesis at hand.

Content of the Plagiarism After determining the source of the (presumably) plagiarized content, this dimension then focuses on the actual content of the plagiarism, i.e., which elements of the original source were taken without citation.⁴⁸⁹ In case of academic texts, this can be the underlying idea, the structure or even the actual text of the original source.⁴⁹⁰ A special case is the copy of an original work (often mentioned as “total plagiarism”) in which all points are taken from the original source without proper

⁴⁷⁷[Rei13]: Reichmann. 2013. “Textplagiate in der Wissenschaft und deren Verhinderung – Theoretische Überlegungen und empirische Befunde”: p. 177 ff.

⁴⁷⁸[Rei12]: Reichmann. 2012. “Plagiate im universitären Bereich”: p. 127 ff.

⁴⁷⁹[Rei13]: p. 176.

⁴⁸⁰[Rei12]: p. 127.

⁴⁸¹[Rei13]: p. 176.

⁴⁸²[Rei13]: p. 177.

⁴⁸³[Rei12]: p. 127.

⁴⁸⁴[Rei12]: p. 128.

⁴⁸⁵[Rei12]: p. 128.

⁴⁸⁶[Rei13]: p. 177.

⁴⁸⁷[Rei12]: p. 128.

⁴⁸⁸[Rei13]: p. 177.

⁴⁸⁹[Rei13]: p. 177.

⁴⁹⁰[Rei12]: p. 128.

citation.⁴⁹¹ While idea or structure plagiarism is often hard to detect and to prove, this is much easier for text plagiarism.⁴⁹²

Type of the Acquisition This dimension mainly applies to text plagiarism.⁴⁹³ In this context, the type of acquisition can either be direct (one-to-one copy) or indirect (in form of paraphrased and slightly modified versions of the original content based on changes of wording and structure).⁴⁹⁴ Reichmann notes that detecting indirect acquisitions of text is much harder than it is for direct one-to-one copies as the former are hard to distinguish from allowed “inspiration”, but also that direct acquisitions are probably a more serious violation of scientific integrity as they lack creativity in any sense.⁴⁹⁵

Extent of the Plagiarism Probably, this dimension is the crucial one for deciding whether a given piece of text is plagiarized.⁴⁹⁶ Although already a single quote which is not marked as such and also each text acquisition without mentioning the original source is not compatible with the aims of good scientific practice, institutions often decide based on the actual amount of copied text which works fail their plagiarism check.⁴⁹⁷ Most often, the extent is measured in terms of the percentage of copied text in relation to the total amount of text.⁴⁹⁸ The basis to measure these amounts can be words, sentences, paragraphs or even whole sections of the respective text at hand.⁴⁹⁹

Intent Apart from the extent of plagiarized content, many definitions note that another important ingredient for a well-founded decision whether a work is plagiarized or not is the conscious intent of the (potential) plagiarist to betray the scientific community by pretending that foreign work is one’s own.⁵⁰⁰ While there is no doubt that intended copying of text without proper citation is plagiarism, there is no consent whether missing intent suffices to relieve a (potential) plagiarist from an accusation.⁵⁰¹ This would allow also “real” plagiarists to simply pretend that they just forgot to add the necessary citation.⁵⁰² Regardless of the answer to this question one gives, also forgetting a citation is still a lack of scientific carefulness.⁵⁰³

From all of the aforementioned five dimensions, the extent of plagiarized content in combination with the intent of the (potential) plagiarist in many cases has the highest

⁴⁹¹[Rei12]: p. 128.

⁴⁹²[Rei13]: p. 177.

⁴⁹³[Rei13]: p. 178.

⁴⁹⁴[Rei12]: p. 128.

⁴⁹⁵[Rei13]: p. 178.

⁴⁹⁶[Rei13]: p. 178 f.

⁴⁹⁷[Rei12]: p. 128 f.

⁴⁹⁸[Rei13]: p. 178.

⁴⁹⁹[Rei12]: p. 128.

⁵⁰⁰[Rei12]: p. 129.

⁵⁰¹[Rei13]: p. 179.

⁵⁰²[Rei13]: p. 179.

⁵⁰³[Rei12]: p. 129.

weight in the decision whether a work is plagiarized or not⁵⁰⁴ while the other dimensions primarily describe the context and manifestation of the plagiarism. In cases of texts, a small extent of copied text without citation not directly means that the whole work is considered to be plagiarized⁵⁰⁵, but this is always at the discretion of the person or institution judging the work⁵⁰⁶.

For the reader's convenience, Figure 3.2, based on ⁵⁰⁷ and ⁵⁰⁸, summarizes the five dimensions proposed by Reichmann in one illustration.



Figure 3.2: 5 Dimensions of Plagiarism according to Reichmann
(Source: Own representation based on ⁵⁰⁹ ⁵¹⁰)

⁵⁰⁴[Rei13]: p. 178 f.

⁵⁰⁵[Rei12]: p. 129.

⁵⁰⁶[Rei13]: p. 176.

⁵⁰⁷[Rei13]: p. 177 ff.

⁵⁰⁸[Rei12]: p. 127 ff.

⁵⁰⁹[Rei13]: p. 177 ff.

⁵¹⁰[Rei12]: p. 127 ff.

3.7 “Plag Wikis”

It is obvious, that plagiarism has the potential to attract the attention of a broad audience as it can be seen based on examples like the dissertations of Karl-Theodor zu Guttenberg⁵¹¹, Annette Schavan⁵¹², Mario-Max zu Schaumburg-Lippe⁵¹³, Johannes Hahn⁵¹⁴ and Christian Buchmann⁵¹⁵. But it has to be noted that the reports about plagiarism in the media often target only allegation cases about politicians and celebrities.⁵¹⁶ Starting from prominent cases which made it into the media, like the public plagiarism allegations of the German politician Karl-Theodor zu Guttenberg in 2011, more and more people began to collaborate in so-called “plag wikis”⁵¹⁷ in order to contribute to an increased level of scientific integrity.⁵¹⁸

Roughly speaking, such “plag wikis” are web-based whistle-blowing platforms for spotting, marking, commenting and discussing suspicious text passages in scientific theses.⁵¹⁹ Furthermore, many “plag wikis” offer the possibility to directly compare text snippets, to highlight similarities and to relate these text parallels with their respective original source(s).⁵²⁰ Through the availability on the Internet, these platforms, in general, allow people all over the world to jointly investigate⁵²¹ whether a given publication contains plagiarized content and, if so, to which extent the work is plagiarized.⁵²² The contributors (who can be everyone), who edit, comment and investigate alleged cases of plagiarism are often anonymous⁵²³ and/or use nicknames⁵²⁴. To be more precise, “plag wikis” are whistle-blowing platforms with the aim to publicly and collaboratively⁵²⁵ document plagiarized text passages and cases of scientific misconduct in scientific theses⁵²⁶, like dissertations or habilitations. Not often, but sometimes, also published Master’s theses are investigated in such wikis.⁵²⁷ Based on these public platforms, it is possible for people to jointly search for plagiarized content in (almost) any type of publicly available scientific work.⁵²⁸

⁵¹¹[Web14c]: p. 29 ff.

⁵¹²[Ebe15]: Ebert. 2015. *FAZ.net*: “Plagiate an Hochschulen: Fälschen ohne Folgen”.

⁵¹³[Hoc11]: Hochmuth. 2011. *Die Presse*: “Kein Plagiat: Schaumburg-Lippe behält seinen Doktor”.

⁵¹⁴[Web14c]: p. 156.

⁵¹⁵[But17]: Buttinger. 2017. *OÖ Nachrichten*: “Der Abschreibjäger” oder “In Österreich fehlt die Rücktrittskultur”.

⁵¹⁶[Hof16]: Hofmann. 2016. *Promotionsfabriken: Der Dokortitel zwischen Wissenschaft, Prestige und Betrug*, p. 8 ff.

⁵¹⁷Term mentioned in [Web14b]

⁵¹⁸[Web14c]: p. 30.

⁵¹⁹[Web14b]: p. 2.

⁵²⁰[Web14c]: p. 98 ff.

⁵²¹[Web14c]: p. 94 ff.

⁵²²[Mar12]: Martin Kotynek, GuttenPlag User “PlagDoc” (nickname) International Version in English: Initial translation by “WiseWoman” (nickname). *Online: Reflections on a Swarm*.

⁵²³Question “Warum arbeiten viele Wiki-Beitragende anonym bzw. pseudonym?” in [Vro11d]

⁵²⁴[Web14c]: p. 32.

⁵²⁵[Web14c]: p. 94 ff.

⁵²⁶[Web14c]: p. 30.

⁵²⁷Like, e.g., “Zahlenübersicht” in [Vro11c]

⁵²⁸Like, e.g., textbooks mentioned in [Web14c]: p. 32.

A crucial ingredient which makes “plag wikis” a powerful tool for successfully disclosing cases of scientific misconduct is the circumstance that they are open to anybody.^{529,530} Another important factor for the interest in “plag wikis” is the fact that contributing to such wikis does not take much, except the willingness to sacrifice a little bit of the personal spare time with the goal to raise the public awareness regarding the topic of plagiarism and to do something for the good cause.⁵³¹

In the majority of cases, “plag wikis” target persons of public interest, like politicians, (honorary) professors and famous researchers as well as university lecturers.⁵³² Indeed, Karl-Theodor zu Guttenberg – although he was the author of one of the most heavily discussed theses in the German-speaking area in the last couple of years – was not the only person targeted by the growing community of “plag wikis”.⁵³³ Many other cases of scientific misconduct in terms of plagiarism were disclosed since then.⁵³⁴ Here, it has to be mentioned that the “Karl-Theodor zu Guttenberg” affair with special attention to plagiarism constitutes a “precedent”⁵³⁵ and was discussed extremely in the media.⁵³⁶

In some sense, the plagiarism scandal around Karl-Theodor zu Guttenberg, which finally led to his resignation, and the increase in terms of public interest in the topic of plagiarism started a trend.⁵³⁷ More and more documentation platforms for disclosing plagiarism were founded and the community of people contributing to these platforms was growing constantly since the “Karl-Theodor zu Guttenberg” affair.⁵³⁸

Subsequently, we give a list of the most prominent “plag wikis” in the German-speaking area which document extensive cases of plagiarism. Afterwards, we also provide a brief description for each of the platforms:

- “GuttenPlag Wiki”
- “VroniPlag Wiki”
- “PlagiPedi Wiki”
- “Initiative Transparente Wissenschaft”

⁵²⁹[Gre09]: p. 6.

⁵³⁰[Kam11]: Kamenz. 2011. “Abschaffung der Plagiate in Deutschland”, p. 88.

⁵³¹Section “1. Why investigate with a swarm?” and “2. What attracts a swarm?” in [Mar12]

⁵³²[Web14c]: p. 32 f.

⁵³³[Web14b]: p. 2 ff.

⁵³⁴Ibid.

⁵³⁵[Sch11]: Schimmel. 2011. *Von der hohen Kunst ein Plagiat zu fertigen - Eine Anleitung in 10 Schritten (Geleitwort Karl-Theodor zu Guttenberg)*.

⁵³⁶[Web14c]: p. 29 ff.

⁵³⁷[Tre11]: Trenkamp. 2011. *Spiegel Online: “Anonyme Plagiatsjäger - Der Schwarm bin ich”*.

⁵³⁸[Web11b]: Weber. 2011. *Newsblog des Plagiatsgutachters Doz. Dr. Stefan Weber: “Blog für wissenschaftliche Redlichkeit: “VroniPlag Wiki funktioniert – Eine erste kleine Plag-Wiki-Bilanz”*”.

GuttenPlag Wiki⁵³⁹ was the very first “plag wiki” and was founded in 2011.⁵⁴⁰ It was designed to gather, collect and evaluate text snippets of the dissertation of Karl-Theodor zu Guttenberg. Its main goal was to find evidence for plagiarized references and, indeed, later on, most of the suspicious text passages found by the community were confirmed to be plagiarized.⁵⁴¹

According to Weber’s article “*Enthüllungsplattformen im Netz am Beispiel der “Plag Wikis”. Neues Medium der Qualitätssicherung oder virtueller Pranger?*”⁵⁴², this key example for “plag wikis” was the first public platform on which anonymous volunteers (mostly persons, who only use nicknames) have confirmed a suspicion of a plagiarism case by documenting violations of academic misconduct.⁵⁴³ One of the success factors of the GuttenPlag Wiki was the fact that users were able to contribute voluntarily to a “political witch hunt” while still staying anonymous (using arbitrary nicknames for the registration).^{544,545} Combining the efforts of single users in a large “swarm” is nowadays also known as “crowd-sourcing phenomenon”.⁵⁴⁶ This Internet-based cooperation of people is widely known – also in different contexts – as “the swarm”, “swarm intelligence”, “investigative crowdsourcing” or “crowdsourcing phenomenon”.^{547,548} The joint effort of the users of the platform, who published evidence for various and sometimes even extreme forms of plagiarism (including the copying of complete pages without any citation of the original sources)⁵⁴⁹ which are present in Guttenberg’s work, led to a true boom in terms of the foundation of further “plag wikis”.⁵⁵⁰ This boom became evident through the initiatives which we will have a glance at in the upcoming parts of this section.

VroniPlag Wiki⁵⁵¹ was also founded in 2011, shortly after the Guttenberg scandal was disclosed by users of the GuttenPlag Wiki.^{552,553} The majority of the founders are

⁵³⁹[Gut11]: GuttenPlag Users of the Wiki. *Online: GuttenPlag - collaborative documentation of plagiarism.*

⁵⁴⁰The project is no longer actively maintained and is only open for documentary purposes.

⁵⁴¹Ibid.

⁵⁴²[Web14b]: Weber. 2014. “Enthüllungsplattformen im Netz am Beispiel der “Plag Wikis”. Neues Medium der Qualitätssicherung oder virtueller Pranger?”

⁵⁴³[Web14b]: p. 2.

⁵⁴⁴[Web14b]: p. 2, 3, 5.

⁵⁴⁵[Mar12]: Martin Kotynek, GuttenPlag User “PlagDoc” (nickname) International Version in English: Initial translation by “WiseWoman” (nickname). *Online: Reflections on a Swarm.*

⁵⁴⁶[Web14b]: p. 2.

⁵⁴⁷Section “*What is investigative crowdsourcing?*” in [Mar12]

⁵⁴⁸[Web14b]: p. 2.

⁵⁴⁹[Gut11]

⁵⁵⁰[Web11b]: Weber. 2011. *Newsblog des Plagiatsgutachters Doz. Dr. Stefan Weber*: “Blog für wissenschaftliche Redlichkeit: “VroniPlag Wiki funktioniert – Eine erste kleine Plag-Wiki-Bilanz””.

⁵⁵¹[Vro11b]: VroniPlag Users of the Wiki (Community Deutschland). *Online: VroniPlag Wiki – kollaborative Plagiatsdokumentation - Eine kritische Auseinandersetzung mit Hochschulschriften.*

⁵⁵²Question “*Wie entstand VroniPlag Wiki?*” in [Vro11d]

⁵⁵³[Vro11d]: VroniPlag Users of the Wiki (Community Deutschland) - first post created by “WiseWoman”. *Online: VroniPlag Wiki:FAQ (Allgemeine Fragen).*

former members of the GuttenPlag Wiki.⁵⁵⁴ Contributors of the VroniPlag Wiki, which represents the successor of the GuttenPlag community^{555,556}, nowadays investigate cases of suspicion of plagiarism in scientific theses, like dissertations and habilitations, but also other forms of academic publications like textbooks.⁵⁵⁷ In general, the VroniPlag Wiki does not consider Master’s theses⁵⁵⁸. This is because of the fact that, in many cases, Master’s theses are not published and, although only a fraction of them is publicly available, they still outnumber dissertations and habilitations by far. The fact that the capacities of the platform (given by the amount of “investigation time” the users are willing to spend) are limited is then also a reason for declining the investigation of Master’s theses.⁵⁵⁹

As of May 11th 2018 and according to VroniPlag⁵⁶⁰, the VroniPlag Wiki, which also provides a discussion platform for its users, counts 215 registered members according to the entries in the member list.^{561,562} It has to be mentioned, that currently the VroniPlag Wiki counts only 14 “active users” with edits during 30 past days. According to VroniPlag Wiki’s overview of documented cases⁵⁶³, in total, 184 dissertations, 13 habilitations, 1 master thesis (exceptional case) as well as one textbook about scientific writing have been examined in detail on the platform of VroniPlag. While in the years immediately after founding VroniPlag Wiki, the majority of theses originates from politicians, in the recent years, among the investigated publications only a small amount of theses from politicians is found.^{564,565}

Furthermore, a special site on VroniPlag⁵⁶⁶ gives a detailed overview over scientific theses which have been investigated on the platform, which of them contain serious plagiarism

⁵⁵⁴[Web14c]: p. 31 f.

⁵⁵⁵More details about the history of “VroniPlag” can be found here: [Vro11a].

⁵⁵⁶[Vro11a]: VroniPlag User “Plugin Hood” of the Wiki (nickname). *Online: VroniPlag Wiki: Projektentwicklung - Wie entwickelte sich das VroniPlag Wiki Projekt?*

⁵⁵⁷[Vro11c]: VroniPlag Users of the Wiki (Community Deutschland). *Online: VroniPlag Wiki: Übersicht aller Dokumentationen.*

⁵⁵⁸Question “Warum werden außer Dissertations- und Habilitationsschriften keine anderen akademischen Qualifikationsschriften untersucht?” in [Vro11d]

⁵⁵⁹Question “Warum werden außer Dissertations- und Habilitationsschriften keine anderen akademischen Qualifikationsschriften untersucht?” in [Vro11d]

⁵⁶⁰[Adm18a]: Admin(s) of VroniPlag Wiki (Community Deutschland). *Online: VroniPlag Wiki: Lokale Benutzerliste.*

⁵⁶¹For more statistical data: see [Adm18b].

⁵⁶²[Adm18b]: Admin(s) of VroniPlag Wiki (Community Deutschland). *Online: VroniPlag Wiki: Spezialseite: Statistik (Allgemeine Daten über VroniPlag).*

⁵⁶³[Vro11c]: VroniPlag Users of the Wiki (Community Deutschland). *Online: VroniPlag Wiki: Übersicht aller Dokumentationen.*

⁵⁶⁴Ibid.

⁵⁶⁵[Web14c]: p. 32.

⁵⁶⁶[Vro18b]: VroniPlag Users of the Wiki (Community Deutschland). *Online: VroniPlag Wiki: Statistik (Gesamtstatistik).*

issues and how many of those allegations resulted in the revocation^{567,568} of the academic degree the author obtained based on the respective thesis.

A detailed overview of the methodology of the VroniPlag Wiki and its work processes can be found in Weber-Wulff's book⁵⁶⁹. This referred methodology can also be transferred to other "plag wikis".

PlagiPedi Wiki⁵⁷⁰ was, likewise the aforementioned examples, also founded in 2011.⁵⁷¹ One of the vital ingredients of the PlagiPedi platform is a special website⁵⁷², which contains a list of theses showing signs of plagiarism and also theses which should be investigated in the future⁵⁷³. Each entry not only provides a summary of (presumably) plagiarized text passages of the corresponding thesis together with references to the original sources⁵⁷⁴, users can also make suggestions about sections needing deeper investigation⁵⁷⁵. Therefore, in some sense, the PlagiPedi platform can be seen as a To-Do list for plagiarism investigations by its members.

As of May 2017, the platform lists theses from Austrian politicians, like Johannes Hahn (former minister of science)⁵⁷⁶ or Peter Pilz⁵⁷⁷, but also German authors and politicians are considered⁵⁷⁸.

Initiative Transparente Wissenschaft⁵⁷⁹ (previously known as "AntiPlag Austria")⁵⁸⁰, founded in 2011, is an Austrian equivalent to the "GuttenPlag Wiki" which originates from Germany⁵⁸¹. Like its inspiration, the goal of the "initiative for transparent science" (so the English translation of the platform's name) is to investigate cases of suspected plagiarism and scientific misconduct (including possible falsification of data) especially in

⁵⁶⁷See [Vro18a] for more details.

⁵⁶⁸[Vro18a]: VroniPlag Users of the Wiki (Community Deutschland). *Online: VroniPlag Wiki: Aberkennungen (Aberkennungen und Urteile)*.

⁵⁶⁹[Web14c]: p. 94-106.

⁵⁷⁰[Pla11a]: PlagiPedi Users of the Wiki. *Online: Homepage of the PlagiPedi Wiki*.

⁵⁷¹[Web14b]: p. 3.

⁵⁷²[Pla11e]: PlagiPedi Users of the Wiki. *Online: PlagiPedi Wiki: Liste der zur Überprüfung vorgeschlagenen Arbeiten*.

⁵⁷³[Web11b]: Weber. 2011. *Newsblog des Plagiatsgutachters Doz. Dr. Stefan Weber*: "Blog für wissenschaftliche Redlichkeit: "VroniPlag Wiki funktioniert – Eine erste kleine Plag-Wiki-Bilanz"".

⁵⁷⁴[Pla11d]: PlagiPedi Users of the Wiki. *Online: PlagiPedi Wiki: Liste der Arbeiten mit Plagiatsfunden*.

⁵⁷⁵[Pla11e]

⁵⁷⁶[Pla11b]: PlagiPedi Users of the Wiki. *Online: PlagiPedi Wiki: Dissertation von Johannes Hahn (Perspektiven der Philosophie heute)*.

⁵⁷⁷[Pla11c]: PlagiPedi Users of the Wiki. *Online: PlagiPedi Wiki: Dissertation von Peter Pilz (Ökonomische Auswirkungen der Einführung neuer Medien)*.

⁵⁷⁸For more details: see [Pla11e]

⁵⁷⁹[Use11b]: Users of the Wiki "Initiative Transparente Wissenschaft". *Online: Homepage of the Wiki "Initiative Transparente Wissenschaft"*.

⁵⁸⁰[Web11b]

⁵⁸¹[Web14b]: p. 3.

Austria.⁵⁸² The founders are Gerhard Fröhlich and Stefan Weber.⁵⁸³ Both are experts in the field of plagiarism research and have long-term experience in this topic. We will get back to these “plagiarism hunters” in Section 3.8.

The collaborative discussion and documentation platform for investigating cases of plagiarism provides a wiki in order to support the transparent handling of suspicions and accusations of cases of plagiarism.⁵⁸⁴ Among others, the following theses targeted by the initiative contain a significant amount of text which can be shown to be indeed plagiarized or which, at least, violate rules of good scientific practice: the dissertation of Dr. Johannes Hahn, the dissertation of Mag. Dr. Mario-Max Schaumburg-Lippe⁵⁸⁵, the Master’s thesis of Mag. Martin Ehrenhauser⁵⁸⁶. Furthermore, the platform also provides several juridical collections of findings from the Austrian Administrative Court on plagiarism at universities (collected by Gerhard Fröhlich).⁵⁸⁷

We can see that there are several “plag wikis”, each of them with its special focus, but all of them with the primary goal to disclose violations of scientific integrity. Another commonality between these wikis is that they heavily benefit from the circumstance that one can relatively easily search for the original sources of text passages based on the availability of various Internet resources (including scientific papers and publications).⁵⁸⁸ On the one hand, this can be a good thing as it makes it significantly harder for people to get away with plagiarism. On the other hand, depending on how strict the term “plagiarism” is interpreted, a small “mistake” can potentially destroy the career of a person as the plagiarized text passages are highlighted for everybody visiting the platforms, making them a “pillory” on the Internet. These two sides of the same medal are also discussed in an article by Stefan Weber.⁵⁸⁹ Another advantage which is, at the same time, also a disadvantage is the fact that the members of these wikis are allowed to use pseudonyms.^{590,591,592} This makes it easier for people to join the community, but it also potentially invites people to abuse those platforms for personal crusades against famous people, like politicians.

The motivation for anonymous contributors of “plag wikis” to investigate and verify cases of plagiarism is manifold. The incentives range from rising the public awareness and

⁵⁸²Section “*Die Initiative Transparente Wissenschaft - Was wollen wir?*” in [Use11b]

⁵⁸³Ibid.

⁵⁸⁴Section “*Die Initiative Transparente Wissenschaft - Was wollen wir?*” in [Use11b]

⁵⁸⁵[Web11a]: Weber. *Online: “Initiative Transparente Wissenschaft”: Plagiatsfunde in der Dissertation von Mario-Max Schaumburg-Lippe.*

⁵⁸⁶[Use11a]: Users of the Wiki “Initiative Transparente Wissenschaft”. *Online: “Initiative Transparente Wissenschaft”: Plagiatsfunde und Entscheidung in der Diplomarbeit von Martin Ehrenhauser.*

⁵⁸⁷[Frö11]: Fröhlich. *Online: “Initiative Transparente Wissenschaft”: Sammlung von Gerhard Fröhlich (Erkenntnisse des österreichischen Verwaltungsgerichtshofs zu Plagiaten an Universitäten).*

⁵⁸⁸Section “*2. What attracts a swarm?*” in [Mar12]

⁵⁸⁹[Web14b]: Weber. 2014. “Enthüllungsplattformen im Netz am Beispiel der “Plag Wikis”. Neues Medium der Qualitätssicherung oder virtueller Pranger?”

⁵⁹⁰[Web14b]: p. 4-7.

⁵⁹¹[Web14c]: p. 32.

⁵⁹²[Web14c]: p. 103 ff.

attention regarding the topic, increasing the citation quality in scientific theses and also party-political interests.⁵⁹³ The latter case is often observed when a person of public interest (like a politician member) should be “motivated” to resign from his position after falling from grace in the public mind.^{594,595} According to the FAQ of VroniPlag⁵⁹⁶, the critical discussion of documented cases of plagiarism by politicians and, of course, the often serious consequences for the plagiarist rise the public attention regarding the topic of plagiarism (all over the world). In addition to anonymous “plagiarism hunters” in “plag wikis”, there are also other people which are professional plagiarism researchers and experts⁵⁹⁷ for maintaining scientific integrity by pursuing cases of scientific misconduct. In the next section, we will give an overview over some of the most prominent representatives of such researchers and experts.

3.8 Plagiarism Experts

It is assumed that scientific misconduct and especially plagiarism in the context of scientific theses is a rapidly growing problem nowadays.^{598,599} This claim is backed by studies and surveys in which students admit that, at least in the context of one homework exercise or seminar paper in their academic career, they had plagiarized or paraphrased sentences without proper citation. According to studies carried out by Schallenberg⁶⁰⁰, Himmelrath 2008⁶⁰¹ or Sattler⁶⁰², on average more than 30 percent of students’ (home)work contain significant signs of plagiarism.^{603,604} Therefore, it can be assumed that the list of public plagiarism allegations (like Guttenberg, Schavan, Hahn, Rošćić) covered by the mass media are just the tip of the iceberg. With a probability close to absolute certainty, it can be assumed that, besides the mentioned cases of scientific misconduct by politicians, there is a large number of theses by “normal” students and young academics in schools and universities containing signs of plagiarism.⁶⁰⁵ The exact number of cases of plagiarism can only be estimated, but one thing that can be safely assumed is that the numbers are much higher than officially claimed.⁶⁰⁶

⁵⁹³Section “2. *What attracts a swarm?*” in [Mar12]

⁵⁹⁴Ibid.

⁵⁹⁵[Web14b], p. 4-7.

⁵⁹⁶Section “*Thema Motivation: Was wird mit der Plagiatsdokumentation bezweckt?*” in [Vro11d]

⁵⁹⁷Some of the plagiarism hunters are also offering commercial services, e.g., for people who want to take personal benefit of (potentially) destroying the career of a (political) opponent.

⁵⁹⁸[Hag16]: Hager. 2016. *Kurier*: “*Bis zu 30 Prozent der Arbeiten sind unsauber*”.

⁵⁹⁹[Frö06], p. 81.

⁶⁰⁰[Sch07]: Schallenberg. 2007. “Aus der Forschung-Betrug per Mausclick-Geisteswissenschaftler mogeln auch mal gern um der Karriere willen: ‘Paste’ and ‘Copy’ kennen nicht wenige von ihnen viel zu gut.”

⁶⁰¹[Him08]: Himmelrath. 2008. “*Wer Hausarbeiten fälscht, muss mit Strafen rechnen.*”

⁶⁰²[Sat07]: Sattler. 2007. *Plagiate in Hausarbeiten. Erklärungsmodelle mit Hilfe der Rational Choice Theorie*.

⁶⁰³At least this is what the samples used in the studies indicate.

⁶⁰⁴Stefan Weber describes similar statistics in [Web07]: p. 49 ff, p. 55.

⁶⁰⁵[Web07]: p. 56 f.

⁶⁰⁶[Frö06]: p. 81.

The increase in the number of disclosed cases of plagiarism is likely based on the rise of public attention in the topic of plagiarism due to many prominent cases of famous politicians who have been accused of having plagiarized (for example, like Karl-Theodor zu Guttenberg).⁶⁰⁷ These cases have led to an increase in searches for potential plagiarism, especially in doctoral dissertations.⁶⁰⁸ Additionally, the high number of revealed and confirmed cases of plagiarism which occurred in the last 15 years make it hard to deny the circumstance that more and more people seem to not comply with Guidelines for Good Scientific Practice.^{609,610,611}

For this reason, some experts in the field of plagiarism research made it to one of their primary goals to disclose cases of plagiarism in scientific work. Their main ambition is to analyze and evaluate cases of academic misconduct and also to address unfair and ethically problematic behavior (including, among others, the non-compliance to the “Guidelines of Good Scientific Practice”⁶¹² or general violations of scientific integrity, also in form of deception), which is in their eyes not acceptable.⁶¹³ These experts in the area of scientific misconduct or rather in the field of plagiarism, are often referred to as so-called “plagiarism hunters” (“*Plagiatsjäger*” in the German-speaking world)^{614,615} or “plagiarism experts” by the mass-media.⁶¹⁶ Interviews in form of articles like *Zeit Online*⁶¹⁷ and newspapers like *ORF*⁶¹⁸ and *Der Standard*⁶¹⁹ are only some examples in which such plagiarism experts are called “plagiarism hunters”.

Noteworthy, is the fact that this term invented by the media currently does not exist in any of the major dictionaries (like Duden⁶²⁰, The Oxford Dictionary⁶²¹ or Dictionary.com⁶²²) nor in any lexicon (like Bertelsmann or Brockhaus⁶²³).

Subsequently, we are going to introduce a small selection of famous experts, scientists and researchers from the German-speaking area, which are known for their efforts to increase scientific integrity by fighting academic misconduct and especially plagiarism.

⁶⁰⁷[OeA12]: OeAWI - Austrian Commission for Research Integrity. 2012. *Annual Report of 2011*, p. 2.

⁶⁰⁸[OeA12]: p. 2.

⁶⁰⁹[Web07]: p. 50.

⁶¹⁰[Web06]: p. 105 f.

⁶¹¹[NN17b]: N.N. 2017. *ORF: “Plagiatsjäger: Problembewusstsein steigt”*.

⁶¹²[ALL17b]: ALLEA - All European Academies, European Commission. 2017. “The European Code of Conduct for Research Integrity (Revised Edition)”.

⁶¹³Like, e. g., Zeit Online Interview with Debora Weber-Wulff: see [Sch13b].

⁶¹⁴[Web14a]: Weber. 2014. *Newsblog des Plagiatsgutachters Doz. Dr. Stefan Weber: “Blog für wissenschaftliche Redlichkeit: „Was bin ich?“ „Plagiatsjäger!“ – Skizze einer neuen Zukunft”*.

⁶¹⁵[Rei13]: p. 176.

⁶¹⁶Like, e. g., term mentioned in [Fab16], which was invented through the media.

⁶¹⁷[Hor11]: Horstkotte. 2011. *Zeit Online: “Stefan Weber: Der einsame Plagiatsjäger”*.

⁶¹⁸[NN17b]: N.N. 2017. *ORF: “Plagiatsjäger: Problembewusstsein steigt”*.

⁶¹⁹[NN13]: N.N. 2013. *Der Standard: “Deutsche Plagiatsjäger untersuchen erstmals Arbeit aus Österreich”*.

⁶²⁰<https://www.duden.de/>

⁶²¹<https://en.oxforddictionaries.com/>

⁶²²<http://www.dictionary.com/>

⁶²³<https://brockhaus.de/info/enzyklopaedie/>

Also, we will point to relevant literature which is (co-)authored by these researchers and which laid the foundations of research concerning plagiarism and paved the way for other researchers by providing definitions and basic literature for this topic.⁶²⁴ Some of the scientists also design and publish strategies and recommendations against plagiarism, both in terms of prevention and control measures.⁶²⁵

3.8.1 Debora Weber-Wulff

The American-born expert in the field of plagiarism research is a German professor of Media and Computing at the University of Applied Sciences (HTW) Berlin.⁶²⁶ Debora Weber-Wulff has been working on the topic of scientific misconduct, especially on plagiarism (in form of detecting plagiarism as well as teaching good scientific practice) since 2002.⁶²⁷

She was one of the first members in the “swarm” of documentation platforms like “GuttenPlag Wiki”, “VroniPlag Wiki” and “PlagiPedi Wiki”.⁶²⁸

Furthermore she is not only a foundation member of the association “*Wikimedia Deutschland*”, in German “*Gesellschaft zur Förderung Freien Wissens*”, but also vice chair of the “*Gesellschaft für Informatik*” (short GI) working group “*Computing and Ethics*”.⁶²⁹

Debora Weber-Wulff is still an active member and contributor in the group “VroniPlag Wiki”⁶³⁰ and she is one of the few who published her nickname in an official way (in order to indicate her real identity).⁶³¹ Noteworthy is the fact, that the plagiarism researcher uses the same nickname in all “plag wikis”, which is “WiseWoman”.⁶³²

She (and of course the “crowd” of most “plag wikis”) have made substantial contributions to the work of the detection of alleged cases of plagiarism.⁶³³ Many of these cases were confirmed later on with the result of the revocation of the academic degree of the accused author.⁶³⁴ In other cases, at least a public discussion of the specific (prominent) case was started (especially due to the documentation work on VroniPlag).⁶³⁵ One reason for the circumstance that not all theses containing signs of plagiarism lead to the revocation of the academic degree is that not every allegation/accusation of plagiarism is also

⁶²⁴Like, amongst others, Debora Weber-Wulff with her typology of plagiarism, see Section 2.2 of [Web14c]: p. 6-14.

⁶²⁵Like, amongst others, Stefan Weber with his solution approaches against plagiarism, see Section 4.8 of [Web14c], p. 100-115.

⁶²⁶[Uni20a]: University of Applied Sciences - HTW Berlin. *Online: Information about Prof. Dr. Debora Weber-Wulff.*

⁶²⁷[Web14c]: *Chapter: Preface*: vii and viii.

⁶²⁸[Web14c]: *Chapter: Preface*: vii.

⁶²⁹[Uni20a]

⁶³⁰Ibid.

⁶³¹[Web14c]: p. 32.

⁶³²[Uni20a]

⁶³³[Web14c]: p. 35 f.

⁶³⁴[Web14c]: p. 35.

⁶³⁵[Web14c]: p. 36.

confirmed by the university to which the respective thesis was submitted.^{636,637} The following cases of (suspicions of) plagiarism laid the foundation of Debora Weber-Wulff's career as one of the most well-known plagiarism researchers in the German-speaking area: Karl-Theodor zu Guttenberg^{638,639}, Veronica "Vroni" Saß^{640,641}, Annette Schavran⁶⁴², Silvana Koch-Mehrin⁶⁴³, and several more.

Through her investigation as well as cooperation work in the above mentioned (famous) alleged cases of plagiarism and through her relevant literature concerning the topic of plagiarism she made a name for herself.⁶⁴⁴ Also some relevant literature which is crucial and laid the foundations of research concerning plagiarism was published by the researcher Debora Weber-Wulff.⁶⁴⁵ Especially noteworthy is the extended typology of plagiarism provided in her book "*False Feathers: A Perspective on Academic Plagiarism*"⁶⁴⁶.

Debora Weber-Wulff has the following quote on her website⁶⁴⁷:

*"Plagiarism seems to have turned into a hot topic for me.... someone has asked me if I'm writing a book. Maybe."*⁶⁴⁸

Since 2014, we can say that we have absolute certainty about the answer to this question. In this year, the German professor wrote the book "*False Feathers: A Perspective on Academic Plagiarism*"⁶⁴⁹ (published in English). In this book, she has summarized most of her expert knowledge and her practical experience about the topic of academic plagiarism, also in the context of the field of academic settings which she has through her experience as a professor. Furthermore, in this book she gives an overview of the topic plagiarism as well as academic misconduct (including some attempts to give definitions of plagiarism⁶⁵⁰), and she also tries to give a typology of plagiarism⁶⁵¹ as well as types of academic misconduct⁶⁵²). She also gives explanations for reasons

⁶³⁶[Web14c]: p. 33, 103 ff.

⁶³⁷[Ebe15]: Ebert. 2015. *FAZ.net: "Plagiate an Hochschulen: Fälschen ohne Folgen"*.

⁶³⁸[Web14c]: p. 29 ff.

⁶³⁹[Sch13b]: Schmidt. 2013. *Zeit Online: "Debora Weber-Wulff - Eine unbequeme Frau"*.

⁶⁴⁰[NN13]: N.N. 2013. *Der Standard: "Deutsche Plagiatsjäger untersuchen erstmals Arbeit aus Österreich"*.

⁶⁴¹VroniPlag Wiki is called like Edmund Stoibers daughter's nickname. For more details: see [Web14c]: p. 31-36.

⁶⁴²[Ebe15]

⁶⁴³[Sch13b]

⁶⁴⁴Ibid.

⁶⁴⁵[Deb06]: p. 90 f.

⁶⁴⁶[Web14c]: Weber-Wulff. 2014. *False Feathers: A Perspective on Academic Plagiarism*, p. 6-14.

⁶⁴⁷[Uni20c]: University of Applied Sciences - HTW Berlin (Debora Weber-Wulff). *Online: Research Interests of Prof. Dr. Debora Weber-Wulff*.

⁶⁴⁸[Uni20c]

⁶⁴⁹[Web14c]: Weber-Wulff. 2014. *False Feathers: A Perspective on Academic Plagiarism*.

⁶⁵⁰[Web14c]: p. 3-6.

⁶⁵¹[Web14c]: p. 6-14.

⁶⁵²[Web14c]: p. 14-18.

why plagiarism is nowadays (and not only since the invention of the Internet⁶⁵³) a problem⁶⁵⁴ and what are possible reasons⁶⁵⁵ for plagiarizing. It is interesting that, in her opinion, “Ghostwriting” is another type of academic misconduct⁶⁵⁶, but does not belong to the notion of plagiarism.⁶⁵⁷ Furthermore, Weber-Wulff gives a detailed picture about plagiarism in Germany (including public plagiarism documentation platforms like GUTTENPlag⁶⁵⁸ and VroniPlag⁶⁵⁹) and confirmed suspicion cases of plagiarism and cases of academic misconduct which were spectacular in the past decades⁶⁶⁰ in the German-speaking area. In addition to the topic of plagiarism detection she describes how text matching software is working.⁶⁶¹ In this context, she also gives examples of techniques and methods for finding text parallels, for instance through manually searching without using a software for detecting plagiarism.⁶⁶² Debora Weber-Wulff has the opinion, that “*There is no method for proving absence of plagiarism*”⁶⁶³. Instead of that, schools and universities should prevent rather than trying to avoid plagiarism.⁶⁶⁴ There are three fields, or let’s say strategies, which can be addressed: “*Training of students*”⁶⁶⁵, a “*transparent process for dealing with plagiarism and academic misconduct*”⁶⁶⁶ and providing “*services staffed by trained people for teachers*”⁶⁶⁷. In the last chapter of her book, namely “*Plagiarism Policies and Procedures in Other Countries*”⁶⁶⁸, the author gives an overview of how different countries deal with the problem of uncovered cases of plagiarism. She also gives answers to the question whether there is a (central and national) committee on academic misconduct and which software detection systems are used by most universities.

Another interesting fact is that Debora Weber-Wulff maintains the English web blog “*Copy, Shake, and Paste*” in which she writes about good scientific practice and documents cases which do not practice scientific integrity (or academic integrity).⁶⁶⁹ Furthermore news, reviews and discussion of articles as well as suspicious cases of academic misconduct (of all sorts) committed by people (especially from the scientific, like professors) all over the world are presented on the blog.⁶⁷⁰ She also shared her experience, her knowledge

⁶⁵³[Web14c]: p. 19 f, 36.

⁶⁵⁴[Web14c]: p. 22 ff.

⁶⁵⁵[Web14c]: p. 20 f.

⁶⁵⁶[Web14c]: p. 14 f.

⁶⁵⁷[Web14c]: p. 14.

⁶⁵⁸[Web14c]: p. 29 ff.

⁶⁵⁹[Web14c]: p. 31-36.

⁶⁶⁰[Web14c]: p. 44-58.

⁶⁶¹[Web14c]: p. 71-111 (*Chapter 4: Plagiarism Detection*).

⁶⁶²[Web14c]: p. 77 f.

⁶⁶³[Web14c]: p. 113.

⁶⁶⁴[Web14c]: p. 113.

⁶⁶⁵[Web14c]: p. 113.

⁶⁶⁶[Web14c]: p. 113.

⁶⁶⁷[Web14c]: p. 114.

⁶⁶⁸[Web14c]: p. 141-167.

⁶⁶⁹[Deb20a]: Debora Weber-Wulff. *Blog: Copy, Shake, and Paste - A blog about plagiarism and scientific misconduct*.

⁶⁷⁰[Deb20a], Posting from 9th July 2017 about “*German plagiarism cases in the news*”.

and her impressions from events like the World Conference on Research Integrity.⁶⁷¹

Additionally, the German professor is author of the platform “*Portal Plagiat*”⁶⁷² in which she provides information about the topic of plagiarism and scientific misconduct. She also tries to explain what plagiarism is, what possible definitions of plagiarism are, how one can detect plagiarism and what a ghostwriter is.⁶⁷³ Also an eLearning unit “*Fremde Federn Finden*” (especially interesting for teachers and professors) with the focus on how to detect plagiarism is given on the platform.⁶⁷⁴

On both (on the portal as well as on her blog) she mentions and links results (performed by Debora Weber-Wulff in cooperation with some students of HTW Berlin) about tests of various plagiarism detection software which contains the tested tools functionality and effectiveness.⁶⁷⁵ Here, it has to be noted that the results of the tests are summarized in her book.⁶⁷⁶ But a more detailed analysis of the results⁶⁷⁷ are only available on Weber-Wulff’s blog⁶⁷⁸. In 2011 and 2012, specialized tests (with Guttenberg’s thesis and additionally tests in form of collusion detections) were performed.^{679,680} Also a partial test from 2014 (where sources from the plagiarism detection system test from 2013 were taken^{681,682} is provided online.⁶⁸³ In these tests, a comparison of existing tools for plagiarism detection based on different criteria was done. Different results in different years shows that a huge improvement became apparent caused by steady further development of existing tools.⁶⁸⁴ Furthermore, the article “*Plagiarism Detection Software: Promises, Pitfalls, and Practices*”⁶⁸⁵ provides a good overview over typical “pitfalls and practices” of different plagiarism detection systems.

Also in her joint paper publication (“Strategies for handling plagiarism”, in German “*Strategien der Plagiatsbekämpfung*”)⁶⁸⁶ with Gabriele Wohnsdorf (also employed on FHTW Berlin at the time of the publication appeared), strategies for handling the problem of plagiarism (in a short- and long-term perspective) are discussed⁶⁸⁷. In

⁶⁷¹[Deb20a], Posting from 7th June 2017 about “*WCRI 2019 - Day 3*”.

⁶⁷²[Uni20b]: University of Applied Sciences - HTW Berlin (Debora Weber-Wulff). Online: “*Portal Plagiat*”.

⁶⁷³[Uni20b]: For more details: see *Frequently Asked Questions*.

⁶⁷⁴[Web16a]: Weber-Wulff. Online: *E-Learning platform “Fremde Federn Finden” (Overview)*.

⁶⁷⁵Conducted tests of plagiarism detection systems of the years: 2004, 2007, 2008, 2010, 2013 and 2014.

For more details: see [Deb20b]

⁶⁷⁶[Web14c]: p. 71-111 (*Chapter 4: Plagiarism Detection*).

⁶⁷⁷[Web14c]: p. 71.

⁶⁷⁸[Deb20b]: Debora Weber-Wulff. Online: *Overview: “Tests of Plagiarism Software” (2004-2019)*.

⁶⁷⁹[Web14c]: p. 71.

⁶⁸⁰[Deb20b]

⁶⁸¹[Web+13a]: Weber-Wulff et al. Online: *Report 2013 of the “Plagiarism detection software test 2013”*.

⁶⁸²[Web+13b]: Weber-Wulff et al. Online: *Summary of the “Results of the Plagiarism Detection System Test 2013”*.

⁶⁸³[Deb20b]

⁶⁸⁴[Deb16]: p. 626.

⁶⁸⁵[Deb16]: p. 625-638.

⁶⁸⁶[Deb06]: p. 90-98.

⁶⁸⁷[Deb06]: p. 98.

this paper they also give an overview of important definitions⁶⁸⁸, forms and types⁶⁸⁹, classifications⁶⁹⁰ and problems⁶⁹¹ of plagiarism.

She defends the opinion that “academic plagiarism did not begin with the advent of the Internet”.⁶⁹² The plagiarism researcher tries to achieve adaptations of academic rules so that there should not be a time limit after which the revocation of a (doctor) title is no longer possible, even though the corresponding thesis is plagiarized.⁶⁹³ Referring to an interview with the newspaper “Zeit Online”⁶⁹⁴ she pursues plagiarism research as her hobby and she does it because she fights for justice and of course for good scientific practice.

Nowadays, Weber-Wulff became known as one of the most noted “plagiarism hunter” in Germany through the mass media.⁶⁹⁵ Noteworthy is the fact, that she doesn’t see herself as “plagiarism hunter”, instead of that, she sees herself much more as “documentalist” of cases of scientific misconduct.⁶⁹⁶ According to the interview with “Zeit Online”⁶⁹⁷, she sees herself as plagiarism researcher with abandon and carries out that passion in a non-commercial way.

3.8.2 Stefan Weber

The habilitated communication and media scientist Stefan Weber is born in Austria and is nowadays known as one of the main experts in the context of plagiarism research⁶⁹⁸, especially in plagiarism detection, in Austria.⁶⁹⁹ He is also private lecturer at the University of Vienna where he is holding some bachelor seminars in which he is teaching rules and standards of good scientific practice (especially in the context of writing theses).⁷⁰⁰

Stefan Weber is also known as expert in the field of plagiarism research since 2002⁷⁰¹ when he was confronted with the problems of plagiarism for the first time as main ideas⁷⁰² as well as complete pages of his PhD thesis were copied without proper citation.⁷⁰³

⁶⁸⁸[Deb06]: p. 90.

⁶⁸⁹[Deb06]: p. 90 f.

⁶⁹⁰[Deb06]: p. 91 ff.

⁶⁹¹[Deb06]: p. 94 ff.

⁶⁹²[Web14c]: p. 19 f, 36.

⁶⁹³[Ebe15]

⁶⁹⁴[Sch13b]: Interview of 14th August 2013.

⁶⁹⁵See interviews and articles, like, e.g., [Ebe15] and [Sch13b].

⁶⁹⁶[Sch13b]: Interview of 14th August 2013.

⁶⁹⁷[Sch13b]: Interview of 14th August 2013.

⁶⁹⁸The definition “*The Expert*” was created by the Austrian mass-media. Compare, e.g., [Hor11].

⁶⁹⁹[Web20c]: Weber. *Online: Homepage of Doz. Dr. Stefan Weber: Sachverständiger für Plagiatsprüfung: “Der Plagiatsjäger” (Lebenslauf, Bücher).*

⁷⁰⁰Ibid.

⁷⁰¹[Web20c]

⁷⁰²[Web07]: p. 72 ff.

⁷⁰³[Hor11]: Horstkotte. 2011. *Zeit Online: “Stefan Weber: Der einsame Plagiatsjäger”.*

Furthermore, in Stefan Weber’s opinion, also the act of a taking over of a hypothesis constitutes cases of plagiarism.⁷⁰⁴

In what follows, we address **four important cases** of “text theft” concerning the dissertation by Stefan Weber.⁷⁰⁵

The **first case** took place in 2002 and laid the foundation of Stefan Weber’s career as plagiarism hunter.⁷⁰⁶ In this case⁷⁰⁷, a female psychologist (her name was not mentioned because of confidentiality) took the central idea of Stefan Weber’s dissertation and put it on the front text (= blurb) of her book without any form of citation or reference to Stefan Weber’s work.⁷⁰⁸ After the disclosure of the case, she had to write that passages anew.⁷⁰⁹ But this was just the beginning of that scandal. Later on, it became official that she was able to make an application for the “Erwin-Schrödinger-Auslandsstipendium” (international scholarship) of the Austrian Science Fund (FWF, “Fonds zur Förderung der wissenschaftlichen Forschung”), which is a financial fellowship and which was in the second round successfully approved.⁷¹⁰ Despite the knowledge and violations of scientific integrity in form of 1:1 copied or paraphrased text snippets which miss proper citation (or in general translated passages which are plagiarized and based on Stefan Weber’s work), the application was passed incomprehensible by the FWF.⁷¹¹ This fellowship was given for six months and totaled to between 25.800 and 30.800 Euro (excluding taxes) per year.⁷¹²

The **second case** deals with a dissertation which is simultaneously his “longest and one of his most extreme cases”⁷¹³ of text plagiarism which Stefan Weber has found since he began his work of plagiarism research in 2002.⁷¹⁴ The plagiarism case was discovered in 2005-2006. A man who has written an allegedly “own” book and has done his dissertation at the University of Tübingen (submitted at the Catholic and theological faculty), and, in this context, plagiarized a significant extent of Stefan Weber’s dissertation.⁷¹⁵ The extreme dimension of plagiarism⁷¹⁶ was not only to copy the central idea or to duplicate a simple paragraph. Instead, about 50 percent of the original text were copied 1:1, totaling to more than 100 pages (at a stretch)⁷¹⁷, without mentioning nor highlighting

⁷⁰⁴[NN17b]: N.N. 2017. *ORF: “Plagiatsjäger: Problembewusstsein steigt”*.

⁷⁰⁵[Web06]: (»’Dr. plag. geht um‘ oder: Wie man drei Mal in drei Jahren Opfer von Plagiatoren werden kann«): p. 103, 104 f, 106, 108.

⁷⁰⁶[Web06]: p. 103 (*Fall 1: Schrödinger-Stipendium des österreichischen Forschungsförderungsfonds (FWF) mit Übersetzungsplagiatsstellen (2002-04)*).

⁷⁰⁷[Web07]: p. 72 ff.

⁷⁰⁸[Web06]: p. 103.

⁷⁰⁹[Web07]: p. 74.

⁷¹⁰[Web07]: p. 74.

⁷¹¹[Web06]: p. 103.

⁷¹²[Web06]: p. 103.

⁷¹³[Web07]: p. 63.

⁷¹⁴[Web06]: p. 104 f (*Fall 2: Promotion magna cum laude an der Uni Tübingen mit 50 Prozent Textübernahme meiner Dissertation (2004-05)*).

⁷¹⁵[Web06]: p. 104.

⁷¹⁶[NN17b]

⁷¹⁷[Web06]: p. 104.

the original sources⁷¹⁸. As soon as the suspicious plagiarism case was announced, the doctoral degree of the plagiarizer was revoked within 3 months by the University of Tübingen.⁷¹⁹ This scenario is one (of the rare) examples of a fast and effective test procedure of plagiarism, executed by an university.⁷²⁰ This extreme case of plagiarism was reported in the mass-media in an extensive coverage (not only in Germany, but also in Austria). The media reported the statement of the university in which it was announced that 86% of the first hundred pages were plagiarized and have text matches.⁷²¹

Case three⁷²², in which Stefan Weber became a plagiarism victim, was a case of plagiarism committed by translation (namely translation plagiarism) on a Website and **case four**⁷²³ also has to do with adoption of central ideas and text passages of Stefan Weber's dissertation in a Master's thesis.

In three of these four mentioned suspected plagiarism cases, the research misconduct in form of plagiarism was confirmed and followed by further consequences for the plagiarists.^{724,725}

Based on the cases mentioned above, it is evident that Stefan Weber became acquainted with the topic of plagiarism and scientific misconduct and this is probably the main reason for the fact that he nowadays work as plagiarism expert (in form of detecting plagiarism) to improve the quality of good scientific writing, to increase the awareness of scientific integrity and also to promote good scientific practice.^{726,727}

In 2007, he began his work on plagiarism detection as a plagiarism reviewer or expert witness (surveyor) for "*court-proof plagiarism reports*".⁷²⁸ His review process for (primarily academic) theses submitted in the German-speaking area (Austria as well as Germany) included four steps.⁷²⁹ The first step is based on a plagiarism software detection test which consists of comparing the thesis with several databases and scientific archives.⁷³⁰ Another scanning step is to use the Google Web Search and/or Google Books dependent on some text snippets or even the whole thesis.⁷³¹ Furthermore, an originality check

⁷¹⁸Minor changes were taken place in form of citation style, abbreviations etc., see [Web06]: p. 105.

⁷¹⁹[Web06]: p. 105.

⁷²⁰[Web06]: p. 105.

⁷²¹[Web07]: p. 63.

⁷²²[Web06]: p. 106 (*Fall 3: Übersetzungsplagiat auf ominöser Tom-Kummer-Website (2005)*).

⁷²³[Web06]: p. 108 (*Fall 4 (2006)*).

⁷²⁴Like, e.g., in case 3: the removal of the plagiarized text on the suspected website, in case 4: the revocation of academic degree

⁷²⁵[Web07]: p. 76 f (*Tab. 4: Auflistung »meiner« bisherigen Plagiatsfälle 2002 bis 2006*).

⁷²⁶[Web20c]

⁷²⁷[But17]: Buttinger. 2017. *OÖ Nachrichten: "Der Abschreibjäger" oder "In Österreich fehlt die Rücktrittskultur"*.

⁷²⁸[Web20b]: Weber. Online: Homepage of Doz. Dr. Stefan Weber about "*plagiarismreports.com*": "*Plagiarism Checks*".

⁷²⁹[Web18]: Weber. Online: Homepage of Doz. Dr. Stefan Weber: "*Plagiat-Check einer fremden schriftlichen Arbeit*", Section "*Meine Methode: Der Vierschritt-Plagiat-Check©*".

⁷³⁰[Web18]: Section "*Meine Methode: Der Vierschritt-Plagiat-Check©*".

⁷³¹[Web18]: Section "*Meine Methode: Der Vierschritt-Plagiat-Check©*".

of content for identifying the most cited literature is realized. The last step is based on the results of all aforementioned steps which results in a list of suspected reference texts which will be later on compared with a text-by-text-comparison software.⁷³² The software tests are only support tools for the in-depth investigation which can only be done by manually comparing of the thesis and different (but similar) sources.⁷³³ What results is a customer-oriented plagiarism check, including a court-proof plagiarism report which summarizes all suspicious text snippets and which represents a personal and certified plagiarism report to check the citation quality and integrity of scientific texts of any kind.⁷³⁴ In the complete picture, Stefan Weber provides a service to generate specialized reports to check, measure and quantify the compliance with rules and standards which are commonly referred to as “good scientific practice”.⁷³⁵ Based on the four steps of the aforementioned plagiarism check method, Stefan Weber proved hundreds of cases of alleged or verified plagiarism in academia since 2007 according to the his website.^{736,737}

In appreciation of his work, he is very often called as “The Plagiarism Hunter” (in German: “Der Plagiatsjäger”⁷³⁸) by the mass-media (especially in Austria but also in the German-speaking area).^{739,740}

The expert witness for plagiarism detection, often interviewed by the media, decides for his own, which theses he will investigate dependent on the client and type of work.⁷⁴¹ Stefan Weber was involved in uncovering and/or initiating an in-depth plagiarism detection of the following (prominent) cases of plagiarism disclosures (in which a person on the public interest was involved): the PhD thesis of Prince Mario-Max Schaumburg-Lippe^{742,743} (hereditary prince of the aristocratic family Schaumburg-Lippe, his real name is Mario Wagner)⁷⁴⁴, the PhD thesis of Johannes Hahn⁷⁴⁵ (a political commissioner of the European Union and Minister for Science and Research in Austria from 2007 until 2010)⁷⁴⁶, the PhD thesis of Christian Buchmann⁷⁴⁷ (a member of the government in Styria in Austria)⁷⁴⁸, the

⁷³²[Web18]: Section “*Meine Methode: Der Vierschritt-Plagiat-Check©*”.

⁷³³[Web18]: Section “*Meine Methode: Der Vierschritt-Plagiat-Check©*”.

⁷³⁴[Web20b]

⁷³⁵[Web20b]

⁷³⁶Ibid.

⁷³⁷[Web20c]

⁷³⁸[Web20c]

⁷³⁹[Hor11]

⁷⁴⁰[NN17b]

⁷⁴¹[Sen17]: Sendlhofer. 2017. *Kurier*: “*Jeder Auftraggeber hat Interessen, das ist aber nicht meine Baustelle*”.

⁷⁴²[Hor11]

⁷⁴³[Web11c]: p. 35 ff.

⁷⁴⁴The academic degree has not been retracted so far, based on the decision of the University of Innsbruck. For more details: see [Hoc11].

⁷⁴⁵[But17]

⁷⁴⁶The academic degree has not been retracted so far because of the decision of the University of Vienna and the decision of the OeAWI. For more details: see [Web14c]: p. 156.

⁷⁴⁷[But17]

⁷⁴⁸The academic degree has been retracted based on the decision of the University of Graz and the investigation results of the OeAWI. For more details: see [Sen17].

PhD thesis of Bogdan Roščić⁷⁴⁹ (the designated director of the Vienna State Opera)⁷⁵⁰, the Master's thesis of Christian Kern⁷⁵¹ (a Austrian politician and the Federal Chancellor of Austria at that time)⁷⁵², the Master's thesis of Thomas Drozda⁷⁵³ (Federal Minister of Arts, Culture and Media from 2016-2017 in Austria)^{754,755}. One of the more recent case of ghostwriting accusations was the Master's thesis of Ulrike Haselsteiner⁷⁵⁶ (the wife of Hans-Peter Haselsteiner, an important Austrian industrialist)⁷⁵⁷ and many other prominent cases concerning plagiarism accusations.

Here we want to note that the ultimate decision whether an academic degree is to be retracted or not is always at the discretion of the university which granted the title in the first place. Therefore, it cannot be avoided that decisions sometimes vary between different universities⁷⁵⁸, also due to the fact that until 2015, there was no common legal definition of plagiarism which is shared between the universities.

The aforementioned cases of plagiarism are probably just a very small minority in contrast to the estimated number of cases which are never disclosed to the wide public; they only build the tip of the iceberg. This means that besides the cases of prominent plagiarists, there probably exist much more cases of plagiarism committed by non-VIPs. A good example for this fact is, in the perspective of Stefan Weber, the (according to Weber himself) “very naive and embarrassing” case of a Master's thesis submitted to the University of Klagenfurt.⁷⁵⁹ This case is in the research community around the topic of plagiarism better known as “*Wickie und die starken Männer*”⁷⁶⁰, which is also the title of the Master's thesis of a female student and former research assistant at the University of Klagenfurt, in which about 40 percent of the content was copied and pasted from sources of the Internet.⁷⁶¹ This extreme case of plagiarism resulted in the revocation of the academic degree, the termination of employment and went down in the history of plagiarism research in Austria.⁷⁶² A good overview of Stefan Weber's previously

⁷⁴⁹[Sen17]

⁷⁵⁰The academic degree has not been retracted so far, because of the decision of the University of Vienna. A possible plagiarism discovery is not already in progress - now the case is closed (as news report of 14th November 2017). For more details: see [NN17c].

⁷⁵¹[Fab17]: Fabry. 2017. *Die Presse*: “Kerns Diplomarbeit: Plagiatsjäger streitet Auftrag der ÖVP ab”.

⁷⁵²The plagiarism report was with inconspicuous results and the case is closed. For more details: see [Fab17].

⁷⁵³[Tre17]: Trenkler. 2017. *Kurier*: “Plagiatsvorwürfe gegen Minister Thomas Drozda”.

⁷⁵⁴The academic degree has not been retracted based on the decision of the Johannes Kepler University of Linz. For more details: see [Tre18].

⁷⁵⁵[Tre18]: Trenkler. 2018. *Kurier*: “Plagiatsvorwürfe: Thomas Drozda darf Magistertitel behalten”.

⁷⁵⁶[Web19a]: Weber. 2019. *Newsblog des Plagiatsgutachters Doz. Dr. Stefan Weber*: “Blog für wissenschaftliche Redlichkeit: “Ghostwriting-Fall bei WU Wien angezeigt: Hans-Peter Haselsteiner war offenbar Mitwisser von Titelschleichung seiner späteren Ehefrau””.

⁷⁵⁷The plagiarism investigation is already in progress and the Vienna University of Economics and Business is currently verifying the accusations. For more details: see [Web19a].

⁷⁵⁸[Web11c]: p. 37 f.

⁷⁵⁹[Web07]: p. 74-78.

⁷⁶⁰[Web07]: p. 74.

⁷⁶¹[Web07]: p. 46.

⁷⁶²[Sen17].

investigated plagiarism cases (from 2002-2006) is given in *Table 4*⁷⁶³ of his book “*Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*”⁷⁶⁴.

In summary it can be stated that the plagiarism researcher Stefan Weber checked more than 800 theses as well as papers and hundreds of cases of alleged or verified plagiarism in academia since 2007 could be found.⁷⁶⁵ In 12 alleged cases of plagiarism^{766,767} (among others the territorial council of Styria in Austria Christian Buchmann⁷⁶⁸), the suspicions to commit scientific misconduct were also confirmed by the universities⁷⁶⁹. As further and final (legally decided by Austrian courts) consequences imposed by universities, the revocations of the academic degrees of the accused authors have been realized.⁷⁷⁰

The expert states that in the years 2004 and 2005, it was the time when the most cases of plagiarized text snippets emerged (in form of copy and paste of these snippets through the Internet).⁷⁷¹

Stefan Weber is the author of many scientific publications like his first book with the title “*Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*” (for short: *GCP*)⁷⁷², which was published in 2006 and which was the first non-fiction book in the German-speaking area which deals with the problem and the topic of plagiarism.⁷⁷³ GCP in this context means that an unknown number of people google for literature, copy and paste it anywhere and use the “foreign” text snippets as their own intellectual work.⁷⁷⁴ The book gives an overview of what and which consequences could possibly arise based on the copy-and-paste-phenomenon. Furthermore, the book discusses how the information from Google and Wikipedia is used in scientific texts and how plagiarism in the World Wide Web threatens education and knowledge (in academia).

The section “*Das akademische Textplagiat in Österreich - Zwischen Rechtsprechung und Lehrbuch-Vorgaben einerseits und gelebter wissenschaftlicher Praxis andererseits*” in the book “*Plagiate-Gefahr für die Wissenschaft? - Eine internationale Bestandsaufnahme*”⁷⁷⁵ represents another scientific publication of Stefan Weber in which he gives a short overview

⁷⁶³[Web07]: p. 76 f (*Tab. 4: Auflistung »meiner« bisherigen Plagiatsfälle 2002 bis 2006*).

⁷⁶⁴[Web07]: Weber. 2007. *Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*.

⁷⁶⁵[Web20c]

⁷⁶⁶10 confirmed cases in Austria and 2 cases in Germany.

⁷⁶⁷[Web18]: Section “*Aberkennungen akademischer Grade nach meinen Gutachten*”.

⁷⁶⁸[Sen17]

⁷⁶⁹Noteworthy is the fact, that not every allegation/accusation of plagiarism is also confirmed by the particular university to which the respective thesis was submitted

⁷⁷⁰[Web18]: Section “*Aberkennungen akademischer Grade nach meinen Gutachten*”.

⁷⁷¹[NN17b]

⁷⁷²[Web07]: Weber. 2007. *Das Google-Copy-Paste-Syndrom: Wie Netzplagiate Ausbildung und Wissen gefährden*.

⁷⁷³[Web20c]

⁷⁷⁴[Web07]: p. 1.

⁷⁷⁵[Web11c]: Weber. 2011. “*Das akademische Textplagiat in Österreich – Zwischen Rechtssprechung und LehrbuchVorgaben einerseits und gelebter Praxis andererseits*”.

of how the current Austrian regulations regarding ghostwriting and plagiarism look like and in which he shows some cases of jurisdiction of the Austrian court.⁷⁷⁶

Another interesting online resource is the publication *“Enthüllungsplattformen im Netz am Beispiel der ‘Plag Wikis’. Neues Medium der Qualitätssicherung oder virtueller Pranger?”*⁷⁷⁷, in which he summarizes the emerging of “plag wikis”, their manifestations (like VroniPlag etc.), and in which he also reflects and gives pros and cons⁷⁷⁸ regarding the anonymity of the users of these networks which could lead to a witch hunt targeting persons of public interest (like politicians). Nevertheless, he has an unequivocal, positive opinion of the existence of such (public) documentation platforms like “plag wikis”.⁷⁷⁹

Another interesting fact is that the plagiarism expert maintains a news blog on his homepage *“Blog für wissenschaftliche Redlichkeit”*⁷⁸⁰ since 2010, in which he informs about national and (in some cases) international news, about cases of plagiarism and where he also gives insights into the research of plagiarism and related topics (like socio-critical approaches). Subsequently we give some examples of headlines which appeared, especially in 2017, in his blog: *“AMS vermittelt akademische Ghostwriter: Arbeitsmarktservice unterstützt damit Verstöße gegen das Universitätsgesetz”, “Veröffentlichung oder Geheimhaltung von Plagiaten und Titelerkennungen? Zur überholten ‘Amtsverschwiegenheit in Österreich’ as well as “Wo kommen die Sätze her? Plagiatsprüfung des neuen österreichischen Regierungsprogramms”*.⁷⁸¹

Stefan Weber was, beside Gerhard Fröhlich, one of the foundation members of the Austrian “plag wiki” “AntiPlag Austria”, nowadays “Initiative Transparente Wissenschaft” (“Initiative for transparent science”) published under the handle name “plagiatsgutachten.de” on Twitter.⁷⁸² More details about the initiative are provided in Section 3.7. This underlines that Stefan Weber was one of the earliest researchers in the context of plagiarism (and also in the area of plagiarism detection in a public way).

Referring to an interview with Stefan Weber⁷⁸³, his main ambition for working in the field of plagiarism research is to avoid unfair practices regarding scientific writing (see also statements on Weber’s homepage⁷⁸⁴).

The Austrian “plagiarism hunter” is well-known in the mass media and has been interviewed for many topics around plagiarism research⁷⁸⁵, also concerning the current

⁷⁷⁶[Web11c]: p. 31-39.

⁷⁷⁷[Web14b]: p. 179-185.

⁷⁷⁸[Web14b]: p. 182 ff.

⁷⁷⁹[Web14b]: p. 184.

⁷⁸⁰[Web20a]: Weber. 2020. *Newsblog des Plagiatsgutachters Doz. Dr. Stefan Weber*: “Blog für wissenschaftliche Redlichkeit: Startseite”.

⁷⁸¹[Web20a]

⁷⁸²Section “Die Initiative Transparente Wissenschaft - Was wollen wir?” in [Use11b]

⁷⁸³[But17]

⁷⁸⁴[Web20b]

⁷⁸⁵[But17]

state-of-the-art.⁷⁸⁶ With statements like “*Ghostwriting finds its way into academia*”⁷⁸⁷ or “*Up to 30 percent of theses are scruffy and have signs of scientific misconduct*”⁷⁸⁸, he often brings up discussions about plagiarism and so he creates and raises the public awareness of this topic.

The expert in the field of plagiarism research sees himself as a “promoter of good scientific practice” (see also his work, stated with “*Detecting Plagiarism – Promoting Good Scientific Practice*”⁷⁸⁹) and also as a specialist in the control and monitoring of good scientific practice (see also Weber’s homepage⁷⁹⁰). Therefore, it is obvious that Stefan Weber pursues plagiarism research because he is passionate about the topic and he wants to fight for justice and fairness in scientific everyday life.

According to Weber, he is currently developing a software called “QuickPlag” which comprises several techniques for an in-depth investigation of text samples.⁷⁹¹ Furthermore, he has also made some efforts in the area of stylometry.⁷⁹² In this context, he proposes that including the content of the Google Book Search would be of great benefit for the identification of potential cases of plagiarism.⁷⁹³ Nevertheless, due to the copyright law this “treasure” (according to Weber⁷⁹⁴) is still not accessible for plagiarism detection systems or tools for stylometric analysis.

3.8.3 Other Researchers

It has to be mentioned, that there exist further candidates for important plagiarism researchers (like, e.g., Gerhard Fröhlich and Sebastian Sattler). Due to the fact that we want not to go beyond the scope of the Master’s thesis, we restrict ourselves to those aforementioned plagiarism experts.

In addition to public plagiarism researchers and (private) “plagiarism hunters” (community of “plag wikis”) as well as the responsible universities, also the Austrian Agency for Research Integrity (OeAWI) is devoted to investigate possible cases of scientific misconduct, especially cases of plagiarism. The following questions now arise: What is the OeAWI, what is its ambition and which tasks does the organization have? Answers to these issues are given in the next section of this thesis.

⁷⁸⁶[NN17b]

⁷⁸⁷[Fab16]

⁷⁸⁸[Hag16]

⁷⁸⁹[Web20b]

⁷⁹⁰[Web20b]

⁷⁹¹[Web19b]: Weber. *Online: Homepage of Doz. Dr. Stefan Weber: “Eigene Software QuickPlag testen”*, Section “*Softwarebasierte Text-Tiefenanalyse*”.

⁷⁹²[Web19b]

⁷⁹³[Web19b]: Section “*Plagiatsprüfung und Google-Intelligenz: Meine Vision*”.

⁷⁹⁴Ibid.

3.9 OeAWI

Due to the fact that plagiarism at universities is often considered to be (at least partly) a problem of the implemented control mechanisms and the institutions themselves, the motivation of those institutions to publish statistics about alleged cases of plagiarism and academic misconduct is quite low (see Parliamentary Request⁷⁹⁵ and answers of the Austrian Universities⁷⁹⁶, for details). This lack of material to estimate the actual number of theses which contain plagiarized content is just one cause for the foundation of the Austrian Agency for Research Integrity (OeAWI, “Österreichische Agentur für wissenschaftliche Integrität”) at the end of the year 2008.⁷⁹⁷ A second reason for the foundation is the increasing number of cases of plagiarism, both from the national and international point of view, in the last decades⁷⁹⁸.

Originally the Austrian Agency for Research Integrity was established as a registered association (under the law of the Austrian Association Act)⁷⁹⁹ through several founding members⁸⁰⁰, consisting of twelve Austrian universities, the Austrian Academy of Sciences (“Österreichische Akademie der Wissenschaften”), the Vienna Science and Technology Fund (WWTF, “Wiener Wissenschafts-, Forschungs- und Technologiefonds”), the IST Austria (Institute of Science and Technology Austria) and the Austrian Science Fund (FWF, “Fonds zur Förderung der wissenschaftlichen Forschung”).^{801,802}

Currently the OeAWI’s members include (in addition to the founding organizations) all public universities in Austria (like, e.g., Vienna University of Technology, Vienna University of Economics and Business, University of Music and Performing Arts, Academy of Fine Arts Vienna, University of Linz and the Medical University of Graz), several of the Universities of Applied Sciences (like, e.g., University of Applied Sciences FH Campus Wien and IMC University of Applied Sciences Krems) and other non-university research facilities and research funders, like, e.g., Austrian Research Promotion Agency (FFG, “Österreichische Forschungsförderungsgesellschaft”) and AIT Austrian Institute of Technology.⁸⁰³ In addition to these full members, there are also special members of the OeAWI, like “Österreichische Privatuniversitäten Konferenz” (ÖPUK).^{804,805,806}

⁷⁹⁵[The16b]: J 9746 BlgNR 25. GP

⁷⁹⁶[The16a]: AB 9407 BlgNR 25. GP

⁷⁹⁷[OeA18a]: OeAWI. *Online: Homepage of the Austrian Agency for Research Integrity.*

⁷⁹⁸For more details: see [SR18]

⁷⁹⁹[OeA11b]: OeAWI Austrian Agency for Research Integrity. *Online: Statutes: Association statutes in accordance with the Austrian Associations Act of 2002.*

⁸⁰⁰[OeA18a]

⁸⁰¹Ibid.

⁸⁰²[OeA18d]: OeAWI Austrian Agency for Research Integrity. *Online: Member List: Full Members.*

⁸⁰³Ibid.

⁸⁰⁴Parent Association with an actual account of 13 private universities with the ambition to representing the (education and science) interests of its members in an national and international way. See [Omb13], p. 13 for more details about duties.

⁸⁰⁵[ÖPU18]: ÖPUK. *Online: Österreichische Privatuniversitäten Konferenz.*

⁸⁰⁶[OeA18f]: OeAWI Austrian Agency for Research Integrity. *Online: Overview: Member List.*

Nowadays the Austrian Agency for Research Integrity counts 38 members (including many institutions)⁸⁰⁷ and has two offices in Vienna⁸⁰⁸. The Austrian Agency for Research Integrity is also member of the European Network of Research Integrity Offices (ENRIO)^{809, 810, 811}. Since September 2016 the ENRIO and thus also the OeAWI is a project partner of the European Project ENERI (European Network of Research Ethics and Research Integrity)⁸¹², which has the goal to exchange information among network partners regarding research ethics and research integrity.⁸¹³

The ambition and goal of the OeAWI is to investigate and to evaluate (alleged) cases of scientific misconduct (in Austria) in a professional way (and in compliance with the formulated regulations to ensure good scientific practice⁸¹⁴) by offering an independent, fact-oriented and objective platform and community to investigate and evaluate (alleged) cases of scientific misconduct including and/or affecting Austrian scientists and/or Austrian scientific and research institutions (e.g., universities).^{815, 816, 817}

Once an investigation of an alleged case of plagiarism is initialized, the first task of the OeAWI consists of the ascertainment of circumstances underlying the respective case based on all relevant information. After that, an assessment report (on the basis of the the facts and circumstances gathered in the first step) is generated. Furthermore, external audits (involving national and international experts) are performed. The result of the process is a conclusion of statements as well as suggestions on how to proceed with the investigated work.⁸¹⁸ Depending on the actual situation, the OeAWI also provides suggestions and proposed measures to be taken in those cases in which the assumption of plagiarism was confirmed. These recommendations for subsequent actions are based on the assessment of the severity of the offense.^{819, 820}

In this context, it is important to note that the Agency for Research Integrity is neither a decision-making authority nor does it possess an organizational entity having judicial

⁸⁰⁷[OeA17b]: OeAWI - Administrative Office. 2017. *Activity Report of 2017*, p. 14.

⁸⁰⁸[OeA17a]: OeAWI - Administrative Office. 2017. *Activity Report of 2016*, p. 1.

⁸⁰⁹More details about ENRIO: www.enrio.eu

⁸¹⁰[OeA17a]: p. 8 (As of 2017)

⁸¹¹More details about OeAWI as member of the ENRIO: [OeA20]

⁸¹²More details about ENERI: www.eneri.eu

⁸¹³[OeA18b]: OeAWI and ENERI. *Online: European Network of Research Ethics and Research Integrity (ENERI)*.

⁸¹⁴Guidelines for Good Scientific Practice (as of April 2015): [OeA16b]

⁸¹⁵[OeA18a]

⁸¹⁶[OeA17a]: p. 8

⁸¹⁷According to the Statutes of the Association: [OeA11b], § 2 “Objectives of the Association” and § 3 “Activities undertaken to fulfill the Association’s objectives”.

⁸¹⁸[Nic16]: Nicole Föger - Head of Administrative Office of the OeAWI. *Online: Österreichische Agentur für wissenschaftliche Integrität: Eine Bilanz der ersten operativen Jahre*, p. 6-7.

⁸¹⁹[OeA10a]: OeAWI - Austrian Commission for Research Integrity. 2010. *Annual Report of 2009: 1st Report of the OeAWI Commission for Research Integrity (2010/09/14)*, p. 1 f.

⁸²⁰[OeA14b]: OeAWI - Commission for Research Integrity. 2014. *Rules of procedure for the investigation of alleged scientific misconduct*, p. 1.

power (according to § 17, Paragraph 2 of the Statutes of the OeAWI).^{821,822}

According to the Statutes of the OeAWI⁸²³, an in-depth investigation of alleged cases of plagiarism will be performed by the Commission of Research Integrity (*“Kommission für wissenschaftliche Integrität”*), which is an independent panel consisting of six international high-quality scientists and researchers by providing expertise in the following scientific disciplines: Human Sciences, Social Sciences, Life Sciences, Medicine, Science and Engineering and Law⁸²⁴. It is important to mention, that the members of the Commission of Research Integrity are all international experts in order to guarantee a decent level of independence of the Austrian science system.^{825,826} Also, the Commission of Research Integrity can decide for itself to investigate and pursue an alleged case of plagiarism or not.⁸²⁷

One of the main tasks of the OeAWI is to publish recommendations about the following topics and give answers about the questions “What is scientific misconduct?” and “How can it be detected and prevented?”.⁸²⁸

In addition to the latest national and international guidelines and policy papers on “good scientific practice” (like, e.g., the revised version of the European Code of Conduct for Research Integrity of 2017⁸²⁹), also annual reports (which give an overview of how many cases and which forms of misconduct were observed by the Commission for Research Integrity) and rules of procedure of the Austrian Agency for Research Integrity⁸³⁰ are provided online on the OeAWI website⁸³¹.

In addition to raising (public) awareness, prevention and sensitization regarding the topic of plagiarism and scientific misconduct, the OeAWI is also responsible for providing and spreading knowledge in form of publications, lectures, consulting and advisory services, events and workshops with the topic of “Good Scientific Practice”.⁸³² Noteworthy is the fact that, according to the activity report of 2016 of the OeAWI Administrative Office⁸³³, since April 2016 to the end of 2016, about 1200 pieces of flyers, which also represents the “*OeAWI Guidelines for Good Scientific Practice*”⁸³⁴, were distributed by the association itself.

⁸²¹[OeA11b]: § 17, Paragraph 2.

⁸²²[OeA18a]

⁸²³[OeA11b]: § 17 “*Commission for Research Integrity*”, Paragraph 1-4.

⁸²⁴[OeA18e]: OeAWI Austrian Agency for Research Integrity. *Online: OeAWI Commission for Research Integrity*.

⁸²⁵Ibid.

⁸²⁶[OeA17c]: OeAWI - Austrian Commission for Research Integrity. 2017. *Annual Report of 2016*, p. 2.

⁸²⁷[OeA18a]

⁸²⁸[OeA17a]: p. 8.

⁸²⁹For more details: see [ALL17a]

⁸³⁰[OeA16b]: OeAWI Austrian Agency for Research Integrity. 2016. *OeAWI Guidelines for Good Scientific Practice (as of April 2015)*.

⁸³¹For more details: see [OeA18c]

⁸³²[OeA17a]: p. 2-3, p. 8.

⁸³³[OeA17a]: p. 2.

⁸³⁴[OeA16b]

Other subjects and issues covered during the events and workshops were, among others, “Scientific and Research Integrity in a National and an International Context”, “Planning and Writing of Scientific Work”, “Publication and Authorship”, “Peer Review”, “Conflict of Interests”, “Supervision Relationships and Responsibilities”, “Discussions of Hypothetical Cases of Scientific Misconduct” and many more.⁸³⁵

The idea behind the founding of the OeAWI was given from the Austrian Scientific Community, which wanted to face problems of scientific misconduct autonomously. That is, the OeAWI decides on its own whether to deeper investigate a given inquiry or not.⁸³⁶

The association OeAWI receives inquiries from a (potentially anonymous) party (see, like, e.g., case 2010/05, which represents a particular case⁸³⁷). The annual reports provided on the OeAWI homepage⁸³⁸ list inquiries concerning a wide range of topics, like suspicions of plagiarism, improper data reporting, data falsification, authorship conflicts, problems regarding the fair and professional supervision of students and many more.⁸³⁹ Apart from submitting inquiries to the OeAWI, it is also possible for the submitting parties to withdrawn a request sent previously.⁸⁴⁰

The OeAWI Commission decides whether an inquiry is to be rejected (due to the limitation period, already initiated proceedings, lack of competence, etc.)⁸⁴¹ or if the facts underlying the inquiry will be investigated in more detail. In this special situation, only if the inquiry met some criteria (which are conditions defined by the OeAWI⁸⁴²), the inquiry is qualified to be referred to as a “case”⁸⁴³. Afterwards a formal procedure is initialized. In this phase of the in-depth investigation of the specific “case”, the Commission decides whether an allegation referred to the concrete “case” is confirmed, i.e., scientific misconduct occurred and one did not comply the standards of scientific ethics, or not.^{844,845} After the examination of the concrete “case” is completed and closed, the core facts of the “case” are published in an anonymous way^{846,847} and a issue

⁸³⁵For more details: see [OeA17b], p. 3 f.

⁸³⁶[OeA18a]

⁸³⁷[OeA12]: OeAWI - Austrian Commission for Research Integrity. 2012. *Annual Report of 2011*, p. 5.

⁸³⁸[OeA18c]: OeAWI Austrian Agency for Research Integrity. *Online: Links and Information provided by the OeAWI*.

⁸³⁹Summary of results of all cases processed by the OeAWI Commission; obtained from all annual reports (2009-2016) published on the OeAWI website. For more details: see [OeA18c].

⁸⁴⁰[OeA11a]: OeAWI - Austrian Commission for Research Integrity. 2011. *Annual Report of 2010*, p. 2.

⁸⁴¹Mentioned, e.g., in [OeA11a]: p. 2 and in [OeA12]: p. 4.

⁸⁴²Rules of Procedure and the Guidelines for the Investigation of Alleged Scientific Misconduct: [OeA16b]

⁸⁴³[OeA11a]: p. 1.

⁸⁴⁴Ibid.

⁸⁴⁵[OeA11a]: p. 2.

⁸⁴⁶[OeA10a]: OeAWI - Austrian Commission for Research Integrity. 2010. *Annual Report of 2009: 1st Report of the OeAWI Commission for Research Integrity (2010/09/14)*, p. 2.

⁸⁴⁷Like, e.g., Closed “cases” in 2010: Seen in Annual Report 2011[OeA12], p. 4-7.

of opinion of the OeAWI Commission⁸⁴⁸, usually in the annual report of the OeAWI, is provided⁸⁴⁹.

It has to be distinguished between requests submitted to and answered by the OeAWI Administrative Office and Management⁸⁵⁰, which exists since September 2010 (by a paid employee)⁸⁵¹ to ensure a faster processing of incoming requests^{852,853}, and inquiries which are later passed on and processed by the Commission of Research Integrity itself⁸⁵⁴. Those requests handled by the Commission of Research Integrity are later selected for a closer examination.⁸⁵⁵ Here, it has to be mentioned, that the OeAWI Office took over the task of advising in the case of incoming inquiries and it has the role of a mediator between parties in cases of conflict.⁸⁵⁶

Figure 3.3, based on the annual report of 2018 of the OeAWI Commission⁸⁵⁷, presents the summary statistics for inquiries submitted to the OeAWI Office and the OeAWI Commission⁸⁵⁸:

⁸⁴⁸[OeA11b]: § 17 “*Commission for Research Integrity*”, Paragraph 1.

⁸⁴⁹[OeA18c]

⁸⁵⁰[OeA15]: OeAWI - Austrian Commission for Research Integrity. 2015. *Annual Report of 2014*, p. 7 f.

⁸⁵¹[OeA10a]: p. 2.

⁸⁵²[OeA17a]: p. 3.

⁸⁵³It has to be noted that “inquiries submitted to the OeAWI Office have only been documented since 2011”: see chart “*Overview of Inquiries*” in [OeA15]: p. 7 f.

⁸⁵⁴[OeA17c]: p. 2.

⁸⁵⁵Ibid.

⁸⁵⁶[OeA15]: p. 7.

⁸⁵⁷[OeA19b]: OeAWI - Austrian Commission for Research Integrity. 2019. *Annual Report of 2018*, p. 4 (*Graphic 1: Commission*), p. 13 (*Graphic 2: Administrative Office*).

⁸⁵⁸Inquiries handled by the Office are documented separately since 2011

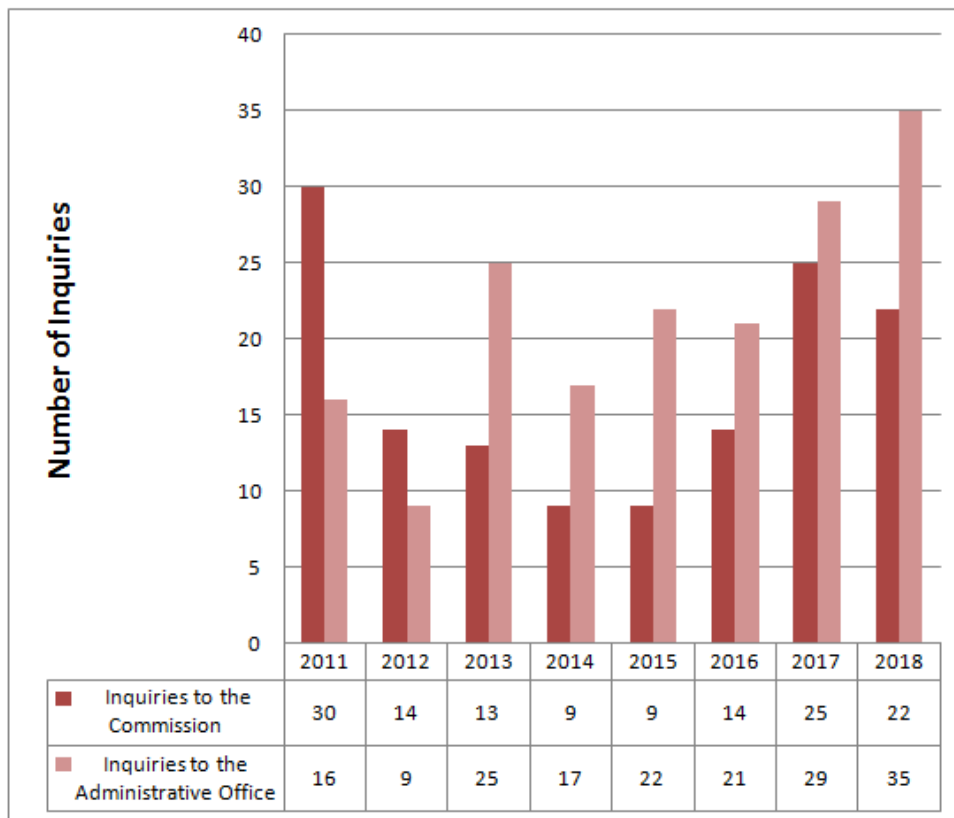


Figure 3.3: Inquiries handled by the OeAWI Office and the OeAWI Commission since 2011

(Source: Own representation based on ⁸⁵⁹)

Between the founding year 2008 and 2015, the agency analyzed a total of 91 inquiries (from which not all refer to theses).⁸⁶⁰ In 30 “cases”, an in-depth investigation was initiated due to strong evidence for scientific misconduct and/or plagiarism (as of the OeAWI annual report of 2015, published in 2016).⁸⁶¹ The following table gives an overview of how many cases the agency analyzed per year (since June 2009, when the OeAWI Commission started with its investigation work) and which of them became concrete “cases”:

⁸⁵⁹[OeA19b]: p. 4 (Graphic 1: Commission), p. 13 (Graphic 2: Administrative Office).

⁸⁶⁰[OeA16a]: OeAWI - Austrian Commission for Research Integrity. 2016. *Annual Report of 2015*, p. 3.

⁸⁶¹[OeA16a]: p. 3.

Year	Number of inquiries	Number of “cases”	Number of closed “cases”
2009	5	1	0
2010	11	5	1
2011	30	9	11
2012	14	6	4
2013	13	2	6
2014	9	6	7
2015	9	1	0

Table 3.1: Number of submitted inquiries under review by the OeAWI Commission
(Source: Based on ^{862,863,864,865,866,867,868})

Table 3.1, based on data from the annual reports of the OeAWI Commission from 2009-2015 (^{869,870,871,872,873,874,875}), illustrates which of the submitted inquiries under review by the Commission became concrete “cases” and which of them were “closed”. Here, the term “closed case” refers to situations in which the scientific misconduct or at least violations of good scientific practice were confirmed or where no violation of scientific standards were found. From data in the first published report of the OeAWI Commission⁸⁷⁶ can be seen that, in 2012, 10 of 16 closed “cases” were confirmed to have scientific misconduct or at least to violate standards and rules of good scientific practice. Whereas, in 2013, 11 to 22 “cases” were approved to commit research misconduct.⁸⁷⁷

It has to be noted that it is possible that not every “case” which emerged in a concrete year can be closed in the same year. In most years, for at least one “case” it was not possible for the Commission to close the respective “case” in the very same year.⁸⁷⁸ An interesting

⁸⁶²[OeA10a]: p. 1-2.

⁸⁶³[OeA11a]: p. 1-2.

⁸⁶⁴[OeA12]: p. 2-7.

⁸⁶⁵[OeA13]: OeAWI - Austrian Commission for Research Integrity. 2013. *Annual Report of 2012*, p. 5-8.

⁸⁶⁶[OeA14a]: OeAWI - Austrian Commission for Research Integrity. 2014. *Annual Report of 2013*, p. 4-7.

⁸⁶⁷[OeA15]: p. 3-7.

⁸⁶⁸[OeA16a]: p. 3-5.

⁸⁶⁹[OeA10a]: p. 1-2.

⁸⁷⁰[OeA11a]: p. 1-2.

⁸⁷¹[OeA12]: p. 2-7.

⁸⁷²[OeA13]: p. 5-8.

⁸⁷³[OeA14a]: p. 4-7.

⁸⁷⁴[OeA15]: p. 3-7.

⁸⁷⁵[OeA16a]: p. 3-5.

⁸⁷⁶[OeA13]: p. 6.

⁸⁷⁷[OeA14a]: p. 5.

⁸⁷⁸See, e.g., [OeA14a]: p. 5.

observation presented in Table 3.1 is the fact that there was a significant increase in the number of inquiries in 2011. This increase is likely based on the rise of public attention in the topic of plagiarism due to many prominent cases of famous politicians who have been accused of having plagiarized⁸⁷⁹ (for example, like Karl-Theodor zu Guttenberg).

From 2016 on, the OeAWI no longer distinguishes cases from inquiries, instead, they keep the notion of “inquiries” also for those investigations which were formerly referred to as “cases”.⁸⁸⁰ For this reason, we do not discuss the subsequent years (2017-2019) in Table 3.1. A closer inspection of the annual report of 2016, which was published in November 2017⁸⁸¹, shows that 14 inquiries were submitted for review to the Commission.⁸⁸² On the contrary, the OeAWI Office received 21 inquiries in 2016.⁸⁸³

An activity report of the Administrative Office for the year 2017 is provided⁸⁸⁴, which states that the OeAWI Office received 29 inquiries⁸⁸⁵ whereas the OeAWI Commission processed 25 inquiries⁸⁸⁶ in total. Furthermore, a working group for the controlling and prevention of plagiarism was founded. In this working group, also ghostwriting is discussed as an important topic.⁸⁸⁷ For 2018, it can be declared that the OeAWI Commission processed 22 inquiries⁸⁸⁸ in comparison to the Administrative Office which received 35 inquiries⁸⁸⁹ in total. For the year 2019 there does not yet exist an annual nor an activity report. Nevertheless, a trend based on the provided reports of the last years^{890,891} can be derived, which shows that the received inquiries are increasingly directed towards other forms of scientific misconduct (like, e.g., ghostwriting and other authorship conflicts).

The Commission treats all submitted inquiries with strict confidence and thus they only provide generalized reports on their activities to the public.⁸⁹² Only special (suspicion) cases regarding scientific misconduct, which attract a high degree of public attention, are sometimes published with an opinion on that special case (see, e.g., case 2009/01⁸⁹³).⁸⁹⁴

Finally, it is important to mention that the agency is open for inquiries from anybody

⁸⁷⁹[OeA12]: p. 2.

⁸⁸⁰[OeA17c]: p. 3.

⁸⁸¹[OeA17c]: p. 2.

⁸⁸²[OeA17c]: p. 4.

⁸⁸³[OeA17c]: p. 8.

⁸⁸⁴[OeA17b]: OeAWI - Administrative Office. 2017. *Activity Report of 2017*.

⁸⁸⁵[OeA17b]: p. 2.

⁸⁸⁶[OeA17b]: p. 4.

⁸⁸⁷[OeA17b]: p. 2.

⁸⁸⁸[OeA19b]: p. 4 f.

⁸⁸⁹[OeA19b]: p. 13.

⁸⁹⁰[OeA17b]: p. 2.

⁸⁹¹[OeA19b]: p. 13.

⁸⁹²[OeA10a]: p. 2.

⁸⁹³[OeA10b]: OeAWI - Austrian Commission for Research Integrity. 2010. *Opinion on Case 2009/01 (2010/11/23)*.

⁸⁹⁴[OeA10a]: p. 1.

(regardless of whether the inquiry stems from an individual or an institution)⁸⁹⁵ who suspects plagiarism in the context of a particular thesis written in Austria. In the overall picture, the work of the Austrian Agency for Research Integrity can be seen as an important contribution (especially nowadays in digital times) for an continuous improvement and enhancement of scientific and research integrity.

3.10 Ghostwriting

As already discussed above, in this thesis at hand the utilization of ghostwriting in the academic context represents another serious type of scientific misconduct.⁸⁹⁶ In general, it can be stated that in cases of ghostwriting, questionable claims in form of undeserved authorships are present⁸⁹⁷. Therefore, in this final section of the background chapter of this Master's thesis, we now want to shed some light on the topic of ghostwriting.

Although, the practice of ghostwriting exists in many areas of application (like, e.g., drafting speeches for politicians, writing books for other authors, directing works for films, writing songs for other performers), for universities this form of scientific misconduct bears new challenges.⁸⁹⁸ Noteworthy is the fact that ghostwriting in the academic context is, in comparison to the problem field of plagiarism, a relatively new phenomenon.⁸⁹⁹ Especially relevant and problematic is this wrongdoing of students when they make use of writing services by ghostwriting agencies for their final theses (which are submitted in an official submission procedure and which later on build the basis for the award of the academic degree from a university).⁹⁰⁰ It is important to mention that such unethical practices⁹⁰¹ of students regarding claimed authorships when publishing at universities do not embody trivial offenses and this kind of wrongdoing is not tolerable.⁹⁰²

In what follows we provide a brief overview over the terminology of ghostwriting. Nowadays, the practice of “ghostwriting” in academia refers to situations in which a person (for instance, a student) hires another person (the writer) who writes a paper or other work on behalf of the client and the original writer does not claim authorship on the written text.⁹⁰³ Here it has to be noted that the writer can be a person working as a freelancer offering custom writing services (see, for instance, offers on www.flohmarkt.at/anzeigen/ghostwriting), but also writer(s) from a company

⁸⁹⁵[OeA18a]

⁸⁹⁶[SG18]: Sankalp and Gautam. 2018. “Ghostwriters in the Scientific World”, p. 3.

⁸⁹⁷[Frö06]: p. 81, 83 f.

⁸⁹⁸[SR18]: p. 2.

⁸⁹⁹[SR18]: p. 2.

⁹⁰⁰[QAA16]: QAA - Austrian Commission for Research Integrity. 2016. “*Plagiarism in Higher Education - Custom essay writing services: an exploration and next steps for the UK higher education sector*”, p. 3.

⁹⁰¹[Frö06]: p. 81.

⁹⁰²[Web14c]: p. 14.

⁹⁰³[Web14c]: p. 14 f.

in form of ghostwriting agencies (like, e.g., ACAD Write⁹⁰⁴, GWriters⁹⁰⁵), which provide custom writing services. While all services regarding the fulfillment of a complete writing task (especially, used writing skills and a predefined style which is used) are regulated by contract, the person who utilizes the services offered by the ghostwriting agencies must pay for the accomplishment in form of an agreed fee.⁹⁰⁶ An interesting fact is that often the student who makes use of the practice of ghostwriting do not have direct, personal contact with the ghostwriter who produces the written work.⁹⁰⁷ Hence, the procedure is done in an anonymous way. Furthermore, professional ghostwriting agencies⁹⁰⁸ justify their business with the fact that they are only helping students⁹⁰⁹ by offering writing services (in form of custom-written papers) which results in form of templates for final theses (such as Master's theses or dissertations).⁹¹⁰ Nowadays, it is usually state-of-the-art of such companies that the scope of such services also consists of a software-based plagiarism detection check, which is performed for the resulting scientific work.⁹¹¹

Noteworthy is the fact that the practice of ghostwriting which is commonly labeled as “unethical authorship”⁹¹², is also often mistakenly referred to under the terms of “guest authorship”⁹¹³ and “honorary authorship”⁹¹⁴. These mentioned terms of wrongdoings are different practices in comparison to the used method of ghostwriting.⁹¹⁵

With special regard to the academic context, sometimes family or friends of students probably take the role of ghostwriters.⁹¹⁶ Nowadays, also professional and industry-employed ghostwriting agencies make business by providing workforce to fulfill a writing task.⁹¹⁷

Cases in which a student commits a serious and intentional scientific misconduct⁹¹⁸ in form of ghostwriting, refer to situations in which the student submits a foreign work of a scientific thesis as its own work.⁹¹⁹ Unfortunately, cases of ghostwriting are not easily detectable and it turns out to be extremely complex to prove it.⁹²⁰ Accusations of ghostwriting are difficult to verify and to confirm.⁹²¹ This is mainly because often only

⁹⁰⁴For more details: see <https://www.acad-write.com/>.

⁹⁰⁵For more details: see <https://gwriters.at/ghostwriting/ghostwriting-agentur>.

⁹⁰⁶[SR18]: p. 2.

⁹⁰⁷[Web14c]: p. 14.

⁹⁰⁸[Frö06]: p. 84.

⁹⁰⁹[SR18]: p. 4.

⁹¹⁰[Web14c]: p. 15.

⁹¹¹[SR18]: p. 2 f.

⁹¹²[Frö06]: p. 81.

⁹¹³[BR12]: p. 324.

⁹¹⁴[Frö06]: p. 83.

⁹¹⁵[Web14c]: p. 14 f, 16 f.

⁹¹⁶[SR18]: p. 2.

⁹¹⁷[Frö06]: p. 84.

⁹¹⁸[BR12]: p. 325.

⁹¹⁹[SR18]: p. 3.

⁹²⁰[SR18]: p. 5.

⁹²¹[Web14c]: p. 15.

the students' thesis supervisor is familiar with the supervised students' writing style⁹²² and this writing style changes over the years of study.

The reasons for students to use a ghostwriter are manifold. It can be assumed that the reasons for students to make use of ghostwriting services are almost identical with the reasons and causes for students to plagiarize in scientific theses (discussed in Section 3.3). Although there exist no concrete facts and figures nor significant studies and statistics about the issue of ghostwriting⁹²³, the market size of agencies which offer custom writing services indicates that there is a high demand for such services.^{924,925} Therefore the misconduct in form of ghostwriting will probably continue increase.⁹²⁶

⁹²²[SR18]: p. 3, 5.

⁹²³[Wäc19]: Wächter. 2019. *Kurier: "Ghostwriting: Über gefälschte Forschung am Fließband"*.

⁹²⁴[Web14c]: p. 15.

⁹²⁵[SR18]: p. 3.

⁹²⁶[Wäc19]

Legal Aspects

In the previous chapter, we provided a short introduction to important terms and concepts regarding the topics of plagiarism and, in particular, ghostwriting. So far, we did not focus on the legal aspects of these issues. Here, first and foremost, it has to be noted that plagiarism is not a trivial offense. This is because, nowadays, the damage which is caused by different forms of plagiarism is not accepted frivolously and the consequences can be serious.

In this chapter, we will now discuss the legal background which is required to fully capture the range and possible manifestations of different forms of plagiarism and ghostwriting. For the thesis at hand, we restrict ourselves to the relevant legislation and the current legal situation in Austria. In particular, we will primarily focus on the Austrian legislation regarding specific regulations provided by the following legal acts, which additionally represent the remainder of this chapter:

- Universities Act 2002 (*Universitätsgesetz 2002: UG*)
- Higher Education Act 2005 (*Hochschulgesetz 2005: HG*)
- University of Applied Sciences Studies Act (*Fachhochschul-Studiengesetz: FHStG*)
- Copyright Act (*Urheberrechtsgesetz: UrhG*)
- Criminal Code (*Strafgesetzbuch: StGB*)

Here, it has to be mentioned that only the German versions of the relevant regulations are legally binding. The English version, which is in some cases provided, was translated by the “*Austrian Legal Information System (RIS)*”⁹²⁷ and is only published and mentioned for a better understanding. Due that fact, a brief review in the respective provision of a stated legal act must be conducted by the reader itself.

⁹²⁷RIS - Rechtsinformationssystem des Bundes. For more details: see <https://www.ris.bka.gv.at/> and <https://www.ris.bka.gv.at/UI/Erv/Info.aspx>

To put it in a nutshell, the following chapters give an overview of the legal situation in Austria and provides insights into the specific fields of law which are applicable in cases of scientific misconduct, especially plagiarism and ghostwriting.

4.1 Universities Act 2002

First of all, the Universities Act 2002 (*Universitätsgesetz 2002: UG*)⁹²⁸ builds the fundamental basis of rules which can possibly be applied in cases of plagiarism as well as of ghostwriting in the academic context, in particular in the application field of most universities in Austria. It is the only legal provision in Austrian law, which explicitly defines the term “plagiarism” and furthermore not explicitly, but in a broader sense the utilization of “ghostwriting”.

This circumstance represents an important fact, because based on these legally defined terms, consequences under the law regulating university studies and other serious study-related sanctions can be derived and imposed easier. Here, it has to be mentioned that this situation was not given before the Universities Act 2002 came into force in January 2015. Additionally, there was no consensus about a general definition of plagiarism (as discussed in Section 3.4) and there existed different perceptions of what constitutes plagiarism and how it can be legally defined. Although, cheating in form of scientific misconduct (like, e.g., plagiarism and ghostwriting) at universities have probably a long history, the legal definition of this topic in Austria regarding the academic context is relatively young. Hence, the amendments of the respective legal definitions were implemented in the Universities Act 2002, which were approved by the National Assembly of Austria in the year 2014 and came into force in January 2015, through the publication of the regulation in the Federal Law Gazette (*BGBl. I Nr. 21/2015*).⁹²⁹ Here, it has to be mentioned that before the legally-binding and general definitions came into force, there were several attempts to formalize this misbehavior in terms of the juridical interpretation of the Supreme Court of Justice (OGH). Commonly, before January 2015, a case of plagiarism was interpreted by the OGH as “*the opposite of a correct citation*”.⁹³⁰ The legal situation regarding cases of plagiarism as well as their applied rules at that time were provided in §§ 46 and 57 UrhG.⁹³¹ These earlier applicable regulations according to the Copyright Act in Austria will be later on briefly summarized in the subsequent section of this Master’s thesis.

⁹²⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019.

⁹²⁹[UG15]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 21/2015 (*Änderung des Universitätsgesetzes 2002 und des Hochschulgesetzes 2005*).

⁹³⁰[OGH90]: OGH 29.09.1987, 4 Ob 313/86 (4 Ob 314/86); OGH 10.07.1990, 4 Ob 72/90.

⁹³¹[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), §§ 46 and 57 UrhG.

In what follows we give a brief overview of the Universities Act 2002 (*Universitätsgesetz 2002: UG*)⁹³² in the context of relevant issues, which are important in the context of academic misconduct, especially plagiarism as well as ghostwriting discovered in final theses. Additionally, we provide vital insights into currently applicable provisions and possible consequences of academic misconduct for students (with special attention on cases of text plagiarism in scientific students' theses). We give answers, on the one hand, to the question which possible study-related consequences do students who plagiarized have to expect, and on the other hand, how (considered on legally-binding aspects) the universities can defend themselves in such cases of committed plagiarism. Therefore, we begin with the discussion of the respective legal terms with their corresponding definitions which are issued by the Austrian legislator and which build the necessary prerequisites to understand the fundamental, legal basics in order to conceive the other concepts of the Universities Act 2002. It is obvious, that only when one knows how "plagiarism" or ghostwriting are legally defined, the imposed consequences under the law regulating university studies can be derived more easily.

4.1.1 Legal Basics in the Context of the UG

The "*Federal Act on the Organisation of Universities and their Studies*" regulates, as the name suggests, the organization of universities and their studies (consisting of among others, organizational law, study law, employment law, provisions for university members and transfer of rights and assets) and is (according to § 6 UG and the "*Scope of Application*"⁹³³) applicable to all 22 (public) universities in Austria, which are listed in the aforementioned article (like, e.g., the University of Vienna, the Vienna University of Technology, the University of Music and Performing Arts Vienna). Furthermore, it has to be noted, that according to § 4 about the "*Legal Nature*" of the Universities Act 2002, all aforementioned universities "*are legal entities under public law*"⁹³⁴ which results in § 51, Paragraph 1 UG stating that the respective universities "*shall act with public power in the implementation of their study regulations*"⁹³⁵. These relevant statements will become important later on when we discuss and analyze whether there are possible consequences for students who had plagiarized in their scientific theses based on the legal aspects of the Austrian criminal law.

According to § 5 UG, which describes the provision about the freedom of adopting statutes for universities (within a certain scope)⁹³⁶, it is possible for universities to

⁹³²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

⁹³³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, especially § 6, Paragraph 1, Sentence 1-22.*

⁹³⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 4 UG.*

⁹³⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 1 UG.*

⁹³⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 –*

regulate certain issues (with compliance to the Universities Act 2002) in form of academic statutes and guidelines.

Based on § 5 UG⁹³⁷ and in accordance to § 19, Paragraph 1,2 UG⁹³⁸ which states that every university in Austria, which is assigned to the UG by law have to define certain general regulations within which they can interact considering the limits of the law. Such statutes of universities can be seen as a kind of an extension to the university law of a corresponding university.

These statutes are an important aspect with special regard to the legal situation of cases of scientific misconduct, like plagiarism or ghostwriting. A fundamental provision, which can be seen as starting point of measures taken by universities against plagiarism issues, is anchored and provided by § 19, Paragraph 2a of the Universities Act 2002. To be more precise, according to § 19, Paragraph 2a UG⁹³⁹, universities (which are assigned to the UG by law) may define a specific handling procedure of cases of plagiarism and other forms of academic misconduct (in particular in the context of written works) by providing regulations in their respective statutes regarding how to deal with the problem of such academic dishonesty. Due to the corresponding article, it is obvious that every university may deal with the problem of plagiarism differently by providing statutes and provisions with different measures, which have to be taken in cases of academic misconduct, especially plagiarism⁹⁴⁰ and “other forms of academic dishonesty”⁹⁴¹ in written works. Referring to § 19, Paragraph 2a UG⁹⁴², the forms of written students’ works are explicitly defined and include “*written term papers and exams, bachelor’s papers, as well as academic theses and artistic submissions*”⁹⁴³. Beside, the permissions for general provisions of possible measures, which can be adopted in the related university statutes, also further consequences in cases of “serious and intentional” plagiarism as well as other forms of academic dishonesty (such as to pretend scientific or artistic achievement), are also listed in ⁹⁴⁴ in an exemplary way. Additionally, such provisions and regulations about possible consequences for students (like the potential suspension

UG). BGBl. I 120/2002 idF I 3/2019, § 5 UG - “Immunity from Ministerial Instructions and Freedom to Adopt Statutes”.

⁹³⁷[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 5 UG.

⁹³⁸[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 1,2 UG.

⁹³⁹[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

⁹⁴⁰[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

⁹⁴¹[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 32 UG.

⁹⁴²[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

⁹⁴³[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

⁹⁴⁴[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

from studies for a maximum time of two semesters in cases where serious and intentional plagiarism as well as other forms and methods of scientific misconduct in the context of “*bachelor’s papers, as well as academic theses and artistic submissions*” were committed) can be defined (and decided by the decision and official notification of the rectorate) in accordance to the respective statutes of an university.⁹⁴⁵

Here, special attention to the definition of “*serious and intentional*” plagiarism as well as forms of academic dishonesty should be given, because it has to be distinguished between negligence and intentional action. It also has to be mentioned that according to the current case law of the Administrative Court (VwGH in Austria) and due to the characterization of an intentional behavior in the context of cases of academic dishonesty, an conscious and nonnegligent action in order to obtain a benefit (like, e.g., a positive assessment) can be presumed.⁹⁴⁶ Therefore, it is obvious that the term of “intentional plagiarism” is often strongly related to the defined provision concerning the fraudulent intention of a plagiarist with reference to § 73, Paragraph 1, Sentence 2 of the Universities Act 2002⁹⁴⁷. A more detailed description of possible consequences (like the annulations of assessments⁹⁴⁸) and the behavior of “fraudulent obtainment” will be explained later on in this section.

The introduction of the aforementioned provision of § 19, Paragraph 2a UG⁹⁴⁹ in the year 2015 represents an important amendment of the Universities Act 2002.⁹⁵⁰ As a result, this relevant change with regard to possible sanctions under the universities law enables the respective universities to provide statutes (and individual decisions) with provisions and regulations about possible measures as well as consequences for students in “serious and intended” cases of confirmed plagiarism and academic misconduct (like, e.g., a short-term suspension of plagiarists) in a legally binding way (according to the Universities Act 2002)⁹⁵¹. Before the release of the corresponding legislation, this was not an easy procedure for universities (in terms of a legally binding way according to the university law).

⁹⁴⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

⁹⁴⁶Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241; VwGH 22.11.2000, 99/12/0324; VwGH 19.12.2005, 2000/12/0051; VwGH 21.5.2008, 2008/10/0020; VwGH 11.12.2009, 2008/10/0088; VwGH 26.11.2011, 2007/10/0145; VwGH 27.05.2014, 2011/10/0187.

⁹⁴⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 2 UG.

⁹⁴⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73 UG.

⁹⁴⁹[UG15]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 21/2015 (Änderung des Universitätsgesetzes 2002 und des Hochschulgesetzes 2005), § 19, Paragraph 2a UG.

⁹⁵⁰[Gam15]: Gamper 2015. “Vom Umgang mit Plagiaten an Österreichs Universitäten: Definition, Rechtsfolgen, Schranken”, p. 10 (2.2 Die Plagiatsdefinition der Österreichischen Universitätenkonferenz vom 24. Februar 2014 - bald Gesetz?).

⁹⁵¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

4.1.2 Relevant Legal Definitions

After some fundamental legal basics in the context of the Universities Act 2002 have been declared, we now give a brief overview over the legal definitions provided by the Austrian legislator, which can be relevant in relation to possible cases of plagiarism and other forms of academic dishonesty.

Foremost, it has to be noted that with exception of the legal definition of the term “*plagiarism*” and the behavior of “*pretending of foreign scientific or artistic achievements as one’s own*” (which can be seen as another form of academic misconduct, which also comprises “ghostwriting” in some sense), no other (directly applied) regulations concerning the topic of plagiarism as well as academic misconduct are explicitly defined in the Universities Act 2002 (as amended from time to time)⁹⁵²

According to § 51, Paragraph 2, Sentence 31 of the Universities Act 2002⁹⁵³, the legal definition of the term “plagiarism” is provided as:

“§ 51, Paragraph 2, Sentence 31

An act of plagiarism is in any case committed, when text, content, or ideas are used and presented as one’s own. This encompasses in particular the appropriation and use of text, theories, hypotheses, findings or data by directly quoting, paraphrasing or translating them without appropriate acknowledgment and reference to the source and the original author.”

*(Translation by RIS)*⁹⁵⁴

Noteworthy, is the fact that the corresponding definition of “plagiarism”⁹⁵⁵ is accompanied by a list which refers to various types of plagiarism (compare Section 3.5 which gives thorough insights into different types of plagiarism). Although a concrete enumeration of different types of plagiarism (like, e.g., Copy & Paste, Quotation without Proof, Paraphrasing, Translation Plagiarism) is defined, a detailed description of the various manifestations of plagiarism is not provided. Additionally and in accordance to the aforementioned legal definition of the term “plagiarism”⁹⁵⁶, also “Structural Plagiarism” as well as “Idea plagiarism” are included in these definitions. Here, the opinions of popular scientists on the question whether “idea plagiarism” embodies an additional plagiarism category are very different and the topic around this form of plagiarism is often

⁹⁵²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

⁹⁵³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.*

⁹⁵⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.*

⁹⁵⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.*

⁹⁵⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.*

discussed. Nevertheless, through the introduction of the legal definition in 2015⁹⁵⁷ this is clearly regulated in the Universities Act 2002 in Austria. Furthermore, the statement of adopted (text) parts in form of a sufficient identification of citations⁹⁵⁸ and their corresponding sources as well as authors⁹⁵⁹, is also an interesting issue, which will be clarified in the subsequent Section 4.4 about relevant provisions in the context of the Copyright Act.

The act of “academic or artistic dishonesty”⁹⁶⁰, which comprises also the behavior of “ghostwriting”, as a form of “*pretending that a foreign scientific or artistic achievement is one’s own*”, is defined as follows:

“§ 51, Paragraph 2, Sentence 32
Academic or artistic dishonesty has been unquestionably committed when unauthorised aids have been used, unauthorised use has been made of another person in writing a scientific thesis, taking an examination or preparing an artistic submission, or data and results have been fabricated or falsified.”
(Translation by RIS)⁹⁶¹

Here, it has to be noted that ghostwriting is not explicitly mentioned nor defined in the university law. Furthermore, an interesting fact is that according to the aforementioned legal definition, academic dishonesty (which also refers to cases of scientific misconduct) as well as ghostwriting are regulated in the same legal provision⁹⁶². Because, here the Austrian legislator generalizes such cheating methods and assumes that, in particular “ghostwriting” is a specific form of scientific misconduct and is therefore classified under this legal definition. Special attention should be given to the fact, that this article⁹⁶³ additionally focuses on the relation to scientific theses. These were not explicitly mentioned in the legal definition of the term “plagiarism”.

As the thesis at hand concentrates solely on text plagiarism in academic and scientific theses (especially in Master’s and PhD theses), in what follows we discuss the legal definition of these specific types of students’ written works.

⁹⁵⁷[UG15]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 21/2015 (Änderung des Universitätsgesetzes 2002 und des Hochschulgesetzes 2005), § 51, Paragraph 2, Sentence 31 UG.

⁹⁵⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

⁹⁵⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57 UrhG.

⁹⁶⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 32 UG.

⁹⁶¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 32 UG.

⁹⁶²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 32 UG.

⁹⁶³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 32 UG.

Corresponding to § 51, Paragraph 2, Sentence 8 of the Universities Act 2002⁹⁶⁴, the legal definition of “*diploma as well as Master’s theses*”, is provided as:

*“§ 51, Paragraph 2, Sentence 8
“Diploma and master’s theses” mean academic theses forming part of diploma and master’s programmes which serve to demonstrate students’ ability to achieve adequate standards of content and methodology when independently addressing scientific topics.”
(Translation by RIS)⁹⁶⁵*

Furthermore, the Universities Act 2002 defines “PhD theses as well as dissertations” as follows:

*“§ 51, Paragraph 2, Sentence 13
“Doctoral theses” mean academic theses which, unlike diploma and master’s theses, serve to demonstrate students’ ability to master scientific topics independently.”
(Translation by RIS)⁹⁶⁶*

Additionally, further provisions for diploma and Master’s theses⁹⁶⁷ as well as doctoral theses⁹⁶⁸ in form of “artistic submissions” are also provided in the Universities Act 2002⁹⁶⁹, but they are not relevant for the Master’s thesis at hand.

After the legal definitions of relevant terms are discussed, we now want to go a little bit more into detail with Master’s as well as PhD theses. Being more precise, subsequently we provide an answer to the question: What types of written works are counting to scientific theses according to the currently applicable university law?

4.1.3 Scientific Theses

In this section we provide references to legal concepts in the context of written students’ works in academia, which consist diploma, Master’s theses as well as doctoral theses. For simplicity, we treat diploma and Master’s theses as equivalent.

⁹⁶⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 8 UG.

⁹⁶⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 8 UG.

⁹⁶⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 13 UG.

⁹⁶⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 9 UG.

⁹⁶⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 13a.

⁹⁶⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 9 and 13a UG.

Here, it has to be mentioned that due to the definition of the aforementioned types of theses (§ 51, Paragraph 2, Sentence 8, 13 UG)^{970,971} and according to the current legal regulation in Austria, only Master's theses and doctoral theses are considered as scientific theses in the context of the university law. Therefore, in cases in which we refer to scientific theses, we employ this definition. In contrast, "Bachelor's papers" (whose legal definition is provided in § 51, Paragraph 2, Sentence 7 UG)⁹⁷² and other written works by students (as part of a course), do not fulfill the criteria and do not count as scientific theses (in accordance to the Universities Act 2002).

Additionally, an important aspect with special regard to the aforementioned legal definitions of Master's theses⁹⁷³ as well as PhD theses⁹⁷⁴ is the concept of "self-accomplishment" in the sense of scientific writing in order to "*independently address*" a scientific topic.^{975,976} Here it has to be taken into account that the importance of the "self-accomplishment" of PhD theses (according to their definition)⁹⁷⁷ is even more pronounced than in the case of a Master's thesis.⁹⁷⁸ It is obvious, that in cases of ghostwriting, the aforementioned "self-accomplishment" in the context of scientific writing of theses is not given. But also in cases of confirmed plagiarism, "self-accomplishment" of the student's work is questionable.

Since final theses represent important subjects in the context of the Universities Act 2002, a separate chapter is dedicated to them. Namely, *Chapter 5* of the corresponding university law. To be more precise, §§ 80-86 UG⁹⁷⁹, are devoted to "*Bachelor's Papers, Diploma, Master's and Doctoral Theses*". This part of the Universities Act 2002 gives a more detailed insight into currently applicable provisions which are relevant for the topic of theses submissions (especially relevant for the thesis at hand are the provision according to § 81 "Diploma and Master's Theses"⁹⁸⁰ as well as § 83 "Doctoral Theses

⁹⁷⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 8 UG.

⁹⁷¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 13 UG.

⁹⁷²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 7 UG.

⁹⁷³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 8 UG.

⁹⁷⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 13 UG.

⁹⁷⁵Compare, like, e.g., VwGH 26.06.1996, 93/12/0241.

⁹⁷⁶[Gam13]: Gamper 2013. "Das Plagiatsverbot aus universitätsrechtlicher Sicht", p. 42 f.

⁹⁷⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 13 UG.

⁹⁷⁸Compare legal definition of PhD theses (§ 51, Paragraph 2, Sentence 13 UG) with Master's theses (§ 51, Paragraph 2, Sentence 8 UG).

⁹⁷⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, §§ 80-86 UG.

⁹⁸⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 81 UG.

and Artistic Doctoral Theses”⁹⁸¹).

With special regard to scientific theses (like Master’s theses as well as PhD theses), it is stated that all final theses (and both the “*treatment of the topic*” as well as the “*supervision of students*”), which are provided in *Chapter 5* of the Universities Act 2002, have to comply with the provisions of the Copyright Act (in its current version)⁹⁸². A thorough description is given for “Bachelor’s Papers” in § 80, Paragraph 2 UG⁹⁸³. This mentioned regulation and their corresponding references are provided in § 81, Paragraph 4 UG for Master’s theses⁹⁸⁴ and § 83, Paragraph 2 UG for doctoral theses⁹⁸⁵.

Finally, also the “Duty of Publication” with reference to § 86 UG⁹⁸⁶ is an important issue concerning the submission of scientific theses. Here, it should be mentioned, that a complete copy of the scientific thesis in the context of the academic submission must be provided in order to publish the written work in the library of the corresponding university. The respective university can decide, for itself, through the provided regulations in the particular statutes of the university (and in accordance with § 86, Paragraph 1 UG⁹⁸⁷), whether the submission of the academic thesis for the library only has to be submitted in electronic or also in printed form. Furthermore, it is additionally mandatory to publish a dissertation in the Austrian National Library (see § 86, Paragraph 2 UG⁹⁸⁸). In addition, there are also exist some exceptions which are not discussed at this point. According to § 86 UG of the aforementioned provision of the Universities Act 2002⁹⁸⁹, universities may define further duties of publication (in particular for scientific theses) in the context of the academic submission procedure in its respective statutes.

⁹⁸¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 83 UG.*

⁹⁸²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018.*

⁹⁸³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 80, Paragraph 2 UG.*

⁹⁸⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 81, Paragraph 4 UG.*

⁹⁸⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 83, Paragraph 2 UG.*

⁹⁸⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 86 UG.*

⁹⁸⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 86, Paragraph 1 UG.*

⁹⁸⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 86, Paragraph 2 UG.*

⁹⁸⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 86 UG.*

4.1.4 Legal Consequences under the Law Regulating University Studies

After a thorough analysis of the Universities Act 2002⁹⁹⁰ was conducted, subsequently the possible legal consequences for students which commit academic misconduct are discussed under the law regulating university studies. First of all, it is important to differentiate between the point in time when a suspicion of a case of academic misconduct is discovered. These consequences are also applicable in cases of observed ghostwriting. The following suspicion times can be distinguished:

- Plagiarism case is discovered before the submission (and therefore before the assessment) is finished.
- Plagiarism case is discovered after the assessment is finished and also the thesis submission procedure is already finished.
- Plagiarism case is discovered after the academic degree was issued.

Dependent on the point in time when a suspicion of a plagiarism case is discovered, different forms of imposed sanctions on the accused student (which has plagiarized in scientific thesis) are possible.

Additionally to the aforementioned time when cases of plagiarism are discovered, also a respect to the underlying behavior of the plagiarist should be taken into account. In particular, the behavior of the plagiarist (in terms of “intentional plagiarism” or “plagiarism through negligence”) is a very important ingredient for the judgment whether a student’s thesis constitutes a concrete case of plagiarism or not. A more detailed description of the term of “intentional plagiarism” with regard to the behavior of “fraudulent obtainment”^{991,992} will be explained later on in the context of annulations of assessments⁹⁹³. Furthermore, it should never be forgotten to take into account the extent of a possibly plagiarized content in comparison to the whole thesis of a student.

Plagiarism Case before the Assessment

It can be stated that in cases in which the academic misconduct is identified **before the assessment** of a thesis is completely finished (which also includes the circumstances that the final certificate is not issued and the academic degree is not awarded) represents an “attempt of plagiarism”. In such cases, even when there was a fraudulent intent of the

⁹⁹⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

⁹⁹¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73 UG.*

⁹⁹²Compare, like, e.g., VwGH 26.06.1996, 93/12/0241; VwGH 22.11.2000, 99/12/0324; VwGH 27.05.2014, 2011/10/0187.

⁹⁹³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73 UG.*

plagiarist in order to obtain a positive assessment, there are usually no “serious” legal consequences⁹⁹⁴ (according to the Universities Act 2002⁹⁹⁵). Instead, related provisions concerning the particular plagiarism handling procedure (and hence the derived sanctions) according to the defined statutes of the respective universities, which often reference to a specific “Code of Conduct” (which comprises essential principals of scientific ethics to prevent scientific misconduct), are applied. In most cases (and for instance at the TU Wien⁹⁹⁶), after a thorough examination of the underlying thesis is conducted and the accused student is informed about the present misbehavior, it is accepted that the student reworks the scientific work. After the resubmission of the thesis, a new evaluation in form of a new assessment can be performed. It is obvious that due to the defined provisions about possible consequences in the statutes of an university, the aforementioned scenario is handled differently by each university.

Plagiarism Case after the Assessment

In cases in which a spotted case of plagiarism was discovered **after the assessment** of the respective scientific thesis was already finished, an annulation of the assessment of the scientific thesis⁹⁹⁷ can be conducted based on an official notification of the particular “body responsible for study matters” when certain requirements are met.

Corresponding to § 73, Paragraph 1 and 2 of the Universities Act 2002⁹⁹⁸, the applicable provision regarding the “Annulations of Assessments”, is provided as:

“§ 73

(1) The assessment shall be annulled by an official notification of the officer responsible for study matters if

1. in the case of an examination, the latter was registered for under false pretences;

2. in the case of an examination, academic thesis and artistic submission, the assessment was obtained by fraudulent means, in particular by the use of unauthorised aids.

(2) An examination, the result of which is annulled, shall count towards the number of repetitions. ”

(Translation by RIS)⁹⁹⁹

⁹⁹⁴[Gam15]: p. 5 (1. Problemaufriss).

⁹⁹⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

⁹⁹⁶[TU 15]: TU Wien - The Vice Rector for Academic Affairs Office of the Rectorate: O.Univ.Prof.Dr.techn. Adalbert Precht. 2015. “Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien (online 14.10.2015)”, p. 4 f (5.1.1. *Suspicion of plagiarism before the assessment*).

⁹⁹⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73 UG.*

⁹⁹⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1 and 2 UG.*

⁹⁹⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1 and 2 UG.*

According to § 73, Paragraph 1, Sentence 2 UG¹⁰⁰⁰, the requirements for such an annulment of the assessment(s) of the scientific thesis are assumed, in situations in which a fraudulent behavior of the student (in form of an intentional action) in order to obtain a positive assessment (especially relevant is the part with “*in particular by the use of unauthorised aids*”) are given.^{1001,1002} In cases of plagiarism as well as ghostwriting, the aforementioned “*use of unauthorised aids*” in the context of the writing process of scientific theses, are obviously present. One reason for that is, that the required “self-accomplishment” is not given in these cases.¹⁰⁰³

Here it has noted, that according to the provisions of § 46 of the Universities Act 2002 concerning the handling of the official procedures (especially, § 46, Paragraph 1 UG)¹⁰⁰⁴, all entities of the respective universities which are subject of the university law, have to apply the General Administrative Procedure Act 1991 (*Allgemeines Verwaltungsverfahrensgesetz 1991: AVG*)¹⁰⁰⁵ in all official as well as administrative matters.

Excursion: AVG

Due the fact, that possible cases of academic misconduct, especially cases of plagiarism, are often detected years after the corresponding official notification for the award of the academic degree to the graduate was issued, the corresponding legal appeal against a decision would have had to be submitted long ago. Typical cases for the application of the AVG are annulations of assessments of examinations or scientific theses (§ 73 UG)¹⁰⁰⁶ as well as the revocation (§ 89 UG)¹⁰⁰⁷ of academic degrees to graduates by official notification.¹⁰⁰⁸ Exactly, the regulations in the AVG¹⁰⁰⁹ address this specific issue and define (among other issues in the legal context) the legal effect of decisions and official notifications, which can be applied in accordance to the Universities Act 2002¹⁰¹⁰, in cases in which the respective notification based on legal decisions must be withdrawn at the university level.¹⁰¹¹

¹⁰⁰⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 73, Paragraph 1, Sentence 2 UG.

¹⁰⁰¹Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241; VwGH 22.11.2000, 99/12/0324; VwGH 19.12.2005, 2000/12/0051; VwGH 21.5.2008, 2008/10/0020; VwGH 11.12.2009, 2008/10/0088; VwGH 26.11.2011, 2007/10/0145; VwGH 27.05.2014, 2011/10/0187;

¹⁰⁰²[Gam13]: p. 42.

¹⁰⁰³Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241.

¹⁰⁰⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 46, Paragraph 1 UG.

¹⁰⁰⁵[AVG18]: *General Administrative Procedure Act 1991 (AVG). BGBl. 51/1991 idF I 58/2018*.

¹⁰⁰⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 73 UG.

¹⁰⁰⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 89 UG.

¹⁰⁰⁸[Gam13]: p. 42 f.

¹⁰⁰⁹[AVG18]: *General Administrative Procedure Act 1991 (AVG). BGBl. 51/1991 idF I 58/2018*.

¹⁰¹⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*.

¹⁰¹¹[Sch13a]: Schick. 2013. “Mögliche strafrechtliche Folgen des Plagierens in der Wissenschaft”, p. 72.

In particular, § 69 of the General Administrative Procedure Act 1991 (AVG)¹⁰¹², which is devoted to a possible “Reopening of a proceeding”, has an important role in terms of issuing official notifications which are also relevant in the context of a “fraudulent obtainment” of a performance¹⁰¹³, like the annulations of assessments of examinations or scientific theses (§ 73 UG)¹⁰¹⁴ as well as the revocation of academic degrees (§ 89 UG)¹⁰¹⁵. With reference on § 69, Paragraph 1, Sentence 1 and 2 of the AVG¹⁰¹⁶, the applicable provision of the reopening of proceedings, which build the fundamental basis regarding the annulations of assessments of scientific theses and the revocation of academic degrees, is provided as:

“§ 69

(1) A motion of a party for reopening of a proceeding already terminated by a ruling is to be adopted if no or no more remedy against the administrative decision is admissible and:

1. the administrative decision has been fraudulently obtained by a forged deed or certificate or any other act punishable under criminal law or in some other surreptitious way or

2. new facts or evidence come up, which the party, without its fault, was not able to bring up during the proceeding and which alone or in connection with other results of the proceedings so far were likely to result in an administrative decision different from the main contents of the decision, or

... ”

(Translation by RIS)¹⁰¹⁷

Referring to scientific theses, this mentioned provision¹⁰¹⁸ also governs, the legally enforceable annulment and thus the reassessment of corresponding scientific theses.¹⁰¹⁹

Based on this article (especially, § 69 Paragraph 1, Sentence 1 and 2 AVG¹⁰²⁰) with special regard to official decisions, it is, for instance, possible to retract an academic

¹⁰¹²[AVG18]: *General Administrative Procedure Act 1991 (AVG)*. BGBl. 51/1991 idF I 58/2018, § 69 AVG.

¹⁰¹³Compare, like, e.g., VwGH 27.07.2004, 2004/10/00121.

¹⁰¹⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73 UG.

¹⁰¹⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 89 UG.

¹⁰¹⁶[AVG18]: *General Administrative Procedure Act 1991 (AVG)*. BGBl. 51/1991 idF I 58/2018, § 69, Paragraph 1, Sentence 1 and 2 AVG.

¹⁰¹⁷[AVG18]: *General Administrative Procedure Act 1991 (AVG)*. BGBl. 51/1991 idF I 58/2018, § 69, Paragraph 1, Sentence 1 and 2 AVG.

¹⁰¹⁸[AVG18]: *General Administrative Procedure Act 1991 (AVG)*. BGBl. 51/1991 idF I 58/2018, § 69, Paragraph 1, Sentence 1 and 2 AVG.

¹⁰¹⁹Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241.

¹⁰²⁰[AVG18]: *General Administrative Procedure Act 1991 (AVG)*. BGBl. 51/1991 idF I 58/2018, § 69, Paragraph 1 and 2 AVG.

degree which has been granted with an official notification¹⁰²¹. This is important in cases in which the fraudulent intent of the plagiarist in order to obtain a positive assessment of a scientific thesis could be determined.^{1022,1023}

“Fraudulent Obtainment”

As one can see, also the behavior of “fraudulent obtainment” is mentioned in the according article (in § 69, Paragraph 1, Sentence 1 AVG)¹⁰²⁴. Therefore, the definition of the term “fraudulent obtainment” should be clarified. Here, it has to be noted that no explicit legal definition of this term in accordance to a specific legal regulation, is provided. Instead, there exists a detailed statement, according to the constant jurisdiction of the Austria’s Supreme Administrative Court (VwGH), which indicates how to interpret this specific behavior in form of an explanation as well as characterization of the basic notion of an act which is fraudulently obtained.¹⁰²⁵ According to the Austria’s Supreme Administrative Court¹⁰²⁶, there are several prerequisites for the characterization of the behavior of the “fraudulent obtainment” (with reference to current legal interpretations). First of all, it can be assumed that the “fraudulent obtainment” is a conscious and nonnegligent action, in which an intent to mislead is present, either in form of an intentionally false objective and incorrect information, or to intentionally disguise important circumstances.¹⁰²⁷ This misbehavior results in an intentional action, which afterwards builds the basis for the decision of an authority, and is done in order to obtain a beneficial result compared to the result without the intentional action, like, e.g., a positive assessment.¹⁰²⁸ Furthermore, there exists a more precise interpretation of the characterization of the term “fraudulent obtainment”, which is in particular relevant in the context of scientific theses and which is therefore important for the legal application to universities. According to the constant jurisdiction of the VwGH, the requirements for “fraudulent obtainment” in scientific theses are fulfilled in cases where significant parts of a student’s thesis (caused by a fraudulent intention of the plagiarist in order to obtain a positive or even better assessment) were plagiarized.¹⁰²⁹ Furthermore, it has to be added that in such cases, it is assumed that the assessment of the underlying thesis would lead to a worse result (like, e.g., negatively

¹⁰²¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 89 UG.

¹⁰²²[Gam13]: p. 42 f.

¹⁰²³Compare, like, e.g., VwGH 22.11.2000, 99/12/0324; VwGH 11.12.2009, 2008/10/0088; VwSlg. 17.804 A/2009.

¹⁰²⁴[AVG18]: *General Administrative Procedure Act 1991 (AVG)*. BGBl. 51/1991 idF I 58/2018, § 69, Paragraph 1, Sentence 1 AVG.

¹⁰²⁵Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241; VwGH 22.11.2000, 99/12/0324; VwGH 19.12.2005, 2000/12/0051; VwGH 21.5.2008, 2008/10/0020; VwGH 11.12.2009, 2008/10/0088; VwGH 26.11.2011, 2007/10/0145; VwGH 27.05.2014, 2011/10/0187.

¹⁰²⁶Compare, like, e.g., VwGH 23.09.1927, A 0629/26; VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241.

¹⁰²⁷Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241; VwGH 11.12.2009, 2008/10/0088.

¹⁰²⁸[Gam13]: p. 42.

¹⁰²⁹Compare, like, e.g., VwGH 22.11.2000, 99/12/0324; VwGH 11.12.2009, 2008/10/0088; VwGH 26.11.2011, 2007/10/0145; VwGH 27.05.2014, 2011/10/0187.

or with a less favorable positive grade) when the fact that major parts of the thesis were plagiarized would have been revealed before the academic degree was granted.¹⁰³⁰ Additionally, a more favorable outcome can also be assumed in cases in which the assessment is better than it would have been without the fraudulent obtainment.^{1031,1032} However, especially here, it has to be noted that also the “partially” fraudulent intent of the plagiarist in order to obtain a (positive) assessment is relevant for the judgment of possible cases of plagiarism, because it can significantly affect the assessment of the underlying student’s thesis.^{1033,1034}

Furthermore, with special regard to scientific theses, and in accordance with the VwGH, thesis supervisors are not in general obligated to classify a submitted thesis as a potential case of plagiarism in advance.¹⁰³⁵ Nevertheless, in cases in which obvious suspicion signs of plagiarism are determined, there is a need for action (in form of a thorough examination of the underlying student’s thesis).¹⁰³⁶

Noteworthy is the fact that the term of “intentional plagiarism” or “fraudulently obtained plagiarism” is the most serious form of plagiarism. It is often strongly related to provision § 73, Paragraph 1, Sentence 2 of the Universities Act 2002¹⁰³⁷ concerning the “fraudulent intention” of a plagiarist. Furthermore, especially in cases of ghostwriting, the conscious intent of a plagiarist to betray the respective university by pretending that foreign work is one’s own, is obviously given.

After the definition of the term “fraudulent obtainment” is clarified, we are now coming back to the initially described situation of a suspicion case of plagiarism, which is detected after the assessment of the scientific thesis is finished. In such cases (with reference to the aforementioned article about the possible annulation of assessments of examinations or scientific theses (§ 73 UG) by official notification¹⁰³⁸), where the prerequisites of the fraudulent obtainment in the context of scientific theses were clearly present, the body responsible for study matters has to annul the assessment of the thesis by official notification. In particular and only if a fraudulent intent of the accused student in order to receive a positive or better assessment of the submitted thesis (and, building on that, the academic degree) was obviously determined, the annulment of the underlying thesis

¹⁰³⁰[Gam13]: p. 42.

¹⁰³¹Compare, like, e.g., VwGH 22.11.2000, 99/12/0324; VwGH 19.12.2005, 2000/12/0051; VwGH 11.12.2009, 2008/10/0088; VwGH 26.11.2011, 2007/10/0145; VwGH 27.05.2014, 2011/10/0187.

¹⁰³²[Gam13]: p. 42.

¹⁰³³Compare, like, e.g., VwGH 26.06.1996, 93/12/0241; VwGH 22.11.2000, 99/12/0324; VwGH 21.5.2008, 2008/10/0020; VwGH 26.11.2011, 2007/10/0145.

¹⁰³⁴[Gam15]: p. 13 ff (3.2.1 *Die Rechtssprechung des VwGH*).

¹⁰³⁵[VwG82]: VwGH 09.03.1982, 81/07/0230; [VwG96]: VwGH 26.06.1996, 93/12/0241; [VwG09]: VwGH 11.12.2009, 2008/10/0088.

¹⁰³⁶[VwG82]: VwGH 09.03.1982, 81/07/0230; [VwG96]: VwGH 26.06.1996, 93/12/0241; [VwG09]: VwGH 11.12.2009, 2008/10/0088.

¹⁰³⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 2 UG.

¹⁰³⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73 UG.

(including the underlying assessment of the thesis) is justified.¹⁰³⁹ The annulment is conducted by official notification of the respective body responsible for study matters.¹⁰⁴⁰ According to § 73, Paragraph 2 UG¹⁰⁴¹), the assessment of the thesis which has been declared as void, is also counted towards the total number of repetitions.¹⁰⁴²

If necessary and under some circumstances (and only in cases when the academic degree was already issued¹⁰⁴³), an additional procedure in form of the revocation of the academic degree is conducted. The consequences in cases where the academic title is withdrawn are described in the subsequent section.

Plagiarism Case after Academic Degree was Issued

Generally, in cases in which an achievement of a student in the academic context was “fraudulently obtained”, which later on leads to the award of an academic degree (by official notification)¹⁰⁴⁴ the university can impose serious consequences according to the Universities Act 2002.¹⁰⁴⁵ In such explained cases, where the intention to deceive was determined, the academic degree held by the graduate will be revoked by the official notification of the respective body responsible for study matters.^{1046,1047} Furthermore and as a result, the primary notification award must be withdrawn.¹⁰⁴⁸ The general case has to be distinguished here because the revocation of an academic degree due to the fraudulent intent of the student (like, e.g. in order to receive a better assessment of an examination or a scientific theses) does not automatically mean that an annulment of the assessment of the thesis is performed. Indeed, to declare the assessment of the underlying thesis void represents a separate procedure in the legal context.¹⁰⁴⁹

The aforementioned topic of the withdrawal of the academic title is defined in the

¹⁰³⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 2 UG.*

¹⁰⁴⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 2 UG.*

¹⁰⁴¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 2 UG.*

¹⁰⁴²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 2 UG.*

¹⁰⁴³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 87 and § 88 UG.*

¹⁰⁴⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 87 UG.*

¹⁰⁴⁵[Gam15]: p. 13-16 (3. *Rechtliche Konsequenzen von Plagiaten*).

¹⁰⁴⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 89 UG.*

¹⁰⁴⁷Compare, like, e.g., VwGH 22.07.2004, 2004/10/0021.

¹⁰⁴⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 89 UG.*

¹⁰⁴⁹[Gam13]: p. 42 f.

provisions of § 89 of the Universities Act 2002¹⁰⁵⁰, which deals with the “*Revocation of Domestic Academic Degrees or Academic Designations*”, and declares:

“§ 89.

The officer responsible for study matters shall revoke and recall the notification of award if it subsequently transpires that a the academic degree or the academic designation has been obtained by fraudulent means, in particular the use of counterfeit certificates or the pretence of scientific or artistic achievements.”

(Translation by RIS)¹⁰⁵¹

Often, cases of plagiarism are discovered years **after the academic degree was awarded**. The VwGH defines that, when the underlying assessment of the thesis was “fraudulently obtained” (prevalent through the fraudulent intent of the plagiarist)¹⁰⁵² in order to receive a positive or better assessment, the scientific thesis may be (based on § 73, Paragraph 1, Sentence 2 UG¹⁰⁵³) annulled by official notification of the respective body responsible for study matters. Additionally, in form of a separate procedure and in accordance to § 89 UG¹⁰⁵⁴, the academic degree, which is held by the graduate, also gets revoked by official notification of the respective body responsible for study matters. Furthermore, this circumstance results in the withdrawal of the primary notification. Here, it has to be mentioned that the accused student is prohibited from holding the (revoked) academic degree. As a result, the university study programme is not completed any longer. It still can be finalized in consequence of the submission of a new final thesis.

Furthermore, it has to be noted that according to penal provisions of the Universities Act 2002, especially defined in § 116 UG¹⁰⁵⁵, in cases where the university degree has been revoked and if the official notification is not respected (meaning that the person still uses the academic title) serious administrative penalties (based on § 116, Paragraph 1, Sentence 2 UG) with a fine of up to 15.000 EUR are possible.¹⁰⁵⁶

The revocation of an academic title can also lead to serious consequences with reference to the academic context. In cases, in which an academic degree (like a bachelor’s degree), which was the fundamental prerequisite for further university degree programmes (like, e.g., the Master’s as well as doctoral study) gets withdrawn, all exams which were passed

¹⁰⁵⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 89 UG.

¹⁰⁵¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 89 UG.

¹⁰⁵²Compare, like, e.g., VwGH 22.11.2000, 99/12/0324; VwGH 11.12.2009, 2008/10/0088.

¹⁰⁵³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 73, Paragraph 1, Sentence 2 UG.

¹⁰⁵⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 89 UG.

¹⁰⁵⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 116 UG.

¹⁰⁵⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 116, Paragraph 1, Sentence 2 UG.

and completed in the postgraduate course, also get annulled. In accordance with § 73, Paragraph 1, Sentence 1 UG¹⁰⁵⁷, this procedure can be executed due the fact that the registration for the post-graduate study has also been fraudulently obtained.

Summarizing all facts together and according to the Universities Act 2002 (especially anchored in § 19, Paragraph 2a UG¹⁰⁵⁸), it can be stated that every university has (besides the regulations which are relevant for all mentioned universities) also the conceded possibility to define further measures and consequences concerning study-related sanctions for cases of academic misconduct, in particular cases of plagiarism, in its respective statutes and other academic regulations). Therefore it is obvious that the legal consequences students have to expect in the case of academic misconduct, especially in the case of committed plagiarism in the context of a scientific thesis, may vary from university to university.

4.2 Higher Education Act 2005

The thoroughly described legal provisions of the Universities Act 2002 are also provided in a similar form in the Higher Education Act of 2005 (*Hochschulgesetz 2005: HG*)¹⁰⁵⁹. In comparison to the aforementioned university law, which is applicable to the most public universities, this regulation is concerned to the legal background of the university college of teacher education. According to § 1, Paragraph 1, Sentence 1-9 HG¹⁰⁶⁰ which is devoted to the “*Scope of Application*”, all public universities of education (like, e.g., the University College of Teacher Education Vienna and the University College of Teacher Education Lower Austria), are regulated within this provided provision.

The “*Federal Act on the Organization of Universities of Teacher Education and their Studies*” is not so extensive as the Universities Act 2002.

In what follows we provide a comparison between the already explained provisions of the Universities Act 2002 and the Higher Education Act of 2005, which are also applicable for possible consequences in cases of detected plagiarism as well as ghostwriting. Due to the fact, that the respective articles contain almost identical legal concepts, we refer to the aforementioned terms of the UG, which are extensively described in Section 4.1:

- The permission to the university colleges of teacher education to adopt the respective statutes and furthermore the introduction of possible measures and consequences

¹⁰⁵⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 1 UG.

¹⁰⁵⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

¹⁰⁵⁹[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018.

¹⁰⁶⁰[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 1, Paragraph 1, Sentence 1-9 HG.

for cases of academic misconduct (especially plagiarism) in their corresponding statutes, which is defined in § 28, Paragraph 3 HG¹⁰⁶¹, is almost identical to § 19, Paragraph 2a UG¹⁰⁶² with the exception of the missing phrase “in particular”, which refers to explicitly defined forms of students’ works (like “*written term papers and exams, bachelor’s papers, as well as academic theses and artistic submissions*”)¹⁰⁶³. These circumstance results in a more generalized provision with in some sense less restrictions.

- Almost identical declarations of the legal definition of Master’s theses, which represent scientific theses according to § 51, Paragraph 2, Sentence 8 UG¹⁰⁶⁴. Only Master’s theses are provided in the corresponding act, due to the fact that no doctoral study programmes are offered at university colleges of teacher education: § 35, Sentence 13 HG¹⁰⁶⁵.
- Identical form of the legal definition of the term “plagiarism” (compared to § 51, Paragraph 2, Sentence 31 UG¹⁰⁶⁶): § 35, Sentence 34 HG¹⁰⁶⁷.
- Identical form of the legal definition of the act of “*pretending of foreign scientific or artistic achievements as one’s own*” (which also includes “ghostwriting”) like defined in § 51, Paragraph 2, Sentence 32 UG¹⁰⁶⁸): § 35, Sentence 35 HG¹⁰⁶⁹.
- There exist additional provisions for the requirements of Master’s theses (comparable with § 81 UG)¹⁰⁷⁰ which are formulated slightly different in § 48a HG¹⁰⁷¹. It has to be noted that in this specific article of the Higher Education Act 2005 with regard to Masters’ theses, the important aspect of “self-accomplishment” in the context of scientific writing of Master’s theses is also provided. Furthermore, according to

¹⁰⁶¹[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 28, Paragraph 3 HG.

¹⁰⁶²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

¹⁰⁶³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 19, Paragraph 2a UG.

¹⁰⁶⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 8 UG.

¹⁰⁶⁵[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 35, Sentence 13 HG.

¹⁰⁶⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

¹⁰⁶⁷[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 35, Sentence 34 HG.

¹⁰⁶⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 32 UG.

¹⁰⁶⁹[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 35, Sentence 35 HG.

¹⁰⁷⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 81 UG.

¹⁰⁷¹[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 48a HG.

the HG, Master's theses represent "*scientific as well as occupational field-related theses*". But there also exists (like in the corresponding UG) a reference on the compliance of the provisions of the currently applicable Copyright Act¹⁰⁷², which has to be ensured in the writing process of a Master's thesis¹⁰⁷³.

- Identical declaration of the requirements for "*Annulations of Assessments*" (according to § 73, Paragraph 1 and 2 UG¹⁰⁷⁴): § 45, Paragraph 1 and 2 HG¹⁰⁷⁵.
- Identical formulation concerning the "*Revocation of Domestic Academic Degrees or Academic Designations*", in § 89 UG¹⁰⁷⁶: § 67 HG¹⁰⁷⁷.

4.3 University of Applied Sciences Studies Act

There are also relevant regulations in the context of the legal background for University of Applied Sciences. Therefore, the "*Federal Act on University of Applied Sciences Studies Act (Fachhochschul-Studiengesetz: FHStG)*"¹⁰⁷⁸, provides relevant provisions for Universities of Applied Sciences, which regulates (based on and according to § 1 FHStG) the "*operation of university of applied sciences degree programmes and certificate programmes for further education as well as the granting of the designation "Fachhochschule" (university of applied sciences)*"¹⁰⁷⁹. It can be stated that there is no explicit list of universities of applied sciences to whom the legal provisions can be applied (in comparison to the other two aforementioned federal laws in the academic context). In what follows, we briefly discuss the currently applicable FHStG in order to clarify which provisions are relevant in the context of discovered scientific misconduct. This consideration is performed in relation to the already described Universities Act 2002 (UG)¹⁰⁸⁰.

After an extensive analysis of the University of Applied Sciences Studies Act¹⁰⁸¹, it has to be mentioned that due the fact that the corresponding principles of the FHStG only

¹⁰⁷²[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 48, Paragraph 2 HG.

¹⁰⁷³[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 48a HG.

¹⁰⁷⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1 and 2 UG.

¹⁰⁷⁵[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 45, Paragraph 1 and 2 HG.

¹⁰⁷⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 89 UG.

¹⁰⁷⁷[HG18]: *Bundesgesetz über die Organisation der Pädagogischen Hochschulen und ihre Studien (Hochschulgesetz 2005 - HG)*. BGBl. I 30/2006 idF I 101/2018, § 67 HG.

¹⁰⁷⁸[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz - FHStG)*. BGBl. 340/1993 idF I 31/2018.

¹⁰⁷⁹[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz - FHStG)*. BGBl. 340/1993 idF I 31/2018, § 1 FHStG.

¹⁰⁸⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019.

¹⁰⁸¹[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz - FHStG)*. BGBl. 340/1993 idF I 31/2018.

consist of 27 articles, it is obvious that the FHStG is not so extensive than in comparison to the UG.

Noteworthy is the fact that Universities of Applied Sciences are different in the management of their organizations (in comparison to public universities). A relevant issue, which has to be discussed, is the fact that according to the University of Applied Sciences Studies Act, there are no legal definitions as well as other provisions of the term “plagiarism”¹⁰⁸² nor of the act of “*pretending of foreign scientific or artistic achievements as one’s own*” (also referred to as “ghostwriting”)¹⁰⁸³. Also, there exist no additional regulations about the possibility to extend the respective statutes in order to define measures and consequences concerning cases of plagiarism and other forms of scientific misconduct.¹⁰⁸⁴

Therefore, it can be assumed that due to the fact that no legal definitions of the terms “plagiarism” and “scientific misconduct” are explicitly declared in the FHStG, the legal interpretation will comply to the old and original definition of the notion “plagiarism”, coined by the Supreme Court of Justice (OGH), which represents the contrary of how a correct quotation and citation (in compliance with scientific standards)¹⁰⁸⁵ in the context of scientific writing looks like, according to the Copyright Act (in particular § 42f¹⁰⁸⁶ and § 57 UrhG¹⁰⁸⁷). More details about specific provisions of the Copyright Act, are explained later on in the Master’s thesis at hand.

An interesting fact is that no legal definitions nor explanations of specific types of students’ written works, like Bachelor’s papers and Master’s theses, are provided in the currently applicable FHStG. Instead, only one generalized regulation (with reference to § 19 in the University of Applied Sciences Studies Act¹⁰⁸⁸) for scientific theses like “*Bachelor’s Papers, Diploma Theses, and Master’s Theses*” is stated. With special regard to cases of plagiarism, which are possibly detected in scientific theses, the positive assessment in form of the approbation of the underlying thesis represents an important requirement for the subsequent and last examination. According to § 19 FHStG, in particular Paragraph 2¹⁰⁸⁹, concerning “*Bachelor’s Papers, Diploma Theses, and Master’s Theses*”, addresses this aforementioned issue, and declares:

“§ 19.

...

¹⁰⁸²Defined in § 51, Paragraph 2, Sentence 31 UG. See [UG 19] for more details.

¹⁰⁸³Defined in § 51, Paragraph 2, Sentence 32 UG. See [UG 19] for more details.

¹⁰⁸⁴In comparison to § 19, Paragraph 2a UG. See [UG 19] for more details.

¹⁰⁸⁵[OGH90]: OGH 29.09.1987, 4 Ob 313/86 (4 Ob 314/86); OGH 10.07.1990, 4 Ob 72/90.

¹⁰⁸⁶[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹⁰⁸⁷[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 57 UrhG.

¹⁰⁸⁸[FHS18]: Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG). BGBl. 340/1993 idF I 31/2018, § 19 FHStG.

¹⁰⁸⁹[FHS18]: Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG). BGBl. 340/1993 idF I 31/2018, § 19, Paragraph 2 FHStG.

(2) *The positive assessment of the diploma thesis or master's thesis is a condition for the admission to the examination before the examination committee. A diploma thesis or master's thesis that has not received a positive assessment shall be returned to the student for revisions and resubmission within a stipulated period of time.*

...”

(Translation by RIS)¹⁰⁹⁰

Furthermore, an import aspect in the context of legal consequences concerning cases of detected plagiarism is (based on and according to § 20 FHStG¹⁰⁹¹) the “*Annulment of Assessments and Thesis Submissions*”. It is defined as:

“§ 20.

The result of an examination or academic thesis shall be annulled if such result was obtained by fraudulent means, in particular by the use of unauthorised aids. Such annulled examinations shall be counted towards the permissible number of resits.”

(Translation by RIS)¹⁰⁹²

The explained article is in its essence pretty similar to the corresponding article (§ 73, Paragraph 1 and 2) of the Universities Act 2002¹⁰⁹³. It has to be noted that the annulment of assessments as well as thesis submissions is not decided in form of an official notification. Here, it is clearly defined who is responsible for the annulment, which is in particular specified in the tasks of a programme director.¹⁰⁹⁴ Also the behavior of the “fraudulent obtainment” as well as the “use of unauthorised aids” are provided.

Furthermore, it can be stated, that no detailed regulations about a possible revocation of an academic degree in the context of the University of Applied Sciences Studies Act are mentioned, which is in contrast to the UG in which there is § 89 UG¹⁰⁹⁵. Instead, only a general provision of the possibility to revoke an academic degree is provided in § 10, Paragraph 3, Sentence 9 FHStG¹⁰⁹⁶. The revocation of the academic degree is also a task of the university of applied sciences board.

¹⁰⁹⁰[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG)*. BGBl. 340/1993 idF I 31/2018, § 19, Paragraph 2 FHStG.

¹⁰⁹¹[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG)*. BGBl. 340/1993 idF I 31/2018, § 20 FHStG.

¹⁰⁹²[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG)*. BGBl. 340/1993 idF I 31/2018, § 20 FHStG.

¹⁰⁹³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1 and 2 UG.

¹⁰⁹⁴[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG)*. BGBl. 340/1993 idF I 31/2018, § 10, Paragraph 5, Sentence 3 FHStG.

¹⁰⁹⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 89 UG.

¹⁰⁹⁶[FHS18]: *Bundesgesetz über Fachhochschul-Studiengänge (Fachhochschul-Studiengesetz – FHStG)*. BGBl. 340/1993 idF I 31/2018, § 10, Paragraph 3, Sentence 9 FHStG.

To put it in a nutshell, the legal situation regarding plagiarism and ghostwriting (with reference to the University of Applied Sciences Studies Act) is remarkably different and not so detailed as the regulations defined in the Universities Act 2002.

4.4 Copyright Act

After a detailed description which is dealing with the legal consequences students (which commit academic misconduct) face under the law regulation of university studies, in what follows, we give the reader important insights into possible consequences under the copyright law. Therefore, a discussion of possible consequences for students in the context of the Copyright Act with special regard to text plagiarism in scientific theses, is provided. Here, it has to be noted that when dealing with cases of plagiarism it has to be legally distinguished between the aspect of the university law (according to the Universities Act 2002) and the copyright law (according to the Copyright Act). While plagiarism cases under copyright law can primarily have consequences under private law (like, e.g., consequences under civil law), the imposed sanctions for plagiarism under university law lie in the area of public law¹⁰⁹⁷.

4.4.1 Legal Terms in the Context of the UrhG

First of all, the Austrian Copyright Act (*Urheberrechtsgesetz: UrhG*)¹⁰⁹⁸ builds the fundamental rules in the context of copyright in works of literature and art. Additionally, a particular subject matter of the corresponding act is the copyright and related rights.

The essential basis of the currently applicable Copyright Act, which is presented in this section refers to “*the work of literature and art*”. The subject matter of protection¹⁰⁹⁹ according to the copyright law and is defined as:

“§ 1

(1) *Werke im Sinne dieses Gesetzes sind eigentümliche geistige Schöpfungen auf den Gebieten der Literatur, der Tonkunst, der bildenden Künste und der Filmkunst.*

(2) *Ein Werk genießt als Ganzes und in seinen Teilen urheberrechtlichen Schutz nach den Vorschriften dieses Gesetzes.* ”¹¹⁰⁰

¹⁰⁹⁷ According to § 4 UG: Public universities “are legal entities under public law”. For more details: see [UG 19].

¹⁰⁹⁸ [Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018.

¹⁰⁹⁹ [Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 1 UrhG.

¹¹⁰⁰ [Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 1 UrhG.

Here, special attention (with regard to scientific theses) should be given on the part that a work is “*as a whole and in its parts*” protected and covered by the Copyright Act¹¹⁰¹.

To be more precise, scientific theses often represent “works of literature”¹¹⁰² and constitute a ‘literary work’, which is declared according to § 2, Paragraph 1 of the UrhG¹¹⁰³, as one of the following kinds of “works”:

“§ 2

Werke der Literatur im Sinne dieses Gesetzes sind:

1. *Sprachwerke aller Art einschließlich Computerprogrammen (§ 40a);*
2. *Bühnenwerke, deren Ausdrucksmittel Gebärden und andere Körperbewegungen sind (choreographische und pantomimische Werke);*
3. *Werke wissenschaftlicher oder belehrender Art, die in bildlichen Darstellungen in der Fläche oder im Raume bestehen, sofern sie nicht zu den Werken der bildenden Künste zählen.* ”¹¹⁰⁴

It has to be noted, that we do not focus in this Master’s thesis at hand on pictures (like defined in § 2, Paragraph 3 UrhG¹¹⁰⁵), which are also possibly plagiarized.

An interesting circumstance is also the differentiation of various types of “works” according to §§ 1-9 UrhG of the currently applicable Copyright Act¹¹⁰⁶.

In the context of the provisions which are relevant for used quotations, the legal definition of the term “published works” with reference to § 8 UrhG¹¹⁰⁷ is provided as:

“§ 8

Ein Werk ist veröffentlicht, sobald es mit Einwilligung des Berechtigten der Öffentlichkeit zugänglich gemacht worden ist. ”¹¹⁰⁸

¹¹⁰¹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 1 UrhG.*

¹¹⁰²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 2 UrhG.*

¹¹⁰³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 2, Paragraph 1 UrhG.*

¹¹⁰⁴[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 2 UrhG.*

¹¹⁰⁵[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 2, Paragraph 3 UrhG.*

¹¹⁰⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, §§ 1-9 UrhG.*

¹¹⁰⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 8 UrhG.*

¹¹⁰⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 8 UrhG.*

As described in Section 4.1, there is the “*Duty of Publication*” of scientific theses in the academic context (according to § 86 UG¹¹⁰⁹), which requires the publication of the scientific thesis in the library of the corresponding university. This shows that the respective student’s thesis is made available to the public. Also the possible availability of the scientific theses (provided by the original author under the compliance of a given consent) on the Internet represents the act of making the “work” available to the public with special regard to the definition of § 18a UrhG¹¹¹⁰. This provision addresses the issue of the “Right for Provision”, in German the “*Zurverfügungstellungsrecht*”¹¹¹¹. Therefore, it is obvious that in general Master’s theses as well as PhD theses belong to the category of “published works”.

Furthermore, the Copyright Act distinguishes between “appeared works” provided in § 9 UrhG¹¹¹², which represent “works” with the following characteristics and which are defined as:

“§ 9

- (1) *Ein Werk ist erschienen, sobald es mit Einwilligung der Berechtigten der Öffentlichkeit dadurch zugänglich gemacht worden ist, daß Werkstücke in genügender Anzahl feilgehalten oder in Verkehr gebracht worden sind.*
(2) *Ein Werk, das innerhalb eines Zeitraumes von 30 Tagen im Inland und im Ausland erschienen ist, zählt zu dem im Inland erschienenen Werken.* ”¹¹¹³

In addition to the aforementioned characteristic of “published works”, which states that a work must be published (especially addressed in § 8 of the Copyright Act¹¹¹⁴), the respective “work” must applied on “appeared works”¹¹¹⁵ also be offered in sufficient numbers to the public. This procedure can be done, for instance in cases of PhD theses, by employing a publisher. Here, it has to be noted that it is difficult to decide whether the aforementioned provision of § 9 of the Copyright Act¹¹¹⁶ is applicable in cases of Master’s theses as well as PhD theses. Due to the fact that it is not clearly declared what is meant by “sufficient numbers”, the act is quite vague at this point. It is common

¹¹⁰⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 86 UG.

¹¹¹⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 18a UrhG.

¹¹¹¹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 18a UrhG.

¹¹¹²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 9 UrhG.

¹¹¹³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 9 UrhG.

¹¹¹⁴[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 8 UrhG.

¹¹¹⁵[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 9 UrhG.

¹¹¹⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 9 UrhG.

practice that scientific theses are not available physically in a high number, because often only the author, the thesis supervisor as well the library of a university is in possession of a copy of the thesis. It should not be forgotten the legal definition of the “author” or “originator”, which represents the person who is covered and protected by the regulations of the copyright law, in accordance to § 10 of the Copyright Act¹¹¹⁷:

“§ 10

- (1) *Urheber eines Werkes ist, wer es geschaffen hat.*
 (2) *In diesem Gesetz umfaßt der Ausdruck „Urheber“, wenn sich nicht aus dem Hinweis auf die Bestimmung des Absatzes 1 das Gegenteil ergibt, außer dem Schöpfer des Werkes auch die Personen, auf die das Urheberrecht nach seinem Tode übergegangen ist.* ”¹¹¹⁸

In addition to the author’s moral right (§§ 19-21 UrhG)¹¹¹⁹, the Austrian Copyright Act also consists of a number of exploitation rights.¹¹²⁰ In what follows, we provide a non-exhaustive list of these rights of exploitation, which are provided in §§ 14-18a of the Copyright Act (in its current version)¹¹²¹:

- “General” right for exploitation (§ 14, Paragraph 1 UrhG)¹¹²²
- Right to edit and translate (§ 14, Paragraph 2 UrhG)¹¹²³
- Right of the first summary (§ 14, Paragraph 3 UrhG)¹¹²⁴
- Right for reproduction (§ 15 UrhG)¹¹²⁵
- Right for distribution (§ 16 UrhG)¹¹²⁶

¹¹¹⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 10 UrhG.

¹¹¹⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 10 UrhG.

¹¹¹⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, §§ 19-21 UrhG.

¹¹²⁰[Nit13]: Nitsche. 2013. “Plagiat und Urheberrecht”, p. 78 f.

¹¹²¹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, §§ 14-18a UrhG.

¹¹²²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 14, Paragraph 1 UrhG.

¹¹²³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 14, Paragraph 2 UrhG.

¹¹²⁴[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 14, Paragraph 3 UrhG.

¹¹²⁵[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 15 UrhG.

¹¹²⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 16 UrhG.

- Right for rental and lending (§ 16a UrhG)¹¹²⁷
- Right for public reproduction: including right of recitation, performing right and presentation right (§ 18 UrhG)¹¹²⁸
- Right for provision (§ 18a UrhG)¹¹²⁹

These aforementioned rights for exploitations are also important in cases of scientific misconduct, especially in cases of plagiarism. For instance, the “general” right of exploitation provided in § 14, Paragraph 1 of the Copyright Act¹¹³⁰ is devoted to the exclusive right, which the originator has and which declares that it is the only person who has the right to exploit the work in the ways which are reserved by him (in accordance with the Copyright Act). Also, with reference to § 14, Paragraph 2 UrhG¹¹³¹, the right for editing and translating a work states that the originator is the only person who has the right to edit, adapt and translate a work. Hence, this mentioned provision¹¹³² also covers the plagiarism types of “translation plagiarism” as well as “plagiarism through paraphrasing”. According to § 15 of the Copyright Act (especially § 15, Paragraph 1 UrhG)¹¹³³, the provision of the right for reproduction declares that the exclusive right to reproduce a work (like, e.g., in form of copies) and is only reserved for the originator of a work (regardless of the reproduction procedure, the quantity and whether it is temporary or permanent). Furthermore, the regulations of § 16 UrhG¹¹³⁴ (in particular § 16, Paragraph 1 UrhG¹¹³⁵) state that the right for distribution, is reserved for the originator of a work.

Noteworthy is the fact that the articles §§ 41-59c of the Copyright Act¹¹³⁶ give provisions which represent important exceptions, in form of limitations of the aforementioned exploitation rights as well as restrictions of the copyright protection (like, e.g., the

¹¹²⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 16a UrhG.

¹¹²⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 18 UrhG.

¹¹²⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 18a UrhG.

¹¹³⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 14, Paragraph 1 UrhG.

¹¹³¹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 14, Paragraph 2 UrhG.

¹¹³²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 14, Paragraph 2 UrhG.

¹¹³³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 15, Paragraph 1 UrhG.

¹¹³⁴[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 16 UrhG.

¹¹³⁵[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 16, Paragraph 1 UrhG.

¹¹³⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, §§ 41-59c UrhG.

reproduction of a work for the personal and private use¹¹³⁷), in the context of the copyright law.

4.4.2 Right to Quote

After the most important legal definitions and, as a consequence thereof, the restrictions of the copyright protection defined in the Copyright Act are provided, we are now coming back to the initially described scenario of discovered cases of (text) plagiarism in scientific theses.

Both, the legal definition of the term “plagiarism” and also the employed definitions of scientific theses (including diploma and Master’s theses¹¹³⁸ as well as doctoral theses¹¹³⁹), provided in the Universities Act 2002, refer to the currently applicable Copyright Act¹¹⁴⁰. These regulations state that, in the context of scientific theses, the compliance with the aforementioned provisions of the Copyright Act¹¹⁴¹ must be ensured. To be more precise, the obligation to cite¹¹⁴² as well as the compliance with common citation rules¹¹⁴³ must be strictly adhered by students.^{1144,1145}

The question of how to cite or quote from foreign copyrighted works in the context of scientific thesis now arises, as one has to comply with the guidelines for the submission procedure at a university?

To provide an answer to this question, it has to be noted that the defined provisions of § 42f of the Copyright Act¹¹⁴⁶ about “citations” as well as “quotations” addresses this specific issue. Here, we want to highlight that the specific regulation of § 42f UrhG¹¹⁴⁷ is part of the aforementioned exceptions and restrictions of the copyright law.

¹¹³⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42 UrhG.

¹¹³⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 81, Paragraph 4 UG.

¹¹³⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 83, Paragraph 2 UG.

¹¹⁴⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 80, Paragraph 2 UG.

¹¹⁴¹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018.

¹¹⁴²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹¹⁴³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57 UrhG.

¹¹⁴⁴[Brü07]: Brünner. 2007. “Studienrechtliche Konsequenzen von Plagiaten”, p. 207 ff.

¹¹⁴⁵See also legal definition of the term “plagiarism”: [UG19]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

¹¹⁴⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹¹⁴⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

Noteworthy, is the fact that since there was no uniform nor explicitly stated legal definition of the term “plagiarism” in the past, the juridical interpretation of the Supreme Court of Justice (OGH) was used to define and formalize this type of misbehavior. Before the introduction of the legal definition of the notion “plagiarism” was conducted in 2015 in the corresponding Universities Act 2002¹¹⁴⁸, a possible case of plagiarism was defined and interpreted by the OGH as “*the opposite of a correct quotation/citation*”¹¹⁴⁹. The applicable provisions for a proper quotation¹¹⁵⁰ which were relevant in the context of scientific theses at that time (especially before the amendments of the Universities Act 2002 came into force¹¹⁵¹), were declared in §§ 46¹¹⁵² and 57¹¹⁵³ in the Austrian Copyright Act. These aforementioned regulations had to be taken into account in the writing process of students’ theses in the academic context. Here, it has to be noted that the earlier provision of § 46 UrhG¹¹⁵⁴ refers to the proper usage of admissible citations/quotations, whereas the regulations of § 57 UrhG¹¹⁵⁵ define information about the original source as well as the original author. Additionally, since 2015 due the amendments of the respective legislation of the Copyright Act in form of the “*Urheberrechts-Novelle 2015*”¹¹⁵⁶, the aforementioned Article 46 of the Copyright Act¹¹⁵⁷ no longer exists in that particular way¹¹⁵⁸. Instead, through the modification of the copyright law inducted by the aforementioned reform

¹¹⁴⁸[UG15]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 21/2015 (*Änderung des Universitätsgesetzes 2002 und des Hochschulgesetzes 2005*), § 51, Paragraph 2, Sentence 31 UG.

¹¹⁴⁹[OGH90]: OGH 29.09.1987, 4 Ob 313/86 (4 Ob 314/86); OGH 10.07.1990, 4 Ob 72/90.

¹¹⁵⁰[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*).

¹¹⁵¹[UG15]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 21/2015 (*Änderung des Universitätsgesetzes 2002 und des Hochschulgesetzes 2005*).

¹¹⁵²[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46 UrhG.

¹¹⁵³[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 57 UrhG.

¹¹⁵⁴[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46 UrhG.

¹¹⁵⁵[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 57 UrhG.

¹¹⁵⁶[Urh15b]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 99/2015 (*Urheberrechts-Novelle 2015 – Urh-Nov 2015*).

¹¹⁵⁷[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46 UrhG.

¹¹⁵⁸See [Urh15b] for more details.

act¹¹⁵⁹, an appropriate and adapted version of this provision is introduced.¹¹⁶⁰ Now, the according provisions can be found in § 42f of the Copyright Act (in its current version)¹¹⁶¹, which represents a slightly adopted version in comparison to the earlier applicable version.¹¹⁶² One important issue which has to be highlighted, is that in the past, the according article of § 46 UrhG¹¹⁶³ about the “Right to Quote” was regulated separately for each (quoted) category of “work”.^{1164,1165} For instance, “small quotations” were regulated in § 46, Sentence 1 UrhG¹¹⁶⁶, whereas “large quotations” were defined in § 46, Sentence 2 UrhG^{1167,1168}. The differences between these types of quotes will be discussed in more detail later on. The implementation of the amendments of the “*Urheberrechts-Novelle 2015*”¹¹⁶⁹ results in a provision, which summarizes and regulates different types of quotes (in particular: “small quotations” and “large quotations”) and therefore comprises different types of “works” in one general provision, as defined in § 42f (about “citations” as well as “quotations”) of the currently applicable Copyright Act^{1170,1171}.

Subsequently, we give the specifications of the provisions of § 42f of the copyright law¹¹⁷², which are devoted to “citations” and “quotations”. They are relevant in the context of scientific theses within the scope of an university. According to this regulation, quotations have the following characteristics and are defined as:

¹¹⁵⁹[Urh15b]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 99/2015 (*Urheberrechts-Novelle 2015 – Urh-Nov 2015*).

¹¹⁶⁰[Dok15]: Dokalik 2015. *UrhG: Urheberrechtsgesetz idF der Novelle 2015 inkl VerwGesG (Textausgabe mit Erläuterungen und Anmerkungen)*, p. 57 f.

¹¹⁶¹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹¹⁶²[Wal17]: Walter, M Michael. 2017. “Vorlesungsskriptum “Grundriss des österreichischen Urheber-, Urhebervertrags- und Verwertungsgesellschaftenrechts””, p. 77-80.

¹¹⁶³[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46 UrhG.

¹¹⁶⁴[Dok15]: p. 58 f “*ErläutRV(687 BlgNR 25. GP)*”.

¹¹⁶⁵[Wal17]: p. 77.

¹¹⁶⁶[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46, Sentence 1 UrhG.

¹¹⁶⁷[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46, Sentence 2 UrhG.

¹¹⁶⁸[Dok15]: p. 58 f “*ErläutRV(687 BlgNR 25. GP)*”.

¹¹⁶⁹[Urh15b]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 99/2015 (*Urheberrechts-Novelle 2015 – Urh-Nov 2015*).

¹¹⁷⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹¹⁷¹[Dok15]: p. 58 f “*ErläutRV(687 BlgNR 25. GP)*”.

¹¹⁷²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

“§ 42f

(1) Ein veröffentlichtes Werk darf zum Zweck des Zitats vervielfältigt, verbreitet, durch Rundfunk gesendet, der Öffentlichkeit zur Verfügung gestellt und zu öffentlichen Vorträgen, Aufführungen und Vorführungen benutzt werden, sofern die Nutzung in ihrem Umfang durch den besonderen Zweck gerechtfertigt ist. Zulässig ist dies insbesondere, wenn

1. einzelne Werke nach ihrem Erscheinen in ein die Hauptsache bildendes wissenschaftliches Werk aufgenommen werden; ein Werk der in § 2 Z 3 bezeichneten Art oder ein Werk der bildenden Künste darf nur zur Erläuterung des Inhaltes aufgenommen werden;
2. veröffentlichte Werke der bildenden Künste bei einem die Hauptsache bildenden wissenschaftlichen oder belehrenden Vortrag bloß zur Erläuterung des Inhaltes öffentlich vorgeführt und die dazu notwendigen Vervielfältigungsstücke hergestellt werden;
3. einzelne Stellen eines veröffentlichten Sprachwerkes in einem selbstständigen neuen Werk angeführt werden;
4. einzelne Stellen eines veröffentlichten Werkes der Tonkunst in einer literarischen Arbeit angeführt werden;
5. einzelne Stellen eines erschienenen Werkes in einem selbstständigen neuen Werk angeführt werden.

(2) Für die Zwecke dieser Bestimmung ist einem erschienenen Werk ein Werk gleichzuhalten, das mit Zustimmung des Urhebers der Öffentlichkeit in einer Weise zur Verfügung gestellt wurde, dass es für die Allgemeinheit zugänglich ist. ”¹¹⁷³

With reference to Paragraph 1 of the aforementioned provision about “quotations”¹¹⁷⁴ which represents in some sense a general clause (which is legally binding for all categorizations of works), it should be kept in mind that the required prerequisite of a work in order to have a right to quote is given when the original work represents a “published work” (with regard on its definition in § 8 UrhG¹¹⁷⁵).¹¹⁷⁶ Furthermore, it has to be taken into account that published works (regardless of their work categorization) may be among other forms, reproduced, distributed, made available to the public, used in public lectures; provided in form of a quotation, if and only if the extent or scope of the usage is justified by special purpose.¹¹⁷⁷

¹¹⁷³[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹¹⁷⁴[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1 UrhG.

¹¹⁷⁵[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 8 UrhG.

¹¹⁷⁶[Wal17]: p. 77.

¹¹⁷⁷[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1 UrhG.

Another important point is that, according to § 42f of the Copyright Act¹¹⁷⁸ (which was based on earlier definitions, which results in the terms defined by § 46 UrhG¹¹⁷⁹, before the amendments of the current law in form of the “*Urheberrechts-Novelle 2015*”¹¹⁸⁰ were implemented) it has to be distinguished between “small quotations” and “large quotations”.^{1181,1182} As a result, it is obvious that we always compare the currently applicable regulation of § 42f UrhG¹¹⁸³ in relation to the earlier version of the corresponding article (in particular: § 46 UrhG¹¹⁸⁴).¹¹⁸⁵ Furthermore, in the subsequently provided differentiation between these two types of quotations, we give special attention on cases of text citations.

“Small Quotations”

This referred type of quotes is nowadays defined in Sentence 3, 4 and 5 of the Copyright Act^{1186,1187}. Based on the fact that scientific theses represent “literary works” (according to § 2, Paragraph 1 of the UrhG¹¹⁸⁸), it is obvious that § 42f, Sentence 3 UrhG¹¹⁸⁹ can be applied correspondingly. The defined provisions without restriction to a specific work category (with the prerequisite that a work is according to § 9 UrhG an “appeared work”¹¹⁹⁰) can be found in the legal regulation of Paragraph 1, Sentence 5 of § 42f¹¹⁹¹. Nevertheless, the corresponding definition of “small quotations” declares that only

¹¹⁷⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹¹⁷⁹[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46 UrhG.

¹¹⁸⁰[Urh15b]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 99/2015 (*Urheberrechts-Novelle 2015 – Urh-Nov 2015*).

¹¹⁸¹[Nit13]: p. 84 f.

¹¹⁸²[Dok15]: p. 58 f “*ErläutRV(687 BlgNR 25. GP)*”.

¹¹⁸³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹¹⁸⁴[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 46 UrhG.

¹¹⁸⁵[Dok15]: p. 58 f “*ErläutRV(687 BlgNR 25. GP)*”.

¹¹⁸⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1, Sentence 3-5 UrhG.

¹¹⁸⁷[Dok15]: p. 58 f “*ErläutRV(687 BlgNR 25. GP)*”.

¹¹⁸⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 2, Paragraph 1 UrhG.

¹¹⁸⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1, Sentence 3 UrhG.

¹¹⁹⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 9 UrhG.

¹¹⁹¹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1, Sentence 5 UrhG.

individual and single passages from a published work may be transferred to a separate work (under the condition that the receiving work represents an independent and new work).¹¹⁹² As already stated, scientific theses (consisting Master's theses as well as PhD theses) are "published works"¹¹⁹³ and therefore they are quotable works (according to § 42f, Paragraph 1, Sentence 3¹¹⁹⁴). Another important aspect is the question of what is legally meant by "individual and single passages" taken from a work in form of a correct citation, which is difficult to define or determine.¹¹⁹⁵ According to the constant jurisdiction of the OGH¹¹⁹⁶, especially applied on cases of scientific theses, it is obvious that a used quote may only include a few small passages from a given text. Here, the relation to the type, purpose and scope of the cited work must be evaluated in order to ensure that the text acquisition is done in form of a correct "small quotation" (in accordance with § 42f, Paragraph 1, Sentence 3 UrhG¹¹⁹⁷).¹¹⁹⁸ Therefore, in cases in which "small quotations" are used, it would be unacceptable to quote entire chapters of a foreign work.^{1199,1200} One reason for that is, that a work which contains quotations (in accordance with the Copyright Act), must still represent an independent creation even when the quotation is removed.¹²⁰¹

Roughly speaking, referring to scientific theses in the academic context, the usage of "small quotations" serves the purpose that in few sentences, the original author's individual thoughts are included in a student's own and separate representation, whereas the provided citations are only used to supplement the student's own opinion.

"Large Quotations"

Besides "small quotations", also "large quotations" are another kind of quotes. This referred type of quotes is defined in Sentence 1 of the currently applicable Copyright Act¹²⁰². They are often referred to as "large scientific quotations".^{1203,1204} The usage of

¹¹⁹²[Nit13]: p. 84 f.

¹¹⁹³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 8 UrhG.

¹¹⁹⁴[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1, Sentence 3 UrhG.

¹¹⁹⁵[Wal17]: p. 78 f.

¹¹⁹⁶[OGH95]: OGH 13.07.1982, 4 Ob 350/82; OGH 31.01.1995, 4 Ob 1/95.

¹¹⁹⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1, Sentence 3 UrhG.

¹¹⁹⁸[Nit13]: p. 84 f.

¹¹⁹⁹[OGH95]: OGH 13.07.1982, 4 Ob 350/82; OGH 31.01.1995, 4 Ob 1/95.

¹²⁰⁰[Nit13]: p. 84 f.

¹²⁰¹[OGH95]: OGH 13.07.1982, 4 Ob 350/82; OGH 31.01.1995, 4 Ob 1/95.

¹²⁰²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1, Sentence 1 UrhG.

¹²⁰³[Dok15]: p. 58 f "ErläutRV(687 BlgNR 25. GP)".

¹²⁰⁴[Wal17]: p. 79 f.

“large quotations” allows the acquisition of an individual work in its entirety into a new scientific work (in which the citations form a major part) under certain prerequisites.¹²⁰⁵ However, the work from which is cited must represent a copyrighted work which is protected under the copyright law. To be more precise, it must already have been published and additionally has to have appeared. Therefore, a work (from which is cited) must not only represent a “published work” (according to the definition of § 8 UrhG¹²⁰⁶), but must also additionally represent an “appeared work” (according to the definition of § 9 UrhG¹²⁰⁷).¹²⁰⁸ Here, it has to be noted, that it is rather rare that Master’s theses and PhD theses do constitute “appeared works” in the context of the Copyright Act¹²⁰⁹. Based on the fact that such scientific theses are not available in a sufficient number to the public. However, applied on scientific thesis, the requirement for “appeared works” could be met when the respective thesis is published by a publisher. Noteworthy is the fact that applied on cases of scientific theses, the usage of “large quotations” demonstrate an area of conflict. In the author’s opinion, scientific theses in the academic context never refer to entire works, otherwise the required “self-accomplishment”^{1210,1211}, which is a vital ingredient of such types of theses, would be missing. Furthermore, another important aspect which has to be taken into account is that it is hard to judge whether a quotation is a main part of a thesis. Also, it is hard to evaluate whether a work counts as scientific work or not.¹²¹² As already described by “small quotations”, the relation to the justified purpose and extent of the cited work must also be evaluated in comparison to the original work when using “large quotations”.^{1213,1214}

4.4.3 Correct Scientific Quotation

Additionally to the applicable rules of the aforementioned regulations of § 42f of the Copyright Act¹²¹⁵, which addresses the “right to quote”, also the provision of § 57 UrhG¹²¹⁶ is relevant in the context of citations.¹²¹⁷

¹²⁰⁵[Dok15]: p. 58 f “ErläutRV(687 BlgNR 25. GP)”.

¹²⁰⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 8 UrhG.

¹²⁰⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 9 UrhG.

¹²⁰⁸[Nit13]: p. 85.

¹²⁰⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 9 UrhG.

¹²¹⁰Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241.

¹²¹¹“Self-accomplishment” in the context of scientific writing: Compare legal definition of PhD theses (§ 51, Paragraph 2, Sentence 13 UG) with Master’s theses (§ 51, Paragraph 2, Sentence 8 UG).

¹²¹²[Wal17]: p. 80.

¹²¹³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f, Paragraph 1 UrhG.

¹²¹⁴[Wal17]: p. 79 f.

¹²¹⁵[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹²¹⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57 UrhG.

¹²¹⁷[Dok15]: p. 58 f “ErläutRV(687 BlgNR 25. GP)”.

Roughly speaking, the aforementioned provisions stated in § 42f of the currently analyzed Copyright Act¹²¹⁸ provide information about the admissible extent and the type of quotations, whereas the subsequently described provisions of § 57 UrhG¹²¹⁹ give relevant information about the citation method. Especially the regulations of § 57, Paragraph 1, 2 and 3a UrhG¹²²⁰ cover important key aspects for scientific theses.

Noteworthy is the fact that the already explained amendments of the respective legislation of the Copyright Act in form of the “*Urheberrechts-Novelle 2015*”¹²²¹ let the provisions of § 57 of the copyright law^{1222,1223} remain largely untouched.^{1224,1225,1226}

According to § 57 of the copyright law¹²²⁷, which issues that immediately after a provided citation the corresponding information of the source has to be defined¹²²⁸ (in particular stated in § 57, Paragraph 2 UrhG¹²²⁹). Additionally and with reference to § 57, Paragraph 2 UrhG¹²³⁰, the name of the originator and the title of the work must be provided.¹²³¹ Also, possible abbreviations of the cited work are allowed, as defined in § 57, Paragraph 1 UrhG¹²³². Furthermore, the citation should be clearly recognizable¹²³³ and it must be possible to find it quickly (e.g. by specifying page numbers of the cited work).¹²³⁴

¹²¹⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹²¹⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57 UrhG.

¹²²⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57, Paragraph 1, 2 and 3a UrhG.

¹²²¹[Urh15b]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 99/2015 (*Urheberrechts-Novelle 2015 – Urh-Nov 2015*).

¹²²²[Urh15a]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 11/2015 (*Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014*), § 57 UrhG.

¹²²³[Urh15b]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 99/2015 (*Urheberrechts-Novelle 2015 – Urh-Nov 2015*), § 57 UrhG.

¹²²⁴[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57 UrhG.

¹²²⁵Compare § 57 UrhG with [Urh15a], [Urh15b] and [Urh18].

¹²²⁶[Dok15]: p. 78 f.

¹²²⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57 UrhG.

¹²²⁸[OGH90]: OGH 29.09.1987, 4 Ob 313/86 (4 Ob 314/86); OGH 10.07.1990, 4 Ob 72/90.

¹²²⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57, Paragraph 2 UrhG.

¹²³⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57, Paragraph 2 UrhG.

¹²³¹[Wal17]: p. 78.

¹²³²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57, Paragraph 1 UrhG.

¹²³³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 57, Paragraph 2 UrhG.

¹²³⁴[Brü07]: p. 207 ff.

Regardless of the used type of quotations (“small quotation” or “large quotation”), the provided quotation must always be marked or highlighted as such in a recognizable way.^{1235,1236} Furthermore, immediately after the citation is given¹²³⁷, also the corresponding source¹²³⁸ as well as author¹²³⁹ must be mentioned. The quoted work must be referred by a defined reference and must be pointed out in a proper way.^{1240,1241}

4.4.4 Legal Consequences under the Copyright Law

After a comprehensive analysis of the Copyright Act in the context of the legal concepts is presented, subsequently the legal consequences for students who have plagiarized under the copyright law are discussed.

A student who committed academic misconduct (in form of a plagiarized thesis) may face sanctions imposed under the Copyright Act¹²⁴², which are in principle only enforceable when the “author/originator” of a work (the person who is covered by the copyright law, based on the definition stated in § 10 UrhG¹²⁴³) initiates a legal action under the civil law.¹²⁴⁴

Therefore, the subsequently non-exhaustive list of legal consequences (initiated by the originator of a work) can be distinguished in cases of violations in the context of scientific theses:

- Injunctive relief (§ 81 UrhG)¹²⁴⁵
- Right to removal (§ 82 UrhG)¹²⁴⁶

¹²³⁵[OGH90]: OGH 29.09.1987, 4 Ob 313/86 (4 Ob 314/86); OGH 10.07.1990, 4 Ob 72/90.

¹²³⁶[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 57, Paragraph 2 UrhG.

¹²³⁷[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹²³⁸[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 57, Paragraph 2 UrhG.

¹²³⁹[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 57, Paragraph 3a, Sentence 2 UrhG.

¹²⁴⁰[Wal17]: p. 77, 80.

¹²⁴¹[Gam15]: p. 11 ff (2.2 Die Plagiatsdefinition der Österreichischen Universitätenkonferenz vom 24. Februar 2014 - bald Gesetz?).

¹²⁴²[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018.

¹²⁴³[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 10 UrhG.

¹²⁴⁴[Nit13]: p. 86.

¹²⁴⁵[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 81 UrhG.

¹²⁴⁶[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 82 UrhG.

- Publication of judgement (§ 85 UrhG)¹²⁴⁷
- Claim for payment (§ 86 UrhG)¹²⁴⁸
- Compensation and disgorgement of profits (§ 87 UrhG)¹²⁴⁹
- Temporary injunctions (§ 87c UrhG)¹²⁵⁰

For more details on the aforementioned listed sanctions, we refer the reader to the corresponding legal act.

In cases of observed ghostwriting (especially in the academic context), it is obvious that (in most cases) the originator of a work will not claim any consequences under the civil law in accordance with the copyright law since he/she was paid for the creation of the work.¹²⁵¹

Besides, the civil law claims, the originator may also initiate claims according to the Austrian Criminal Code (like in form of a financial penalty up to 360 daily fines in lieu of jail time or a jail term up to 6 months¹²⁵²), which are explicitly declared in §§ 91-93 of the Copyright Act^{1253, 1254}.

In the overall picture, it has to be noted that a confirmed case of plagiarism does not always automatically refer to copyright infringements.¹²⁵⁵ Due to the fact that in cases of copyright infringements (like, e.g., through the violation of the copyright of the originator and non-compliance of the defined exploitation rights which are mentioned in §§ 14-18a of the Copyright Act¹²⁵⁶, but also the untrue allegation of an authorship)¹²⁵⁷ the right of the originator to protect a work based on copyright according to the copyright law (defined in §§ 60-65 UrhG¹²⁵⁸) is only possible within a defined period. Furthermore, also “free

¹²⁴⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 85 UrhG.

¹²⁴⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 86 UrhG.

¹²⁴⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 87 UrhG.

¹²⁵⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 87c UrhG.

¹²⁵¹[Nit13]: p. 78 f.

¹²⁵²[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, § 91, Paragraph 1 UrhG.

¹²⁵³[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, §§ 91-93 UrhG.

¹²⁵⁴[Sch13a]: p. 74.

¹²⁵⁵[Kar16]: Karin Lackner. 2016. “Informationsfolien “Bild- und Urheberrecht für VWA / Diplomarbeit””, p. 8 f.

¹²⁵⁶[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, §§ 14-18a UrhG.

¹²⁵⁷[Kar16]: p. 7.

¹²⁵⁸[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018, §§ 60-65 UrhG.

works”, which are declared in the provisions of § 7 UrhG¹²⁵⁹, are not protected via the Copyright Act. Although “free works” and such works with an expired protection period no longer have any copyright protection with reference to the copyright law (especially § 60, Paragraph 1 UrhG)¹²⁶⁰, also such categories of works must be cited correctly in scientific theses (according to the required citation obligation of the Universities Act 2002¹²⁶¹ and additionally in compliance with the rules regarding scientific integrity), otherwise there may be violations which impose study-related consequences under the Universities Act 2002.

4.5 Austrian Criminal Code

The Austrian Criminal Code (*Strafgesetzbuch: StGB*) regulates (most) fundamental matters in Austria regarding penal law.¹²⁶² The legal matter of the law comprises a collection of instances of misbehavior which range from “simple” misdemeanors, like defamation, up to felonies, like homicide.

The history of the criminal law in Austria reaches back to the year 1974 in which the principal version of the Austrian Criminal Code was amended¹²⁶³. The law came into force on January 1st, 1975. Until now there were many amendments of the Criminal Code 1974¹²⁶⁴. The current version¹²⁶⁵ is (among others) based on amendments introduced by the Criminal Code Reform Act of 2015 (*Strafrechtsänderungsgesetz 2015: StRÄG 2015*)¹²⁶⁶. This act (*BGBL. I Nr. 112/2015*)¹²⁶⁷ represents one of the biggest modifications of the criminal law since the principal version from 1975¹²⁶⁸.

¹²⁵⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. *BGBL. 111/1936 idF I 105/2018*, § 7 UrhG.

¹²⁶⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. *BGBL. 111/1936 idF I 105/2018*, § 60, Paragraph 1 UrhG.

¹²⁶¹See legal definition of the term “plagiarism”: [UG19]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. *BGBL. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 31 UG.

¹²⁶²[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. *BGBL. 60/1974 idF I 111/2019*.

¹²⁶³[StG74]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. *BGBL. 60/1974*.

¹²⁶⁴[StG74]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. *BGBL. 60/1974*.

¹²⁶⁵[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. *BGBL. 60/1974 idF I 111/2019*.

¹²⁶⁶[StG15]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. *BGBL. 60/1974 idF I 112/2015 (Strafrechtsänderungsgesetz 2015: StRÄG 2015)*.

¹²⁶⁷[StG15]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. *BGBL. 60/1974 idF I 112/2015 (Strafrechtsänderungsgesetz 2015: StRÄG 2015)*.

¹²⁶⁸[StG74]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB)*. *BGBL. 60/1974*.

This modification of the legislation inducted by the aforementioned reform act introduces important reforms in the area of the penal legislation¹²⁶⁹. In addition to the modernization of the Austrian Criminal Code, also the implementation of EU directives had taken place.¹²⁷⁰

Since the Reform Act of 2015¹²⁷¹ came into effect, also six other amendments were published¹²⁷² (like, e.g., Federal Law on the Improvement and Control of Anti-Welfare Fraud (*“Sozialbetrugsbekämpfungsgesetz: SBBG”*)¹²⁷³, Federal Law which amended the Criminal Code and the Code of Criminal Procedure 1975 (*“Strafgesetznovelle 2017”*)¹²⁷⁴).

After a short overview over the regulated key issues of the Austrian Criminal Code, the next step in this thesis is an analysis of the current relevant legislation in order to determine whether the following (on the first glance applicable) criminal offenses are indeed applicable in cases of plagiarism and especially in cases of ghostwriting:

- Deception / Deceit (§ 108 StGB)¹²⁷⁵
- Larceny / Theft (§ 127 StGB)¹²⁷⁶
- Fraud (§ 146 StGB)¹²⁷⁷

We want to highlight at this point, that neither the term “plagiarism” nor the term “ghostwriting” are defined as elements of offenses in the Austrian Criminal Code.

4.5.1 Deception / Deceit

According to § 108 of the Austrian Criminal Code¹²⁷⁸, the criminal offense of “deceit” in the legal context is declared as:

¹²⁶⁹[StG15]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 60/1974 idF I 112/2015 (Strafrechtsänderungsgesetz 2015: StRÄG 2015).*

¹²⁷⁰See [StG15] for more details.

¹²⁷¹[StG15]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 60/1974 idF I 112/2015 (Strafrechtsänderungsgesetz 2015: StRÄG 2015).*

¹²⁷²[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 60/1974 idF I 111/2019.*

¹²⁷³[StG74]: idF I 113/2015.

¹²⁷⁴[StG74]: idF I 117/2017.

¹²⁷⁵[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 60/1974 idF I 111/2019, § 108 StGB.*

¹²⁷⁶[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 60/1974 idF I 111/2019, § 127 StGB.*

¹²⁷⁷[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 60/1974 idF I 111/2019, § 146 StGB.*

¹²⁷⁸[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 60/1974 idF I 111/2019, § 108 StGB.*

“§ 108

- (1) *Wer einem anderen in seinen Rechten dadurch absichtlich einen Schaden zufügt, daß er ihn oder einen Dritten durch Täuschung über Tatsachen zu einer Handlung, Duldung oder Unterlassung verleitet, die den Schaden herbeiführt, ist mit Freiheitsstrafe bis zu einem Jahr oder mit Geldstrafe bis zu 720 Tagessätzen zu bestrafen.*
- (2) *Hoheitsrechte gelten nicht als Rechte im Sinn des Abs. 1.*
- (3) *Der Täter ist nur mit Ermächtigung des in seinen Rechten Verletzten zu verfolgen.* ¹²⁷⁹

On the first glance, it seems that the aforementioned provision of the Austrian Criminal Code is applicable in cases of committed plagiarism as well as ghostwriting, especially in the academic context. Because, as already mentioned in Section 4.1.4, in cases of “serious and intentional” plagiarism and ghostwriting, it can be assumed that there was a fraudulent intent¹²⁸⁰ of the accused student in form of a conscious and non-negligent action, by pretending of a foreign work as one’s own in order to receive a benefit (like, a positive or even better assessment of the scientific thesis).^{1281,1282} Furthermore, it is obvious, that the required “self-accomplishment” of a student in order to fulfill the writing assignment of scientific theses is not given.¹²⁸³ Hence, the fraudulent intention of the plagiarist, which is the prerequisite for the “fraudulent obtainment” of an achievement, is fulfilled in cases of plagiarism as well as ghostwriting. Nevertheless, the criminal offense of a deception (according to the Austrian Criminal Code)¹²⁸⁴ cannot be applied here¹²⁸⁵, although the currently discussed article was relevant for plagiarism and other forms of academic dishonesty in the scientific context especially until the year 1987. From this point in time on, there were no criminal penalties for cases of plagiarism. One reason for this fact is, that since the amendments of the Austrian Criminal Code, in form of “605. Bundesgesetz: Strafrechtsänderungsgesetz 1987”¹²⁸⁶, which came into force in 1988, no criminal penalties according to the criminal law are possible anymore for cases of academic misconduct (like plagiarism) based on the decision of the OGH¹²⁸⁷, which refers to the prohibition of double jeopardy.¹²⁸⁸ According to the juridical decision of the OGH,

¹²⁷⁹[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 108 StGB.*

¹²⁸⁰Compare, like, e.g., VwGH 09.03.1982, 81/07/0230; VwGH 26.06.1996, 93/12/0241.

¹²⁸¹Compare, like, e.g., VwGH 11.12.2009, 2008/10/0088.

¹²⁸²[Sch13a]: Schick. 2013. “Mögliche strafrechtliche Folgen des Plagierens in der Wissenschaft”, p. 72.

¹²⁸³Compare, like, e.g., VwGH 26.06.1996, 93/12/0241.

¹²⁸⁴[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 108 StGB.*

¹²⁸⁵[Sch13a]: p. 72, 76.

¹²⁸⁶[StG88]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB). BGBl. 605/1987 (Strafrechtsänderungsgesetz 1987: StRÄG) idF 398/1988.*

¹²⁸⁷[OGH75]: OGH 06.11.1975, 12 Os 123/75; OGH 09.06.1976, 9 Os 53/76; OGH 01.02.1977, 10 Os 206/77.

¹²⁸⁸The jurisdiction of the OGH was conducted based on a case which dealt with driving a vehicle with an invalid or even fake license plate cannot be punished twice.

it is not possible to impose sanctions in form of an administrative penalty and to also impose penalties based on the court of law simultaneously.¹²⁸⁹ Here, it has to be noted that this modification was conducted due to the introduction of Paragraph 2 of § 108 of the Austrian Criminal Code¹²⁹⁰. With reference on § 108, Paragraph 2 of the StGB¹²⁹¹, it can be stated that the aforementioned provisions are not legally binding for institutions which hold sovereign rights, and as already discussed before, universities are according to the provisions of § 4 about the “*Legal Nature*” of the Universities Act 2002 “*legal entities under public law*”¹²⁹².

Therefore, it is obvious that § 108 of the Austrian Criminal Code (in its current version)¹²⁹³ and their resulting sanctions in form of criminal penalties cannot be applied in cases of plagiarism as well as ghostwriting.

4.5.2 Larceny / Theft

The act of “larceny/theft” is defined as follows:

“§ 127

Wer eine fremde bewegliche Sache einem anderen mit dem Vorsatz wegnimmt, sich oder einen Dritten durch deren Zueignung unrechtmäßig zu bereichern, ist mit Freiheitsstrafe bis zu sechs Monaten oder mit Geldstrafe bis zu 360 Tagessätzen zu bestrafen. ”¹²⁹⁴

Although plagiarism (and other forms of academic misconduct, especially ghostwriting) are often associated with the “theft” of intellectual property, the aforementioned article § 127 (which is devoted to the criminal offense of larceny/theft)¹²⁹⁵ cannot be applied in such cases (even in cases where the intent of the plagiarist was obviously present). One reason for this fact is that the theft of intellectual property is not a larceny of “moveable properties” (in accordance to the Austrian Criminal Code)¹²⁹⁶ and hence not covered by this law.¹²⁹⁷ Additionally, the prerequisites of the criminal offense of “grand

¹²⁸⁹For more details: see OGH 24.06.1987, 9 Os 26/87; OGH 06.09.1988, 11 Os 84/88 (11 Os 85/88).

¹²⁹⁰[StG88]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB)*. BGBl. 605/1987 (*Strafrechtsänderungsgesetz 1987: StRÄG*) idF 398/1988, § 108, Paragraph 2 StGB.

¹²⁹¹[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB)*. BGBl. 60/1974 idF I 111/2019, § 108, Paragraph 2 StGB.

¹²⁹²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 - UG)*. BGBl. I 120/2002 idF I 3/2019, § 4 UG.

¹²⁹³[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB)*. BGBl. 60/1974 idF I 111/2019, § 108 StGB.

¹²⁹⁴[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB)*. BGBl. 60/1974 idF I 111/2019, § 127 StGB.

¹²⁹⁵[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB)*. BGBl. 60/1974 idF I 111/2019, § 127 StGB.

¹²⁹⁶[StG19]: *Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB)*. BGBl. 60/1974 idF I 111/2019, § 127 StGB.

¹²⁹⁷[Sch13a]: p. 73.

larceny/theft”, which is defined in § 128 of the Austrian Criminal Code¹²⁹⁸, are also not fulfilled due to the non-applicability of the provisions of § 127 StGB¹²⁹⁹. Therefore the appropriate regulations for the unauthorized use of foreign thoughts are mainly covered in the Copyright Act¹³⁰⁰.

4.5.3 Fraud

Finally, “fraud” is defined as follows:

“§ 146

Wer mit dem Vorsatz, durch das Verhalten des Getäuschten sich oder einen Dritten unrechtmäßig zu bereichern, jemanden durch Täuschung über Tatsachen zu einer Handlung, Duldung oder Unterlassung verleitet, die diesen oder einen anderen am Vermögen schädigt, ist mit Freiheitsstrafe bis zu sechs Monaten oder mit Geldstrafe bis zu 360 Tagessätzen zu bestrafen. ”¹³⁰¹

At the first impression, it seems to be that the aforementioned article, which deals with the criminal offense of “fraud”¹³⁰², can be applied in cases of plagiarism especially due to the fact that, in “serious and intentional” cases of scientific misconduct, the “fraudulent intent” (and hence with special regard to the legal definition of “intent” which is defined in § 5 of the Austrian Criminal Code¹³⁰³) is present. Also, it can be interpreted as “fraud” against the university when a foreign work is pretended to be one’s own. It is also possible to go beyond the frame and to refer such cases as fraud to the scientific community. Still, § 146 of the Austrian Criminal Code¹³⁰⁴ refers to cases of private gain or gain on third entities in form of a financial loss of others. Therefore, the aforementioned article cannot be applied in revealed cases of plagiarism as well as ghostwriting. Additionally, also the prerequisites of the criminal offense of “grand fraud”, which is defined in § 147 of the Austrian Criminal Code¹³⁰⁵, are also not fulfilled, due to the non-applicability of the provisions of § 146 of the criminal law¹³⁰⁶.

¹²⁹⁸[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 128 StGB.

¹²⁹⁹[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 127 StGB.

¹³⁰⁰[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl. 111/1936 idF I 105/2018.

¹³⁰¹[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 146 StGB.

¹³⁰²[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 146 StGB.

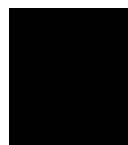
¹³⁰³[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 5 StGB.

¹³⁰⁴[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 146 StGB.

¹³⁰⁵[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 147 StGB.

¹³⁰⁶[StG19]: Bundesgesetz vom 23. Jänner 1974 über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch – StGB). BGBl. 60/1974 idF I 111/2019, § 146 StGB.

After the analysis of the currently relevant legislation of the Austrian Criminal Code, it can be stated that the legal consequences which one has to expect in cases of academic misconduct, especially in cases of a plagiarized scientific thesis, cannot be directly derived from the penal law of Austria. As a result and in accordance with the criminal law, sanctions (in form of consequences from the criminal and civil law) can only be imposed indirectly based on the Austrian Copyright Act.



Plagiarism Handling at TU Wien

The following chapter provides an overview over how the Vienna University of Technology (TU Wien) is dealing with the problem of plagiarism. After a short analysis of the current situation in the context of applying plagiarism procedures and actual policies regarding combating student plagiarism, also currently applicable guidelines (like, e.g., the Statute of the TU Wien) and possible consequences of academic misconduct will be thoroughly investigated. In addition, also an investigation of the actual handling procedure of such plagiarism checks (including submitted Master's as well as PhD theses) of various faculties will be done.

Another important topic we will address is the question whether a software-based plagiarism check of scientific works is done at all or not at the TU Wien. If yes, the further question arises whether the plagiarism checks are performed in a uniform way. Also an answer to the question, whether a TU-wide handling of plagiarism detection systems for scientific theses is required, will be provided in this chapter.

Additionally, concrete strategies for the (standardized) prevention as well as detection (based on the findings of the state-of-the-art analysis) of cheating methods, with special focus on text plagiarism at the university level, will be defined.

Afterwards, the process of an organizational workflow for detecting plagiarism in the academic context, especially tailored towards TU Wien, will be designed and also the characteristics of such an efficient workflow will be thoroughly discussed.

The implementation and concrete functionality of the workflow, which resulted in the "Plagiarism Workflow Portal" is briefly summarized in Section 5.4. The workflow portal for plagiarism checks represents the interface between all involved persons and is (technically) organizing the professional, faculty internal handling of the detection workflow for the plagiarism check with an external anti-plagiarism software.

Our approach for identifying academic misconduct, especially text plagiarism, was tested in a practical example, which also represents a pilot experiment at the TU Wien. The aforementioned experiment consists not only of a plagiarism review process (including the corresponding workflow as well as an plagiarism check done with an external plagiarism detection system) for scientific theses but also a manual (and human-based) analysis of the results of anti-plagiarism software for spotting cases of manifestations of plagiarism. The topic around ghostwriting is not examined in this practical example. One reason for this fact is that it is more likely that a thesis supervisor probably recognizes the student's writing style of a written work better than an arbitrary faculty employee.

The aforementioned detection and prevention process was tested during the period from 2016 to 2017 as part of the submission processes at the Faculty of Architecture and Planning, to be more precise, the Institute of Spatial Planning (E 280) of TU Wien. The pilot project, consisting of the workflow process (including the workflow portal for plagiarism checks), was designed in such a way that it can be easily adapted to other faculties or even other universities.

The experiences gained through the experiment can be seen as findings from practice for practice, which provide some trends, possibly for the development of further procedures and strategies, which are necessary for the handling of the problem of plagiarism. Additional important factors, which are essential for the detection and prevention of plagiarism, are obtained via the testing phase of the practical experiment and contribute to the quality assurance in the academic field.

5.1 State-of-the-Art

There are several specific regulations which are relevant for the topic of scientific misconduct at the TU Wien. Besides the Universities Act 2002 (*Universitätsgesetz 2002: UG*)¹³⁰⁷, which includes the fundamental rules and provisions about the organization of universities and their studies (like, e.g., the legal definition of plagiarism¹³⁰⁸), also academic statutes (like, e.g., the Statute of the TU Wien) and other guidelines as well as regulations are applicable (according to § 5 UG, which defines the freedom of adopting statutes within a certain scope¹³⁰⁹). They can be applied in cases of detected plagiarism and also in cases of ghostwriting.

¹³⁰⁷[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

¹³⁰⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.*

¹³⁰⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 5 UG.*

5.1.1 Universities Act 2002

The general provisions of the Universities Act 2002 (*Universitätsgesetz 2002: UG*)¹³¹⁰, which are relevant in the context of academic misconduct (especially plagiarism as well as ghostwriting), are thoroughly described in the legal background in Chapter 4. They are applicable to most (public) Austrian universities (see § 6 UG “*Scope of Application*”¹³¹¹). Therefore, we subsequently refer to the already defined regulations in the “legal basics” chapter of this Master’s thesis.

Referring to § 19, Paragraph 2a UG¹³¹², which declares that a university may define measures and consequences in cases of academic misconduct (in particular in final theses) in its respective statutes (like, e.g., the potential suspension from studies for a maximum time of two semesters in cases in which serious and intentional plagiarism as well as other forms of scientific misconduct were committed)¹³¹³. These possible measures regarding academic dishonesty can be seen as an “extension” of the Universities Act 2002 in form of provisions about possible consequences in the according statutes. With reference to § 19, Paragraph 2a UG¹³¹⁴ and after a detailed analysis of the statutes¹³¹⁵, there is no defined handling procedure of cases of plagiarism in the providing statutes regarding how to deal with the problem of plagiarism at the TU Wien. In particular there are no corresponding (and explicitly mentioned) consequences (like the temporary suspension in cases of committed academic misconduct) provided. Here, it has to be noted, that (according to § 19, Paragraph 2a UG¹³¹⁶), in addition to the aforementioned measures, it is also conceivable that the respective rectorate can make a decision by an official notification regarding further consequences (like a student’s suspension from studies for a maximum time of two semesters) in cases in which serious and intentional plagiarism as well as other forms of scientific misconduct were committed.

Indeed, there exists a “*Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien*”¹³¹⁷ which is applicable in the area of teaching and was published in 2014 in the *University Gazette of the TU Wien* (and 2015 online) by the

¹³¹⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

¹³¹¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, especially § 6, Paragraph 1, Sentence 1-22 UG.

¹³¹²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 19, Paragraph 2a UG.

¹³¹³Possible consequences are listed in an exemplary way.

¹³¹⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 19, Paragraph 2a UG.

¹³¹⁵[TU 16]: TU Wien. 2016. “Provisions of the Chapter Study Law of the TU Wien Statute (online 27.10.2016)”.

¹³¹⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 19, Paragraph 2a UG.

¹³¹⁷[TU 15]: TU Wien - The Vice Rector for Academic Affairs Office of the Rectorate: O.Univ.Prof.Dr.techn. Adalbert Precht. 2015. “Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien (online 14.10.2015)”.

rectorate. This document serves as a guideline in possible cases of scientific misconduct, especially with focus on plagiarism.

After the investigation of the general part of the academic regulations, which are valid for all (public) Austrian universities (see § 6 UG “*Scope of Application*”¹³¹⁸), we will now focus on the specific part which is specifically applicable for the TU Wien. An in-depth analysis of currently applicable regulations at the TU Wien regarding academic dishonesty provides the information that the university has several specific points regarding ghostwriting as well as plagiarism in general in their academic statutes, Codes of Conduct and other related documents. The following (preventive as well as reactive) directives and regulations are currently legally applicable in context of actual plagiarism procedures and policies regarding student plagiarism at the TU Wien (with special attention on the issue of plagiarism in written theses and papers):

- Statutes of the TU Wien (especially “*Provisions of the Chapter Study Law of the TU Wien Statute*”)¹³¹⁹
- Other directives and regulations of the rectorate:
 - “*Code of Conduct – Rules to Ensure Good Scientific Practice*” (Decision by the Chancellor’s Office of 23 October 2007)¹³²⁰
 - “*Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien*”¹³²¹

Here, it has to be mentioned that only the German versions of the relevant regulations are legally binding. The English version is only published for a better understanding by international guests and members of the university.¹³²²

5.1.2 Statutes of the TU Wien

According to the preamble of the statutes of the TU Wien, it can be stated that “*The provisions of the Chapter Study Law of the TU Wien Statute amend the study-law provisions of the Universities Act 2002 (UG)*.”¹³²³. With regard to § 1 of the “*Provisions*

¹³¹⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, especially § 6, Paragraph 1, Sentence 1-22 UG.

¹³¹⁹[TU 16]: TU Wien. 2016. “Provisions of the Chapter Study Law of the TU Wien Statute (online 27.10.2016)”.

¹³²⁰[TU 07]: TU Wien: Chancellor’s Office. 2007. “Code of Conduct – Rules to Ensure Good Scientific Practice: Decision by the Chancellor’s Office of 23 October 2007”.

¹³²¹[TU 15]: TU Wien - The Vice Rector for Academic Affairs Office of the Rectorate: O.Univ.Prof.Dr.techn. Adalbert Prechtel. 2015. “Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien (online 14.10.2015)”.

¹³²²[TU 16]: p. 1.

¹³²³[TU 16]: TU Wien. 2016. “Provisions of the Chapter Study Law of the TU Wien Statute (online 27.10.2016)”, p. 2: (*Preamble*).

of the *Chapter Study Law*” of the TU Wien, the responsible body for study matters, which is qualified and authorized for the enforcement of the “*Provisions of the Chapter Study Law*” of the TU Wien is the Vice Rector for Academic Affairs or the respective “Dean of Studies”.¹³²⁴ The “*Body responsible for study matters*” is acting as “*competent, monocratic organ*”¹³²⁵ in relation to the university law¹³²⁶ and the statutes¹³²⁷. Its role comprises, according to the UG¹³²⁸, the following tasks:

- The awarding (§ 87, Paragraph 1 UG)¹³²⁹ and revocation (§ 89 UG)¹³³⁰ of academic degrees to graduates by official notification,
- the annulations of assessments of examinations or scientific theses (§ 73 UG)¹³³¹ by official notification (in cases where there was fraudulent intent of the student to receive a particular assessment)
- and other authorizations.

Referring to § 1 of the statutes of the TU Wien¹³³² in the context of the “*Chapter Study Law*”, also further tasks and responsibilities of the respective “*Body responsible for study matters*”, especially in the application area of the TU Wien, are listed.¹³³³

Furthermore, the currently applicable Statute of the TU Wien (“*Provisions of the Chapter Study Law*”), gives vital insights into more detailed provisions for scientific theses. According to § 22¹³³⁴ and § 23¹³³⁵ of the aforementioned provisions only Diploma and Master’s theses as well as PhD theses are considered as scientific theses at the TU Wien. Therefore, in cases in which we refer to scientific theses, we employ this definition.

In addition, the aforementioned articles refer also to the applicability as well as the legal force of the “*Code of Conduct – Rules to Ensure Good Scientific Practice*”, a directive of the rectorate on complying with scientific integrity in the context of scientific theses (§ 22, Paragraph 2 for Master’s theses¹³³⁶ and § 23, Paragraph 2 for PhD theses¹³³⁷).

¹³²⁴[TU 16]: p. 2: § 1, Paragraph 1 (*Body responsible for study matters*).

¹³²⁵[TU 16]: p. 2: § 1, Paragraph 1 (*Body responsible for study matters*).

¹³²⁶[TU 16]: p. 2 f: § 1, Paragraph 1 (*Body responsible for study matters*), Sentence 1-16.

¹³²⁷[TU 16]: p. 3 f: § 1, Paragraph 1 (*Body responsible for study matters*), Sentence 17-30.

¹³²⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019.

¹³²⁹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 87 UG.

¹³³⁰[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 89 UG.

¹³³¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73 UG.

¹³³²[TU 16]: p. 2 ff: § 1, Paragraph 1 (*Body responsible for study matters*), Sentence 1-30.

¹³³³[TU 16]: p. 3 f: § 1, Paragraph 1 (*Body responsible for study matters*), Sentence 17-30.

¹³³⁴[TU 16]: p. 14 f: § 22 (*Diploma theses (master’s theses)*).

¹³³⁵[TU 16]: p. 15 f: § 23 (*Doctoral theses*).

¹³³⁶[TU 16]: p. 14: § 22, Paragraph 2 (*Diploma theses (master’s theses)*).

¹³³⁷[TU 16]: p. 15: § 23, Paragraph 2 (*Doctoral theses*).

It is binding for all members of the TU Wien.¹³³⁸ Furthermore, it can be stated that, according to the statutes of the TU (especially, the “*Provisions of the Chapter Study Law*”), the regulations of the Copyright Act (as amended from time to time)¹³³⁹ must also be applied with regard to scientific writing.^{1340,1341}

5.1.3 Code of Conduct – Rules to Ensure Good Scientific Practice

The most important parts of the statutes of the TU Wien which are relevant for scientific writing have already been explained. Therefore, in what follows, we only give a brief overview over the current guidelines of the TU regarding binding principles to ensure good scientific practice. These principles come in the form of the “Code of Conduct” which is based on the decision of the rectorate and came into force due to its publication in the university gazette of the TU Wien in 2007.¹³⁴² The guidelines of the “*Code of Conduct – Rules to Ensure Good Scientific Practice*” comprise essential principals of scientific ethics, which are intended to prevent scientific misconduct. Therefore they are intended to contribute to the quality of scientific works at a university. Hence, the “Code of Conduct” provides answers to the questions: What is commonly referred to as (general) principals of “good scientific practice”?¹³⁴³, What defines and which behavior is “scientific misconduct” (especially in the academic context)?¹³⁴⁴, Who shares the responsibility for scientific misconduct?¹³⁴⁵

Referring to § 2 of the “Code of Conduct”¹³⁴⁶, scientific misconduct is not only given in the context of intended misinformation, but also in cases where the “theft” or infringement of intellectual property (especially Paragraph 2 with regard to “plagiarism”)¹³⁴⁷ occur. In addition, a detailed list of the specific aspects and manifestations of the theft of intellectual property is given in the aforementioned article.

According to “§ 2, Paragraph 2 lit a” of the “Code of Conduct”¹³⁴⁸ in the context of scientific writing at the TU Wien, which refers to the “*infringement of intellectual property rights*”, “*plagiarism*” is defined as the “*unauthorised use with misrepresentation of authorship (plagiarism)*”. Furthermore, the theft of ideas (§ 2, Paragraph 2 lit b)¹³⁴⁹ as well as “ghostwriting” (§ 2, Paragraph 2 lit c and Paragraph 3)¹³⁵⁰, with special regard

¹³³⁸[TU 07]: p. 4 f (*Preamble*) and (*Article 1 “General principles of scientific practice”*).

¹³³⁹[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018.

¹³⁴⁰[TU 16]: p. 14: § 22, Paragraph 2 (*Diploma theses (master’s theses)*).

¹³⁴¹[TU 16]: p. 15: § 23, Paragraph 2 (*Doctoral theses*).

¹³⁴²[TU 07]: TU Wien: Chancellor’s Office. 2007. “Code of Conduct – Rules to Ensure Good Scientific Practice: Decision by the Chancellor’s Office of 23 October 2007”.

¹³⁴³[TU 07]: p. 5 (*Article 1 “General principles of scientific practice”*).

¹³⁴⁴[TU 07]: p. 5 f (*Article 2 “Scientific misconduct”*).

¹³⁴⁵[TU 07]: p. 6 (*Article 3 “Co-responsibility for misconduct”*).

¹³⁴⁶[TU 07]: p. 5 f (*Article 2 “Scientific misconduct”*).

¹³⁴⁷[TU 07]: p. 5 (*Article 2 “Scientific misconduct”, Paragraph 2 lit a-e*).

¹³⁴⁸[TU 07]: p. 5 (*Article 2 “Scientific misconduct”, Paragraph 2 lit a*).

¹³⁴⁹[TU 07]: p. 5 (*Article 2 “Scientific misconduct”, Paragraph 2 lit b*).

¹³⁵⁰[TU 07]: p. 5 f (*Article 2 “Scientific misconduct”, Paragraph 2 lit c and Paragraph 3*).

on the adoption and claiming of scientific (co-)authorship, are also defined and can be applied in cases of scientific misbehavior. Another interesting article is § 7 of the “Code of Conduct” of the TU Wien¹³⁵¹ about “scientific publications”. In the scientific context, authors are responsible for the scientific reliability of their publication(s). All results and applied methods which are used in the context of a work must be given in a full, precise, comprehensible as well as “highlighted” way. The aforementioned fact must also be respected in cases of self-references to previously published results and written work. Furthermore, important aspects regarding the authorship of a work are provided in § 7 of the “Code of Conduct” of the TU Wien¹³⁵².

Here, it has to be noted that all comprising principles of the directive of good scientific practice do not replace legal regulations, but only supplement them. The explained regulations provide a proper scope for dealing with the problem of scientific misconduct.

5.1.4 Directive concerning the handling of plagiarism in academic papers at TU Wien

In addition to the “Code of Conduct” of the TU Wien¹³⁵³ (which has special focus on scientific integrity), also the “*Directive concerning the handling of plagiarism in academic papers at TU Wien*”¹³⁵⁴ is another important regulation concerning the topic of plagiarism and ghostwriting.

These guidelines are especially designed for the support of university employees, like lecturers and (thesis) supervisors, in order to provide them with essential information in context of actual plagiarism procedures and policies regarding preventing and combating student plagiarism at the TU Wien.¹³⁵⁵ The directive serves as guide, which is applicable in cases of suspected plagiarism in relation with academic courses as well as scientific theses, and was published in the *University Gazette of the TU Wien* in 2014. Noteworthy is the fact, that at this time, no legal definitions of the term “plagiarism” as well as “ghostwriting”, according to the current Universities Act 2002 (*Universitätsgesetz 2002: UG*)¹³⁵⁶, existed. Because the amendments of the respective legal definition were added in December 2014 (approved by the National Council of Austria), they can be applied since January 2015 (published in the *Federal Law Gazette BGBl. I Nr. 21/2015*)¹³⁵⁷.

¹³⁵¹[TU 07]: p. 7 (*Article 7 “Scientific publication”*).

¹³⁵²[TU 07]: p. 7 (*Article 7 “Scientific publication”*).

¹³⁵³[TU 07]: TU Wien: Chancellor’s Office. 2007. “Code of Conduct – Rules to Ensure Good Scientific Practice: Decision by the Chancellor’s Office of 23 October 2007”.

¹³⁵⁴[TU 15]: TU Wien - The Vice Rector for Academic Affairs Office of the Rectorate: O.Univ.Prof.Dr.techn. Adalbert Prechtel. 2015. “Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien (online 14.10.2015)”.

¹³⁵⁵[TU 15]: p. 1: (*Preamble*).

¹³⁵⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 and Sentence 32 UG.

¹³⁵⁷[UG15]: *Bundesgesetz über die Organisation der Universitäten und ihre Studien (Universitätsgesetz 2002 – UG)*. BGBl. I 120/2002 idF I 21/2015 (*Änderung des Universitätsgesetzes 2002 und des Hochschulgesetzes 2005*).

For this reason, it is obvious that the “*Directive concerning the handling of plagiarism in academic papers at TU Wien*” is (in some sense) out of date. There are no references to legal definitions of the term “plagiarism” and “ghostwriting”, but a pretty similar description of what constitutes plagiarism is provided. Therefore, a definition (based on the legal situation at the time of 2014) of how a correct quotation and citation (in compliance with scientific standards)¹³⁵⁸ in the context of scientific writing looks like, in form of a sufficient identification of citations (like, e.g., highlighting with quotation marks) with reference to § 46 UrhG¹³⁵⁹ and their sources according to § 57 UrhG¹³⁶⁰, is also specified. Here, it has to be noted that the aforementioned legal provision of § 46 UrhG of the Copyright Act¹³⁶¹ does no longer exist (since the amendments of the Copyright Act of 2015¹³⁶²) in this particular manifestation.¹³⁶³ Instead, applied on current legal regulations with special regard to the Copyright Act (in its current version¹³⁶⁴) concerning the required quotation, the relevant terms are now provided in § 42f “(Quotations)” of the Copyright Act¹³⁶⁵.¹³⁶⁶ The defined terms of § 57 UrhG¹³⁶⁷ about the necessary specification of the source citation remained unchanged. More details about the Copyright Act in Austria is provided in Section 4.4.

Noteworthy is the fact, that the provided definition of the term “plagiarism” in the actually analyzed directive of the rectorate from 2014¹³⁶⁸ corresponds to today’s (applicable) legal definition, which is anchored in the current regulation of the Universities Act 2002¹³⁶⁹. Therefore, the aforementioned plagiarism definition, especially the part referring to “*a sufficient identification of citations and their corresponding sources/authors*”¹³⁷⁰, is due

¹³⁵⁸[OGH90]: OGH 29.09.1987, 4 Ob 313/86 (4 Ob 314/86); OGH 10.07.1990, 4 Ob 72/90.

¹³⁵⁹[Urh15a]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 11/2015 (Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014), § 46 UrhG.

¹³⁶⁰[Urh15a]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 11/2015 (Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014), § 57 UrhG.

¹³⁶¹[Urh15a]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 11/2015 (Urheberrechtsgesetz-Novelle 2014 – UrhG-Nov 2014), § 46 UrhG.

¹³⁶²[Urh15b]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 99/2015 (Urheberrechts-Novelle 2015 – Urh-Nov 2015).

¹³⁶³[Dok15]: Dokalik 2015. UrhG: Urheberrechtsgesetz idF der Novelle 2015 inkl VerwGesG (Textausgabe mit Erläuterungen und Anmerkungen), p. 57 f.

¹³⁶⁴[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018.

¹³⁶⁵[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 42f UrhG.

¹³⁶⁶[Dok15]: p. 58 f “ErläutRV(687 BlgNR 25. GP)”.

¹³⁶⁷[Urh18]: Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz). BGBl 111/1936 idF I 105/2018, § 57 UrhG.

¹³⁶⁸[TU 15]: p. 1 (1. What is plagiarism?).

¹³⁶⁹[UG 19]: Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

¹³⁷⁰[TU 15]: p. 1 (1. What is plagiarism?).

to the current legal situation now regulated in a certain way by the legal definition of the term “plagiarism”¹³⁷¹.

Besides the attempt for a definition of the term “plagiarism” at the time where the document was published, also an exhaustive list of different acts and behaviors which constitute possible cases and forms of plagiarism¹³⁷² (like, e.g., “*Copy & Paste, Self-Plagiarism, Translated Plagiarism, Quotation without Proof, Paraphrasing, Ghostwriting*”), are discussed. Noteworthy is the fact, that in particular “ghostwriting” is classified under the term of “plagiarism”. The directive states that ghostwriting represents a student’s submission of “*the work of another person written on their behalf and with the permission of the actual author, claiming it to be their own.*”¹³⁷³. An interesting point is that the aforementioned definition of “ghostwriting” differs significantly from the legal definition given in the Universities Act 2002¹³⁷⁴.

Furthermore, the provided “*Directive concerning the handling of plagiarism in academic papers at TU Wien*” gives answers to the question of how much help from others is allowed in the context of scientific writing to still fulfill the concept of “self-accomplishment”¹³⁷⁵ in the sense of scientific writing¹³⁷⁶. According to these guidelines of the TU Wien, the external help from others (in written theses) has its limits in “*any cases where the correction is exceeded by formal criteria such as orthography and content corrections or revisions by someone other than the student*”¹³⁷⁷. The support provided by the respective supervisor is also restricted to the support in scientific work or the application of scientific methodology. It does not include the (text) correction of the student’s work. This task has to be conducted by the corresponding student independently.¹³⁷⁸

It can be stated that the focus of the underlying directive is on preventing plagiarism, which can be implemented with certain measures. Possible actions, which have to be taken, are, for example, on the one hand raising the awareness regarding the problem field of plagiarism among the students, and on the other hand providing information material about a correct use of citations and quotations (complying with scientific guidelines).¹³⁷⁹ Furthermore, it is important to offer teaching and training courses for scientific work and writing techniques for students.¹³⁸⁰ In addition, Section 3 of the “*Directive concerning the handling of plagiarism in academic papers at TU Wien*” is

¹³⁷¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 31 UG.

¹³⁷²[TU 15]: p. 1 f (1. *What is plagiarism?*).

¹³⁷³[TU 15]: p. 2 (*Ghostwriting*).

¹³⁷⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 32 UG.

¹³⁷⁵[TU 15]: p. 2 (2. *How much help from others is allowed?*).

¹³⁷⁶See Austria’s legal definition for Bachelor’s thesis, Master’s thesis and PhD thesis in [UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019*, § 51, Paragraph 2, Sentence 7, Sentence 8, Sentence 13 UG.

¹³⁷⁷[TU 15]: p. 2 (2. *How much help from others is allowed?*).

¹³⁷⁸[TU 15]: p. 2 (2. *How much help from others is allowed?*).

¹³⁷⁹[TU 15]: p. 2 (3.1. *Raising awareness and imparting competence*).

¹³⁸⁰[TU 15]: p. 2 (3.1. *Raising awareness and imparting competence*).

devoted to the recommendation of signed students' declaration of consent about the self-accomplishment of written academic works.¹³⁸¹ It is especially relevant in the context of the submission procedure of scientific theses, in order to ensure that the underlying student did not use any other sources and resources than the ones which are outlined in the theses.

Referring to Section 3.2. of the actually analyzed directive of the TU Wien¹³⁸² and according to the constant jurisdiction of the Austria's Supreme Administrative Court (VwGH), there is no legal or generalized obligation for any thesis supervisor to consider nor to classify a submitted thesis as a potential case of plagiarism in advance.¹³⁸³ Instead, in the first investigation phase of a written work, the thesis supervisor may trust the student's honesty and reliability (regarding used scientific methods, self-accomplishment as well as the authorship of the work).¹³⁸⁴ Hence, it should not be assumed that there is a generalized suspicion of plagiarism with regard to a submitted thesis.^{1385,1386} However, there is a need for action in cases of reasonable suspicions.¹³⁸⁷ In these cases where possible suspicion signs of plagiarism are present, a closer examination and evaluation of the underlying thesis in order to determine whether a thesis actually constitutes plagiarism or not, must be conducted by the respective supervisor.¹³⁸⁸

Additionally, useful tips for the detection as well as the prevention of suspected cases of (text) plagiarism are described in Section 3 of the referred guideline.¹³⁸⁹ The detection of possible cases of plagiarism can be done with the help and support of an external plagiarism detection software.¹³⁹⁰ Here, it has to be mentioned that the TU Wien has the requirement for the electronic submission of scientific theses (especially, Master's as well as PhD theses) since September 2013.¹³⁹¹ The corresponding legal directive¹³⁹² is legally-binding due to its publication in the *University Gazette of the TU Wien* in 2013. The "*Directive of the Vice Rector for Academic Affairs concerning the electronic submission requirement for theses (doctoral theses, diploma theses, master's theses) at TU Wien*"¹³⁹³ stipulates that, in the context of the submission process of theses, it is

¹³⁸¹[TU 15]: p. 2 (3.1. *Raising awareness and imparting competence*).

¹³⁸²[TU 15]: p. 2 f (3.2. *Recognising plagiarism*).

¹³⁸³[VwG82]: VwGH 09.03.1982, 81/07/0230; [VwG96]: VwGH 26.06.1996, 93/12/0241; [VwG09]: VwGH 11.12.2009, 2008/10/0088.

¹³⁸⁴Compare, like, e.g., VwGH 26.06.1996, 93/12/0241.

¹³⁸⁵[TU 15]: p. 2 f (3.2. *Recognising plagiarism*).

¹³⁸⁶[VwG82]: VwGH 09.03.1982, 81/07/0230; [VwG96]: VwGH 26.06.1996, 93/12/0241; [VwG09]: VwGH 11.12.2009, 2008/10/0088.

¹³⁸⁷[VwG82]: VwGH 09.03.1982, 81/07/0230; [VwG96]: VwGH 26.06.1996, 93/12/0241; [VwG09]: VwGH 11.12.2009, 2008/10/0088.

¹³⁸⁸[TU 15]: p. 2 f (3.2. *Recognising plagiarism*).

¹³⁸⁹[TU 15]: p. 2 f (3.2. *Recognising plagiarism*).

¹³⁹⁰[TU 15]: p. 3 (3.3. *Using plagiarism detection software*).

¹³⁹¹[TU 13]: "Directive of the Vice Rector for Academic Affairs concerning the electronic submission requirement for theses (doctoral theses, diploma theses, master's theses) at TU Wien (online 14.10.2015)".

¹³⁹²[TU 13]: "Directive of the Vice Rector for Academic Affairs concerning the electronic submission requirement for theses (doctoral theses, diploma theses, master's theses) at TU Wien (online 14.10.2015)".

¹³⁹³Ibid.

mandatory that all scientific theses (with special regard to the definition of scientific theses at the TU Wien) have to be submitted in electronic as well as in printed form. The aforementioned directive supplements the regulation on the submission of academic papers in accordance to the provisions of §§ 22 and 23 of the statutes of the TU Wien¹³⁹⁴ (in particular, the “*Provisions of the Chapter Study Law*”) and extends furthermore the provisions “*Duty of Publication*” concerning the obligation to publish theses according to § 86 UG¹³⁹⁶.

It is important to note that when performing the plagiarism check of a thesis with a third-party anti-plagiarism software, it is strongly recommended (according to the guideline concerning the handling of plagiarism of the TU Wien¹³⁹⁷) that the corresponding student is informed about the procedure of plagiarism detection. The student confirms this handling in form of a declaration of consent about a (software-based) plagiarism check of his/her scientific thesis, which is part of the submission procedure.¹³⁹⁸

After the most important points in the context of the detection of plagiarism at the TU Wien have been discussed, the question about which legal consequences one has to expect in the case of academic misconduct, especially in the case of a plagiarized scientific thesis arises. Therefore, in what follows we give a brief overview of the legal situation in form of imposed sanctions on the accused student based on civil law and academic regulations.¹³⁹⁹

According to Section 4 of the “*Directive concerning the handling of plagiarism in academic papers at TU Wien*”¹⁴⁰⁰, which is devoted to the legal consequences of plagiarism detected in scientific theses, in cases where the fraudulent intent of the plagiarist in order to obtain a positive assessment¹⁴⁰¹ is obviously present (based on and according to § 73 UG¹⁴⁰²), an annulation of the assessments of the scientific thesis may be executed by official notification of the respective dean of studies. Additionally, the assessment which has been declared void, is counted towards the total number of repetitions.¹⁴⁰³ Furthermore, in such cases (when necessary), a revocation of the respective academic degree held by graduates has to be conducted (also by official notification of the dean of studies and

¹³⁹⁴[TU 16]: p. 14 f: § 22 (*Diploma theses (master’s theses)*).

¹³⁹⁵[TU 16]: p. 15 f: § 23 (*Doctoral theses*).

¹³⁹⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 86 UG.

¹³⁹⁷[TU 15]: p. 3 (3.3. *Using plagiarism detection software*).

¹³⁹⁸[TU 15]: p. 3 (3.3. *Using plagiarism detection software*).

¹³⁹⁹[TU 15]: p. 3 f (4. *Legal consequences of plagiarism*).

¹⁴⁰⁰[TU 15]: p. 3 f (4. *Legal consequences of plagiarism*).

¹⁴⁰¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 2 UG.

¹⁴⁰²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73 UG.

¹⁴⁰³[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 2 UG.

on the basis of § 89 UG¹⁴⁰⁴). The precise provisions of the Universities Act 2002¹⁴⁰⁵ have already been discussed in Section 4.1 of the Master's thesis at hand. Nevertheless, here it has to be noted that the "partially" fraudulent intent of the plagiarist in order to obtain a positive assessment¹⁴⁰⁶ is also relevant for the determination and judgment of the possible cases of plagiarism.¹⁴⁰⁷ For instance, cases where students did not mention all used sources (which could indicate the use of unauthorized aids), also represent the act of "fraudulent obtainment" (according to § 73 UG¹⁴⁰⁸).¹⁴⁰⁹ But here it has to be distinguished between negligence and intentional action. In cases where a lack of citation due to negligence is given, it can be assumed that there is likely no conscious intention of the student to deceive the university in order to receive the academic degree. But in cases where a high number of missing references is detected, it can be assumed that there was a fraudulent intent of the plagiarist.^{1410,1411}

It has to be noted that the annulment of theses (including the underlying assessment of the thesis) can cause further legal, study-related consequences (with special regard to the Universities Act 2002¹⁴¹²). There are extensive and serious legal consequences in cases where a university degree is withdrawn (especially in cases of detected student plagiarism in theses).¹⁴¹³ For instance, in cases where a Bachelor's degree gets revoked, which was the essential prerequisite for other university degree programmes (like the Master's as well as the doctoral study), all passed exams completed in the postgraduate course, like the Master's studies, also get annulled.¹⁴¹⁴ This is done due the fact that the registration of the post-graduated study has been fraudulently obtained (in accordance with § 73 UG¹⁴¹⁵) and therefore the academic degree(s) must be revoked (in accordance with § 89 UG¹⁴¹⁶).

Besides study-related consequences, the student may also face sanctions imposed under

¹⁴⁰⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 89 UG.*

¹⁴⁰⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

¹⁴⁰⁶Compare, like, e.g., VwGH 26.06.1996, 93/12/0241; VwGH 22.11.2000, 99/12/0324; VwGH 21.5.2008, 2008/10/0020; VwGH 26.11.2011, 2007/10/0145.

¹⁴⁰⁷[TU 15]: p. 3 (4.1. *Consequences under the law regulating university studies*).

¹⁴⁰⁸[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 2 UG.*

¹⁴⁰⁹Compare, like, e.g., VwGH 22.11.2000, 99/12/0324; VwGH 26.11.2011, 2007/10/0145; VwGH 27.05.2014, 2011/10/0187.

¹⁴¹⁰[TU 15]: p. 3 (4.1. *Consequences under the law regulating university studies*).

¹⁴¹¹Compare, like, e.g., VwGH 11.12.2009, 2008/10/0088.

¹⁴¹²[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019.*

¹⁴¹³[TU 15]: p. 4 (continuation of 4.1. *Consequences under the law regulating university studies*).

¹⁴¹⁴[TU 15]: p. 4 (continuation of 4.1. *Consequences under the law regulating university studies*).

¹⁴¹⁵[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 73, Paragraph 1, Sentence 2 UG.*

¹⁴¹⁶[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG). BGBl. I 120/2002 idF I 3/2019, § 89 UG.*

the Copyright Act (*Urheberrechtsgesetz: UrhG*)¹⁴¹⁷. In cases of detected plagiarism in scientific theses, the original author(s) (according to the corresponding legal definition of the term “author/originator” in the Copyright Act) might initiate legal actions under the civil law (like, e.g., “*Injunctive relief* (§ 81 UrhG), *Right to removal* (§ 82 UrhG), *Publication of judgement* (§ 85 UrhG), *Claim for payment* (§ 86 UrhG), *Compensation and disgorgement of profits* (§ 87 UrhG)”).^{1418,1419} The detailed provisions have to be consulted in the corresponding Copyright Act in its current version¹⁴²⁰.

Furthermore, it has to be distinguished between a detected plagiarism case of scientific theses in the application area of the TU Wien before the assessment has taken place, after the assessment has finished and even after the award of the academic degree was conducted. This is according to Section 5 of the “*Directive concerning the handling of plagiarism in academic papers at TU Wien*”, which is devoted to the point in time when a suspicion of plagiarism is discovered.¹⁴²¹

Two of the three possible cases (plagiarism detection after the final assessment the student needed to pass and further after the academic degree is issued) have already been discussed in detail in this section. Thus, we now focus on the detection of a plagiarism case before the assessment of the scientific thesis was finished. In such cases¹⁴²², a thorough examination of the underlying thesis is performed by the responsible “Dean of Studies” together with the respective thesis supervisor. The accused student is informed about his/her misbehavior and the student has to revise the underlying thesis.¹⁴²³ Afterwards, a new assessment of the students’ thesis can be made. In the scenario of a successful revision of the plagiarized content of the scientific thesis, no further steps are taken. If a revision of the work does not happen, the opinion of an independent expert in form of a reviewer must be requested by the respective “Dean of Studies” in order to determine the extent of plagiarism. This results in a plagiarism report.¹⁴²⁴ Additionally, the plagiarized part of the student’s thesis has to be assessed negatively.¹⁴²⁵

After we provided vital insights into the specific fields of law which are applicable in cases of scientific misconduct, especially plagiarism, we subsequently focus on the evaluation whether there is a uniform, procedural handling of plagiarism cases provided at the TU Wien. According to Section “3.3. *Using plagiarism detection software*” of the investigated “*Directive concerning the handling of plagiarism in academic papers at TU Wien*”¹⁴²⁶ it

¹⁴¹⁷[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018.

¹⁴¹⁸[TU 15]: p. 4 (4.2. *Consequences under copyright law*).

¹⁴¹⁹For more details of the corresponding provisions of the Copyright Act: see [Urh18].

¹⁴²⁰[Urh18]: *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*. BGBl 111/1936 idF I 105/2018.

¹⁴²¹[TU 15]: p. 4 f (5. *Procedure in the case of the detection of plagiarism*).

¹⁴²²[TU 15]: p. 4 f (5.1.1. *Suspicion of plagiarism before the assessment*).

¹⁴²³[TU 15]: p. 4 f (5.1.1. *Suspicion of plagiarism before the assessment*).

¹⁴²⁴[TU 15]: p. 4 f (5.1.1. *Suspicion of plagiarism before the assessment*).

¹⁴²⁵[TU 15]: p. 4 f (5.1.1. *Suspicion of plagiarism before the assessment*).

¹⁴²⁶[TU 15]: p. 3 (3.3. *Using plagiarism detection software*).

can be stated, that there is no central or uniform way of software-based plagiarism checks of scientific works at the TU Wien. Instead, each faculty (of a total of eight faculties at the TU Wien) is responsible for performing its own plagiarism review process for spotting cases of manifestations of plagiarism, i.e., every faculty checks possible cases of plagiarism for itself, while using an external plagiarism detection software (which is dependent on the responsibility of the respective faculty).¹⁴²⁷

The current situation in the context of the applied plagiarism procedures strongly indicates the necessity for the introduction and application of a university-wide integration and handling of plagiarism checks. Especially an approach for a standardized detection and prevention strategy for cases of plagiarism at the TU Wien is needed.

5.2 An Approach for a Standardized Detection and Prevention of Plagiarism

Based on the current situation (in the context of the practice of plagiarism procedures and guidelines) and the state of the art at the TU Wien as described in the previous section, the importance and the specific need for the introduction and application of a standardized prevention, detection and combating strategy against academic misconduct, especially plagiarism, is obvious.

Our proposed ideas represent some concrete strategies against (text) plagiarism at the university level and they consist of concepts like education, information (like, e.g., in form of public websites) and procedures in the context of plagiarism handling (like the practical realization of our strategy and workflow for the detection of possible plagiarism cases). A more detailed description of these components of the concept is given at the end of the section.

The idea behind a standardized detection and prevention strategy to combat student plagiarism is to combine, on the one hand, the measures of prevention and, on the other hand, the reaction against academic dishonesty (like detecting and combating plagiarism). The latter point represents the countermeasure(s) to the action of committing plagiarism. Here, it has to be mentioned, that the two explained measures are equally important and face each other at the same level.

Besides the distinction between applied methods which comprise action (prevention) and reaction (detection and combating), one can also distinguish between the individual components of a concept (like information, education and procedures which together affect the overall strategy against plagiarism)¹⁴²⁸. Here it has to be mentioned that all concepts can be applied to prevention as well as detection. Another dimension provides information on which individuals and organizational roles the concepts and methods can

¹⁴²⁷[TU 15]: p. 3 (3.3. *Using plagiarism detection software*).

¹⁴²⁸[Uni16a]: University of Konstanz. *Online: Information about Project “Refairenz”*, Section “5 Spheres of activity” (especially compare the concepts “Information, Education and Procedures” of the project “Refairenz”).

be applied to or which group of people they support¹⁴²⁹ (like, e.g., students, supervisors, employees of the faculty in general or the dean's office) and which entities are involved.

The distinction between different principles, concepts and methods is important to answer the following questions:

- How can a distinction be made?
- From which side is the problem considered?
- Which pillar of the framework of my proposed idea is being addressed?

For this reason, in the following, we will discuss which specific concept will be discussed/applied, what will be achieved with the implementation of concrete steps and how as well as who is involved while our proposed strategy is implemented. Additionally, we will provide information about who is affected by the realization of our suggested strategy.

The following enumeration summarizes and represents which dimensions of our presented strategies can be distinguished:

- Action (measures of prevention) vs. Reaction (measures of detection and combating plagiarism)
- Components of a concept (information, education and procedures) which result in an effective plagiarism strategy¹⁴³⁰
- Involved and supported entities (students, supervisors, the dean's office, faculty or general university employees)¹⁴³¹

Our self-defined strategy consists of three main parts – which can be also seen as the pillars of our concept – and two other parts, which are essential for the evolving of a prevention and detection strategy, specifically tailored for the TU Wien. The idea behind the pillar concept is comparable with the construction of a house which is only stable and effective if all three pillars, the foundation of a house (which is important for the fundamental use) as well as the roof of a house, are treated equally. Otherwise, if not all parts weighted equally and play together, the building collapses like a house of cards.

¹⁴²⁹[Uni16a]: Section “5 Spheres of activity” (especially compare “Strategy - Principles and concepts” of the project “Refairenz”).

¹⁴³⁰[Uni16b]: University of Konstanz. *Online: Poster of the Project “Refairenz”, Section “Five spheres of action and practical support”* (especially compare the concepts “Information, Education and Procedures” of the project “Refairenz”).

¹⁴³¹[Uni16b]: Section “Five spheres of action and practical support” (especially compare “Strategy - Principles and concepts” of the project “Refairenz”).

The **first pillar** represents an online information website, especially designed for students of the TU Wien (but also available for students of other universities), with which we funnel students with information about the topic and the general problem area of plagiarism. On this website, we will not only shed some light on these areas, but also eliminate some possible speculations which students may have regarding the issue of academic plagiarism.

For example, we provide answers to the following questions, which are especially interesting for students: What constitutes plagiarism? Which types and manifestations of plagiarism, especially in the academic context, exist? Which serious legal (like, e.g., in context of the Copyright Act) and especially academic consequences and sanctions must be expected in cases of committed plagiarism? Which currently applicable academic regulations regarding plagiarism, viewed from the perspective of a student, are relevant? What is the legal background regarding the basics of the Copyright Act, Universities Act and other academic regulations like the Statutes? Which types and styles of citation exist? How does a correct quotation and citation style (in compliance with scientific standards) look like? How do concrete application examples of different quotation and citation styles look like? What are the current guidelines regarding the constitution/preparation of theses of the respective fields of study? How can one recognize plagiarism? How do (automated) plagiarism checks work? Which tools currently exist on the market for the detection of plagiarism?

In addition, we also offer tips, guidelines and recommendations to prevent cases of plagiarism at the TU Wien. Furthermore, the website gives a short overview in form of frequently asked questions (*short: FAQ*) over the topic of plagiarism.

Additionally, the website contains further information about case studies in the legal context and a link list of external software tools for a possible self-examination/review process of detecting potential plagiarism in the student's written work.

The **second pillar** describes a process as well as a procedure for handling cases of plagiarism, which are grounded in a so-called "Plagiarism Workflow Portal". The "Plagiarism Workflow Portal" organizes and enacts a standard workflow for the professional handling of external plagiarism analysis software checks within a faculty. The portal supports (and in some sense represents) the communication flow between a theses submission office (Dean's Office), the faculty's single point of contact (SPoC), the thesis supervisor and the dean of studies. Here, it has to be mentioned that the SPoC is the central contact person for all concerns around the topic of plagiarism detection. In many cases, this is the person with the most plagiarism (detection) expertise and knowledge of these issues. The person is comparable to a (faculty) "plagiarism hunter" because he/she is performing the plagiarism analysis review process of scientific theses. The SPoC represents the central unit while detecting plagiarism. One reason for that is that he/she gets in touch and has contact with everyone of the faculty in spotted cases of plagiarism. The SPoC also gives recommendations and guidelines about how to discover suspicious text sections. The faculty's single point of contact is, in cases of questions, available for a respective supervisor of a written thesis and shares his/her knowledge about the topic of

plagiarism, which is constantly expanding with new theses, with other faculty employees. The knowledge is shared through workshops, info events, courses and other lectures in which concepts and possible suspicion signs of plagiarism are presented and taught. In Section 5.3, the process in general as well as the duties of the SPoC will be described thoroughly.

The **third pillar** consists of an information homepage for teachers, especially for thesis supervisors, which is only available while using the aforementioned “Plagiarism Workflow Portal”. The information about the topic of plagiarism is provided in form of a custom website in which we give an overview over several specific fields of law which are relevant for the topic of plagiarism in Austria. Furthermore, we provide answers on the following questions: What is important to know about plagiarism? What defines the term “plagiarism”? What constitutes plagiarism? What are typical signs/hints for detecting and spotting cases of plagiarism? Which types and manifestations of plagiarism, especially in the academic context, exist? Which currently applicable academic regulations regarding plagiarism, viewed from the perspective of a supervisor/reviewer, are relevant? What is the legal background regarding the basics of the Copyright Act, Universities Act and other academic regulations like Statutes? How is plagiarism handled at the TU Wien and in Austria in general? What are the ethical problems of plagiarism? What are the legal consequences of plagiarism in Austria? What is the procedure when plagiarism is detected at the TU Wien? What is the concrete position of the TU Wien regarding the issue of plagiarism? Are there special obligations of supervisors/reviewers of scientific theses while dealing with the problem of plagiarism?

Furthermore, the “Plagiarism Workflow Portal” also respects the fact that it has to be distinguished whether a spotted case of plagiarism was discovered before or after the assessment of the respective thesis. It is also possible that plagiarism is detected after the academic degree has already been awarded and also for such cases, the homepage for thesis supervisors provided helpful information.

Additionally, we publish further links and information material about the handling procedure of the TU Wien in context of detecting cases of plagiarism (like, e.g., the “*Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien*”¹⁴³² and the “*Code of Conduct – Rules to Ensure Good Scientific Practice*”¹⁴³³).

In order to spot plagiarism already during the assessment of a written thesis, we also offer a list of typical signs for identifying, detecting and spotting cases of plagiarism.

All parts of the house or pillar concept are working together and the combination as well as cooperation of all described components results in our approach of a standardized detection and prevention strategy against plagiarism at the TU Wien.

¹⁴³²[TU 15]: TU Wien - The Vice Rector for Academic Affairs Office of the Rectorate: O.Univ.Prof.Dr.techn. Adalbert Prechtel. 2015. “Directive concerning the handling of plagiarism in academic papers at Technische Universität Wien (online 14.10.2015)”.

¹⁴³³[TU 07]: TU Wien: Chancellor’s Office. 2007. “Code of Conduct – Rules to Ensure Good Scientific Practice: Decision by the Chancellor’s Office of 23 October 2007”.

For the reader's better illustration, Figure 5.1 summarizes and demonstrates our pillar concept, which represents our proposed prevention and in some sense combating strategy against plagiarism at the TU Wien, in one illustration.

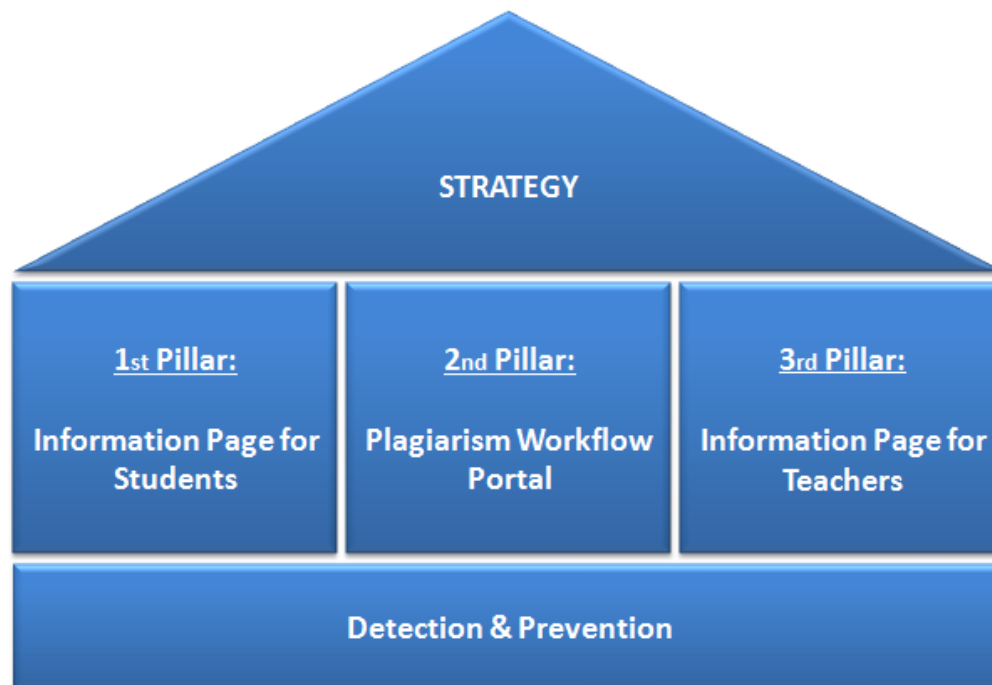


Figure 5.1: Approach of a Standardized Detection and Prevention of Plagiarism
(Source: Own representation)

The measures of prevention are given by providing informational material which is publicly available both for students as well as supervisors. Especially for thesis supervisors there is also a channel of teaching and education consisting of workshops, info events, courses and other lectures in which concepts and possible suspicion signs of plagiarism are taught. But also for students there is a possibility to learn about practices of good scientific standards in form of workshops, info events and other lectures/training courses in which the focus lies on the prevention of student plagiarism.

The measures of detection in order to tackle student plagiarism at the TU Wien are provided by our proposed "Plagiarism Workflow Portal" with which we implement a standard procedure for dealing and handling cases of plagiarism.

The ultimate goal of implementing our approach was to create awareness for the topic and problem field of plagiarism. Furthermore, we give special attention to the communication and propagation of competence and knowledge in the context of detecting and preventing cases of academic plagiarism.

In what follows we will also shed some light at what is done at other universities to tackle plagiarism. To be more precise, we will illustrate the plagiarism detection and prevention strategies employed at the University of Konstanz (Germany) and relate the concepts used at both universities.

5.2.1 Five Spheres of Action (according to the University of Konstanz)

Noteworthy is the fact that some of the presented principles and concepts¹⁴³⁴ are closely related, but not based on the framework developed in the context of the “plagiarism prevention project” with the name “Refairenz” at the University of Konstanz and some other collaborating universities. The framework, which was realized and tested from 2014 to 2016¹⁴³⁵, consists of “*Five spheres of action and practical support*” with the following components¹⁴³⁶:

- “*Strategy (principles and concepts)*”
- “*Information (clarification and advice)*”
- “*Education (teaching/learning material and training)*”
- “*Procedures (detection and penalties)*”
- “*Research and Knowledge Base (analysis of given student texts, best practices and demands)*”¹⁴³⁷

Here, we are only referring to the already existing project “Refairenz” just to give the reader the possibility to compare the concepts of ideas with other projects and to illustrate certain differences in context of our proposed strategy.

Subsequently, we will now relate our concept to the concepts of the project “Refairenz”¹⁴³⁸.

5.2.2 The Relationship of the Concepts

Now there are the questions of “how can one apply the elements of the already existing project to our idea for the TU Wien”, “how can the concrete steps of the concept be implemented” and “how do the results look like”.

We note that our idea was created independently from the already existing project of the University of Konstanz and we will subsequently give a mapping of the concepts of the already existing framework “Refairenz”, especially on the aforementioned components of the “5 Spheres of activity”¹⁴³⁹, to our proposed idea for the TU Wien.

¹⁴³⁴[Uni16a]

¹⁴³⁵[Uni16a]: Section “*Project duration*”.

¹⁴³⁶For more information: see [Uni16b]: Section “*Five spheres of action and practical support*”.

¹⁴³⁷[Uni16b]: Section “*Five spheres of action and practical support*”.

¹⁴³⁸Ibid.

¹⁴³⁹[Uni16a]: Section “*5 Spheres of activity*”.

The classification was retrospectively done during a comparing and matching process of our proposed idea with the already existing components of the framework of the University of Konstanz¹⁴⁴⁰ in which we clarified where and how do the elements of our idea of a standardized detection and prevention of plagiarism fit into the compared framework. The result is presented subsequently in Figure 5.2. Furthermore we give answers on how these components are implemented in the framework of our proposed idea.

The comparison is done only for the concepts, which are declared and defined in their so-called “Five spheres of action and support” (like, e.g., information, education and procedures)¹⁴⁴¹. It is important to mention that we are not comparing our proposed strategy with the concrete implementation content of the measures (like specific training materials in practice) of the project “Refairenz”¹⁴⁴².

We will map the concrete content, more precisely the three pillars, of our proposed ideas to the concept dimension of the project “Refairenz”. It is obvious that a functional mapping of the already existing concepts of the project “Refairenz”¹⁴⁴³ to the components of our strategy can be done, while we are using a different approach in the implementation of concepts (for instance, we use a different division of concepts).

The Figure 5.2, which is closely related to the framework “Five Spheres of Action” 5.2.1, represents the relationship between the concepts of the project “Refairenz” (according to the University of Konstanz)¹⁴⁴⁴ and our proposed plagiarism strategy for a standardized detection and prevention at the TU Wien.

Referring to the aforementioned concepts of the “*Five spheres of action and practical support*” in Section 5.2.1, the information is given by information websites (among others, for students as well as theses supervisors). The websites represent one measure for the prevention of plagiarism. The education and teaching factor is provided through workshops, info events, training courses and other lectures in which concepts and other important facts about student plagiarism are taught. Additionally, the faculty’s single point of contact (SPoC) offers presentations and teaching as well as learning materials on how he/she deals with possible suspicion signs of student plagiarism, which were discovered in practice. Another fact, which has to be mentioned, is that supervisors as well as lectures are trained by the SPoC in order to recognize student plagiarism in an easier way.

The procedures are given by our proposed “Plagiarism Workflow Portal” (including the standardized detection and submission process of given theses). The handling and

¹⁴⁴⁰[Uni16b]: Section “*Five spheres of action and practical support*”.

¹⁴⁴¹[Uni16b]: Section “*Five spheres of action and practical support*” (especially compare the concepts “Information, Education and Procedures” of the project “Refairenz”).

¹⁴⁴²[Uni16b]: Section “*Five spheres of action and practical support*”.

¹⁴⁴³[Uni16a]: Section “*5 Spheres of activity*”.

¹⁴⁴⁴[Uni16b]: Section “*Five spheres of action and practical support*”.

¹⁴⁴⁵[Uni16b]: Section “*Five spheres of action and practical support*”.

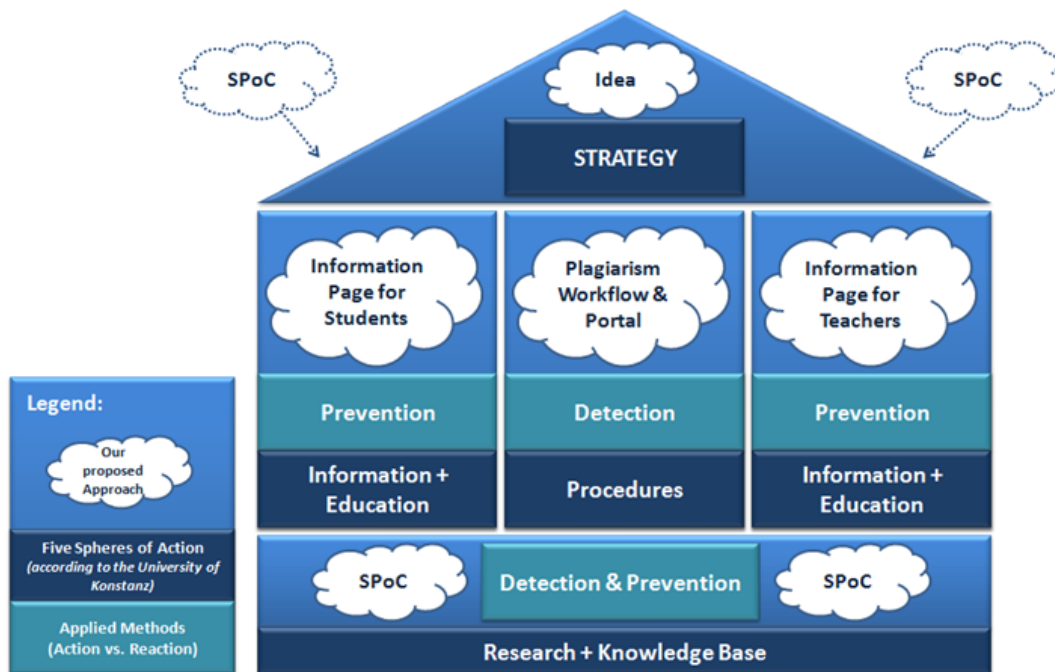


Figure 5.2: Relationship between the concepts of our proposed strategy and the project “Refairenz” of the University of Konstanz

(Source: Own representation, mapping of the concepts based on ¹⁴⁴⁵)

implementation of the concrete workflow, in which our proposed idea is put into practice, is counting to the measures of the detection and combating of (text) plagiarism.

The entire implementation of our approach for a standardized detection and prevention of plagiarism (consisting of the described pillar concept) results in the “strategy” (referring to the project “Refairenz” of the University of Konstanz)¹⁴⁴⁶, which supports all involved members and entities of the TU Wien.

Another interesting fact is that our involved entity “Single Point of Contact” (SPoC), which is responsible for the (text) analysis and review process of given theses, represents a competence center for the most issues concerning (text) plagiarism at the TU Wien. Here, it has to be mentioned that the SPoC is not only responsible for the prevention, he/she is also responsible for measures for detecting as well as combating student plagiarism. Due to his/her task of knowledge transfer in the context of common mistakes in scientific theses, the role of the SPoC represents a “pool of plagiarism knowledge”. So it is obvious that the so-called SPoC, which can be installed by a faculty as well as for the entire

¹⁴⁴⁶[Uni16b]: Section “Five spheres of action and practical support”.

university (TU Wien), is comparable with the concept of the “*Research and knowledge base*” according to the “*Five Spheres of Action*” of the University of Konstanz¹⁴⁴⁷.

Additionally, it is also possible that the role of the SPoC acts as standalone and independent entity, which means, in terms of Figure 5.2, outside the illustrated house.

Another important aspect, which has to be noted is, that the strategy or in some sense, parts of our proposed strategy, are adaptable and expandable to (other as well as special) conditions and requirements of other faculties at the TU Wien. Noteworthy is the fact that it is imaginable that our approach can be also used and applied for the plagiarism handling procedure of other universities.

Subsequently, the second pillar of our approach, which represents a process of a potential organizational workflow for detecting plagiarism in the academic context, especially tailored for the TU Wien, will be designed and described in detail.

5.3 Design of an Organizational Workflow

In this section, we describe the design and the conception of a potential organizational workflow process for the detection and in some sense for the prevention of possible cases of plagiarism at the TU Wien. The organizational workflow process, which is an important part of our proposed and standardized prevention, detection and combating strategy against text plagiarism (aforementioned in Section 5.2), represents the interdisciplinary cooperation as well as the interaction between all responsible entities of a faculty in the context of detecting plagiarism at the TU Wien.

Exactly this presented organizational workflow, which constitutes the interface between all involved actors within a faculty, organizes the professional and standardized plagiarism detection handling in the context of the submission procedure of scientific theses at the TU Wien.

The plagiarism review process for scientific theses is only one important part of our proposed standard workflow process for the detection of possible cases of plagiarism and is done with the help and support of an external plagiarism detection software. As part of the professional and investigative plagiarism checks, the plagiarism reports, which were previously created and provided by the external anti-plagiarism software, are examined manually and individually by the Faculty’s Single Point of Contact (SPoC). The concrete roles and duties of such an entity will be described later on in the context of a thorough description of the individual steps of the corresponding process. The presented plagiarism review process (including the entire workflow for plagiarism handling) demonstrates one concrete strategy against text plagiarism at the university level, especially designed for the TU Wien.

¹⁴⁴⁷[Uni16b]: Section “*Five spheres of action and practical support*” (especially compare the concept “Research and knowledge base” of the project “Refairenz”).

Noteworthy is the fact, that a student's declaration of consent about a (software-based) plagiarism check of his/her scientific thesis establishes the legal basis for performing the corresponding plagiarism review process. The declaration of consent has to be provided in the context of the student's submission process.

Besides the design of the organizational procedures, we also provide a detailed workflow description of all individual process steps which are relevant for an efficient and complete accomplishment of the planned plagiarism detection process including the workflow.

Additionally, we shed some light on possible dependencies of all involved entities (in the context of the represented workflow and communication process) as well as on the individual sequences of steps of their performed activities (like, e.g., which activity triggers the next step of the process and which actors are affected by these tasks).

Due to the fact that we often refer to the terms "workflow" as well as "process", we subsequently elaborate the exact definition of the used notions and clarify how we use them in the context of our proposed strategy for the detection of possible plagiarism cases. This discrimination is very important for the rest of this chapter.

5.3.1 Terminology: (Business) Process vs. Workflow

First of all, a brief summary about the existing definitions of the terms "(business) process" and "workflow" should be considered, especially with the focus on what the differences as well as the relations between these mentioned terms are.

According to Springer¹⁴⁴⁸, a business process is initiated by an event and it consists of a sequence of activities which are logically connected. Furthermore, the business process can be influenced by provided data inputs as well as internal and external events.¹⁴⁴⁹ An important fact, that has to be noted is that a business process is always geared towards a corporate goal and is a relevant part of a company's value chain.¹⁴⁵⁰ Referring to the source provided by Microtool.de¹⁴⁵¹, a business process is used to describe what steps are necessary to execute in which order to reach a predefined goal and not how the concrete steps are implemented.

According to Microtool.de¹⁴⁵², the Workflow Management Coalition (WfMC)¹⁴⁵³, defines "workflow" as

"The automation of a business process, in whole or part, during which documents, information, or tasks are passed from one participant to another for

¹⁴⁴⁸[Mül05]: Müller. 2005. *Workflow-based Integration: Grundlagen, Technologien, Management*, p. 7.

¹⁴⁴⁹[Mül05]: p. 7.

¹⁴⁵⁰[Mül05]: p. 7 f.

¹⁴⁵¹[Mic16]: MicroTOOL.de. *Online: Workflows. Automatisiert Effizienz und Qualität schaffen. Was ist ein Workflow? Wie unterscheidet er sich von einem Geschäftsprozess? Warum ist er nützlich und wie lässt er sich umsetzen?*, Section "Workflow vs. Geschäftsprozess".

¹⁴⁵²[Mic16]: Section "Was ist ein Workflow?".

¹⁴⁵³[Wor16]: Workflow Management Coalition (WfMC): BPM Glossary. *Online: Definition of the term "workflow"*.

action according to a set of procedural rules. ”
(One definition of the BPM Glossary of the WMfC)¹⁴⁵⁴

So, it is obvious, that a workflow is closely related to a (business) process, but the terms are not always synonymous.¹⁴⁵⁵

A workflow refers to the technical realization of an underlying process.¹⁴⁵⁶ Therefore, a business process is technically supported (in its entirety or even in parts) by a workflow.¹⁴⁵⁷ A workflow also consists of steps (like activities, events and actions), which can run sequentially or in parallel.¹⁴⁵⁸ Furthermore its processing happens according to a similar scheme (like a recurring business process) and has a defined state when an activity is successfully completed or canceled.¹⁴⁵⁹ Additionally, a workflow provides information, tools, and documents, which are used by different actors to perform the activities.¹⁴⁶⁰ In summary, a workflow describes when, how and who executes the underlying business process with which technical resources (also taking into account the corresponding flow of information).¹⁴⁶¹

Noteworthy is the fact that a workflow is intended to automate an underlying business process.¹⁴⁶² An automated workflow uses a system that controls such activities and enables tasks for an efficient workflow management.¹⁴⁶³ For instance, if a particular task is completed (which can also include a completion of a specific document), this system not only manages this document, but also forwards the reviewing task to the next (organizational) party or responsible entity. Such a system, where workflows are designed, applied, and all the information and documents which are needed, are managed, is called “Workflow-Management-System (WfMS)”.^{1464,1465}

The first task when developing such business processes, is the activity of modeling the underlying process. This procedure is called “business process modeling”, which defines who (which actor) has to do what (which activities) and when (in which order) in the corresponding process.¹⁴⁶⁶ The second level is dealing with methods from the concept of “workflow modeling” in order to specify the systems which will support the aforementioned business model in a technical way.¹⁴⁶⁷ Therefore, specific tasks of the process will be

¹⁴⁵⁴[Wor16]

¹⁴⁵⁵[Mic16]: Section “*Was ist ein Workflow?*”.

¹⁴⁵⁶[Mic16]: Section “*Was ist ein Workflow?*”.

¹⁴⁵⁷[Mül05]: p. 8.

¹⁴⁵⁸[Mic16]: Section “*Elemente eines Workflows*”.

¹⁴⁵⁹[Mül05]: p. 8.

¹⁴⁶⁰[Mic16]: Section “*Wie lassen sich Workflows umsetzen?*”.

¹⁴⁶¹[Mic16]: Section “*Zusammengefasst ...*”.

¹⁴⁶²[Mül05]: p. 10.

¹⁴⁶³[Mül05]: p. 10 f.

¹⁴⁶⁴[Mül05]: p. 10 f.

¹⁴⁶⁵[Mic16]: Section “*Wie lassen sich Workflows umsetzen?*”.

¹⁴⁶⁶[Mül05]: p. 11.

¹⁴⁶⁷[Mic16]: Section “*Modellierung von Workflows*”.

split up into smaller steps until they can be technically automated.¹⁴⁶⁸ Here, it has to be mentioned that the graphical representation of the process components (including their activities, tasks, subprocesses and their existing relationship to each other), especially the description of such models (relating to processes as well as workflows), is using the methods of process modeling.¹⁴⁶⁹ Such modeling methods (regarding to the business process modeling language), are employing notations like “Flowchart”, “Event Driven Process Chain (EPC)”, “Unified Modeling Language (UML)” or “Business Process Model and Notation (BPMN)”.¹⁴⁷⁰

Coming back to our initial situation of the necessity of a standardized approach for identifying possible cases of plagiarism in consideration of the aforementioned definitions, we are modeling an organizational workflow for the (business) process “Plagiarism Detection and Review of scientific theses (within the students’ submission procedure)”. An external plagiarism software check, manual plagiarism reworks, summarizing and collecting the aggregated plagiarism results at one specific location, the determination and the review of the provided results and making the decision, whether an underlying thesis is a concrete case of plagiarism or not, are only some activities and subprocesses, which represents important parts of the corresponding plagiarism handling procedure(s).

Here, it has to be mentioned that we do not only concentrate on individual process steps, instead, we also take into account the flow of information, relevant aspects of the communication as well as the coordination process of all involved actors. Specifically, we highlights the flow of information (in terms of the continuous availability of all required information as well as documents regarding the corresponding “Plagiarism Status” of an underlying student’s thesis, which represents the current plagiarism results of a thesis), their forwarding procedure and not to be forgotten the necessary notifications of all involved (faculty-related) entities of these occurred events. Exactly these examples show that we are dealing with the concept of a workflow. Nevertheless, at this point we won’t go into details about how the technical realization of the aforementioned plagiarism review process was done.

Furthermore, some specific activities of the described plagiarism review process can be almost automatically performed by implementing and introducing a “Workflow-Management-System (WfMS)”. Therefore, our introduced entity (a portal or back-end system of the website), the so-called “Plagiarism Workflow Portal”, represents such a system. The typical characteristics of such workflow systems in the context of the implementation of the processes of our presented “Plagiarism Control Strategy” are thoroughly explained in Section 5.4.

What follows is the representation of a workflow for a standardized detection and prevention of possible cases of plagiarism. We use the notations of a standard flowchart,

¹⁴⁶⁸[Mic16]: Section “*Modellierung von Workflows*”.

¹⁴⁶⁹[Mül05]: p. 32.

¹⁴⁷⁰[Mül05]: p. 84.

which embodies the applied modeling language for the proposed process. In practice, the presentation of our described workflow is done in form of a cross-functional standard flowchart, which also provides insights into the information flow across organizational boundaries, especially of various entities, which have different roles and duties regarding their scope of responsibilities at a faculty.

Furthermore, we also provide information about which specific entities are involved in the workflow process. We also show which entities are supported and in which way they are affected by the process of our proposed and standardized plagiarism control strategy.

Subsequently, we will provide a detailed workflow and process description of our designed workflow for spotting cases of plagiarism, in which the individual (organizational) process steps as well as organizational activities and responsibilities of the various actors, which are involved, are explained and discussed. The workflow contributes and results in its functioning to the entirety of the plagiarism control strategy for a standardized detection and prevention of plagiarism in the context of the submission procedure of scientific theses at the TU Wien.

Our proposed workflow for spotting cases of plagiarism in the academic context begins with the submission of a students' scientific thesis. It continues with the assessment and availability of the concrete plagiarism results, indicating whether an underlying thesis actually constitutes a possible "case of plagiarism" or not, and it ends with the notification of all involved and affected entities about the current "Plagiarism Status" of the respective thesis. Therefore it is obvious, that the focus of our presented "Plagiarism Control Strategy" lies on activities, which have to be taken in the context of the corresponding plagiarism review process, as part of the submission process. Hence, we do not concentrate on the particular evaluation procedures (including further manual steps, which have to be taken) of the underlying thesis, which are usually conducted by the respective thesis supervisor.

It has to be noted that the professional plagiarism detection clearly takes place before the assessment of the underlying thesis is completely finished and the final certificate is issued and the academic degree is awarded.

Only those students, who submit a scientific thesis, which is in compliance with rules and standards of good scientific practice, receive an assessment of their written works.

Therefore, instead of a student plagiarism combating strategy, an approach for plagiarism prevention, given through the design of our proposed and experienced plagiarism detection strategy, is pursued here.

An important fact that has to be mentioned is that the results of the plagiarism detection checks constitute a relevant part in the assessment of the final thesis and they are also included in the thesis supervisor's assessment of the written work in accordance with the concept of our plagiarism control strategy.

The **first step** of our proposed plagiarism control strategy for a standardized detection and prevention handling of plagiarism is done by the student, namely finalizing and finishing his/her scientific thesis, which starts and initiates our subsequently described workflow process. The process begins when a student submits his/her academic thesis to the Submission Office for Academic Theses (Dean's Office or Deanery). This is necessary for the final certificate of a study as well as for the graduation (in order to obtain a university degree). At most universities in Austria¹⁴⁷¹, alike also the TU Wien¹⁴⁷², the concrete submission of the scientific thesis has to be done twice, once in digital form (electronic submission of the thesis) and, secondly, in a hardcover version of the thesis (printed submission of the thesis). Therefore, in the design of our proposed workflow process, the aforementioned fact was also taken into account and results in two further process steps, which are both responsible for the submission handling of the underlying thesis (digital as well as a printed version).

Here, it has to be mentioned that the concrete procedures for the submission handling of an academic thesis, especially on how this is done, which medium is used by the student and how this is specified by guidelines of the Deanery, is not considered in our proposed workflow process. Thus, it is conceivable that an online platform (faculty-related or university-wide) as well as an external medium (e.g., CD, DVD etc.), which is delivered personally by the student to the Dean's Office, can be used for the digital submission of the student's thesis. Another imaginable scenario is the students' submission of the thesis by e-mail, but this is dependent on the file size of the underlying thesis and the e-mail quotas. Regardless of how this (submission) procedure is handled by a concrete Deanery, it is obvious that there exist different methods for the specific submission of an academic thesis to the responsible Dean's Office, which depend on the particular faculty and thus also have different handling procedures for theses submissions. Here, it can be seen that our proposed process just described, is really adaptable and extensible, especially with regard to the context of faculty-related or university-specific requirements.

After the submission of an electronic and a printed version of a student's scientific thesis and also a submission of all study-related documents (like the birth certificate, study sheet, declaration of consent about a (software-based) plagiarism check of the underlying thesis, certificates of all successfully completed courses and possibly applying transitional provisions)¹⁴⁷³ in order to finalize the student's submission process of a master or doctorate program, the next step has to be performed by employees of the Deanery.

As part of a detailed examination process, including checking whether, among others, information and requirements (like, e.g., the assignment of certificates of completed courses

¹⁴⁷¹[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 86 UG.

¹⁴⁷²[TU 13]: “Directive of the Vice Rector for Academic Affairs concerning the electronic submission requirement for theses (doctoral theses, diploma theses, master's theses) at TU Wien (online 14.10.2015)”.

¹⁴⁷³Here, it has to be noted, that the specific submission of the student's study-related documents is not part of our designed workflow process.

to the respective curriculum), all necessary forms and documents for the completion of the student's submission and evaluation process are available, also further process steps are initiated.

In the context of this review process, in which the staff of the Deanery will check if all required documents of a student's final submission (process) are present to the Dean's Office, a further check, if successful, is made: Concretely, a document check with a verification, whether the electronic submission is identical to the printed version of the underlying thesis, is performed. In the case, that not all relevant documents are provided or the submission of both final thesis versions (digital and printed thesis) are not identical, the student will be informed about the missing documents/information or, in the latter case, about the non-identical thesis submissions. Here, our designed submission process (which is based specifically on the plagiarism detection of scientific theses) is terminated at this point. The submission process starts again from the beginning for the student (regardless of which documents are missing) in the case of the aforementioned scenarios in which the conditions given by the Deanery are not fulfilled.

In the other cases, where the prescribed requirements are fulfilled and both thesis versions coincide, an employee of the Submission Office for Academic Theses will gather all relevant information about the student's thesis submission (like, e.g., the title of the scientific thesis, the thesis supervisor, the date of thesis submission and other study-, student- and submission-related data), which are later on processed in supplementary activities.

The next important step is performed by an employee of the Dean's Office with the upload of the student's thesis to the website of the "Plagiarism Workflow Portal", which represents the main system for the handling workflow of plagiarism checks and which acts as a portal interface between all involved, faculty-internal entities.

It has to be noted that exactly here, our proposed and introduced entity, the "Plagiarism Workflow Portal" of our designed workflow process, is employed for the first time. Furthermore, the selection of the specific "Dean of Studies" and the "Thesis Supervisor" in the web-based "Plagiarism Workflow Portal" has to be done by an employee of the Deanery. In addition to the selection of the responsible "Plagiarism Hunter (SPoC)", also the concrete title of the academic thesis must be supplemented by the Deanery. A correct assignment of the aforementioned users and roles is really important in order to ensure an efficient and correct execution of the workflow process, because the faculty's "Plagiarism Hunter", the dean as well as the thesis supervisor will get e-mails from the workflow system.

The next step of the process is fully and automatically performed by the back-end system of the "Plagiarism Workflow Portal" by adding headers and a timestamp to each uploaded thesis. This activity is only possible if there exists a complete "thesis submission record", which means, in terms of our proposed workflow process, a correct selection of the responsible "Dean of Studies" as well as "Thesis Supervisor" and "Plagiarism Hunter". But also the title of the underlying scientific thesis must be provided to the

workflow portal by a manual input of the responsible person while entering the thesis meta data. The supplement of the “thesis submission record” with the headers and a qualified timestamp is important and necessary in order to prevent subsequent changes to the work and also in possible cases (if required at a later time) that the exact thesis submission date can be precisely determined.

After the “thesis submission record”, which always belongs exactly to one thesis, is completed, it will be stored and integrated in the system database of the “Plagiarism Workflow Portal”. After receiving and storing the complete data set related to a concrete thesis, the system of the workflow portal sends an information message, particularly an e-mail, to the previously selected and responsible (faculty-related) plagiarism hunter, the so-called “Single Point of Contact (SPoC)”. This triggered notification, which represents in some sense the starting point of the following investigative plagiarism review process, provides the SPoC with information that a new thesis, which has to be processed by performing comprehensive plagiarism checks, is available. It has to be mentioned that push notifications are used, because in this way one does not always have to check the e-mails, but receives messages once (individual and new) information, which is important for the concrete recipient, is available.

The next activity step is performed by the faculty’s plagiarism hunter, which turns out to be very complex and time-consuming in practice. Under the action “Manual preparation tasks” of our proposed workflow process, shown in Figure 5.3, all preparatory activities concerning the detection of possible cases of plagiarism, are subsumed. To be more precise, this includes all preliminary activities, which have to be done before the plagiarism check, performed with an external plagiarism software, can be initiated (like, e.g., removing all personal data in the student’s underlying thesis due to regulations of the EU General Data Protection Regulation, short *GDPR*¹⁴⁷⁴, in order to avoid further potential problems with regard to the conformity with the *GDPR*¹⁴⁷⁵ and also with the handling of the student’s personal data)¹⁴⁷⁶. Another possible task is the reduction of the file size of the concrete thesis for the simple reason that file size limitations when uploading a file (in this concrete case, the scientific thesis) are present when using an external plagiarism program. Of course, the aforementioned examples represent a non-exhaustive list, but it has to be mentioned that a description of every possible scenario or circumstance would go beyond the scope of the Master’s thesis at hand.

Additionally, it has to be noted that the process step “Manual preparation tasks” and other subsequent subprocesses are strongly dependent on the requirements and specifications of the concrete faculty or, in general, of the university and can be differently handled by each entity. As one can see from Figure 5.3, the plagiarism preparation and other process

¹⁴⁷⁴For more details: see Regulation (EU) 2016/679.

¹⁴⁷⁵[Eur16]: *REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)*.

¹⁴⁷⁶This is especially relevant in cases where foreign servers are used for the plagiarism check of the uploaded thesis by an external and commercial-used plagiarism software.

activities, like “Software-based plagiarism check of the thesis”, represent subprocesses as they are more complex than normal process steps. One reason for these circumstances are that they cannot be completed and finished in a single step or with one single performed activity. Instead of that, they consist of multiple and manifold subtasks and processes. These parts of the approach clearly show that our proposed workflow process is very adaptable (in the context of the faculty- or university-related requirements) and can be used in a very flexible way.

Referring to Figure 5.3, the next activity will be initiated by the faculty’s single point of contact with the execution of the software-based plagiarism check of the underlying thesis with an external plagiarism detection tool. While using an external plagiarism software, the present thesis, to be more precise, the entire text content of the written work, will be compared to different text snippets of other sources (within a document, external sources such as the Internet and other publication databases) based on text similarities and text matches. Also an internal comparison of already existing and uploaded theses in the system (of the external plagiarism program), which include both, faculty-related as well as other university-related theses, is done. A thorough description of the exact procedure and how such text comparisons of such plagiarism detection software systems work in principle, is provided in Weber-Wulff’s book “*False Feathers: A Perspective on Academic Plagiarism*”¹⁴⁷⁷. Additionally, valuable hints on how to discover and recognize similar texts (especially focus on the automatic detection of text duplicates), are discussed in the book “*Automatische Duplikatserkennung: Ähnliche Texte entdecken und erkennen*”¹⁴⁷⁸ by Christian Eichhorn.

In most cases, the concrete results are given in a percentage of determined and suspicious text similarities and matches in relation to the overall amount of text within the thesis. This percentage provides a similarity index of this external plagiarism check. Furthermore, the results often include the highlighting of potential and suspicious text passages with indications of their original sources. Finally, the summarized results are provided in an so-called “Originality Report”, which synonymously corresponds in our described workflow process with the plagiarism report. The report is not only provided online on a website, instead, the results of the originality check are also subsequently present in form of an downloadable PDF document. Most plagiarism check programs support this mentioned strategy¹⁴⁷⁹.

Noteworthy is the fact, that the so-called plagiarism report serves as a starting point for the subsequent plagiarism review process by representing the basis as well as the supporting foundation in the context of the entirely described plagiarism detection.

After a thorough review of the provided and externally created plagiarism report, which corresponds to exactly one specific academic thesis, the SPoC will also perform various

¹⁴⁷⁷[Web14c]: p. 71-111 (*Chapter 4: Plagiarism Detection*).

¹⁴⁷⁸[Eic09]: Eichhorn. 2009. *Automatische Duplikatserkennung: Ähnliche Texte entdecken und erkennen*.

¹⁴⁷⁹[Web+13b]: Weber-Wulff et al. 2013. *Online: Summary of the “Results of the Plagiarism Detection System Test 2013”*.

other manual plagiarism detection checks in form of the usage of different comparison methods. Examples include, manual text comparisons to other publications which are available on the Internet in general, on Google as well as on Google Books¹⁴⁸⁰, books provided in libraries, and other well-known (scientific) publication databases. It is obvious that another time-consuming scenario involves the book lending by libraries, which will be compared with the (text) content of the currently examined final thesis later on.

In addition to the highlighted passages from the report of the plagiarism detection software, which serve as supporting foundation in the process of plagiarism detection, also other text snippets suspected for being plagiarized will be checked for text similarities by the “Plagiarism Hunter”. Nevertheless (and independent of the externally created “Similarity Index”¹⁴⁸¹ of the plagiarism detection software), a manual review of the underlying thesis must always be conducted.

After all suspicious (text) passages of the plagiarism review process are available and examined, the concrete, extensive evaluation of the current aggregated results can be performed by the faculty’s “Plagiarism Hunter”. Therefore, the next activity within the subprocess of “Manual plagiarism rework” is the determination whether the underlying thesis contains “obvious and remarkable” signs and passages of plagiarism or not, based on the (aggregated) findings of the externally created “Originality Report” and the self-discovered and matched results of the SPoC.

These two types of (provided) results can be considered independently or even in an aggregated form. In most cases, both presented results are evaluated in combination in order to ensure an efficient procedure for identifying possible cases of plagiarism since the results of the report, generated by the anti-plagiarism tool, identify the most important and “obvious” text similarities in comparison to their original sources. Besides the indications of their original sources, the report also includes the highlighting of such suspicious text passages. Afterwards, the faculty’s SPoC examines these findings together with other (self-discovered and questionable) text passages in more detail by post-processing them manually.

Here, a possible case of plagiarism committed by a specific student refers to situations in which a specific and predefined limit of text similarities (provided in terms of a percentage), specified by the Deanery, more precisely by the Dean of Studies, has been exceeded. This limit, which corresponds in some sense to a threshold, represents a (critical) “Plagiarism Index”. Taking into account the calculated likelihood for text similarity as determined by the previously described text comparison (measured in a percentage of suspicious text amount in relation to the total text amount), significant deficiencies in the context of scientific integrity, particularly text acquisitions without

¹⁴⁸⁰Special attention must be given on the Google Book Search, as this turns out to be particularly difficult and time-consuming to find original sources. Especially, this extensive comparison search is not considered in most plagiarism detection software systems.

¹⁴⁸¹[tur13]: *Blog turnitin: “Does Turnitin Detect Plagiarism? To kick off our new blog, we’ll tackle the #1 student misconception: that Turnitin detects plagiarism.”*

mentioning the original source(s)/author(s) or highlighting these text passages/citations, can be demonstrated.

Additionally, it should be mentioned, that, if a certain (previously defined) limit of text similarities is exceeded, it is most likely that the underlying thesis represents a concrete “case of plagiarism” due to containing obvious signs of plagiarism. In such cases, there are several text passages which obviously do not comply with scientific standards according to common Good Scientific Practices.¹⁴⁸² For instance, an uniform and sufficient identification of citations (like, e.g., highlighting with quotation marks) and their sources according to a correct and scientific way is (at least) sometimes missing in certain text paragraphs of the thesis.

The concrete verification procedure with which one can determine a concrete “case of plagiarism” in association with the review of an underlying thesis, is explained in the subsequent workflow description when we shed some light at the activities of the entity “Dean of Studies”. In our proposed workflow process, the “Dean of Studies” is the only organ which can decide in a legally-binding form (according to the university law and the Statutes¹⁴⁸³) whether a thesis actually constitutes plagiarism or not. The determined and founded results of the “Plagiarism Hunter”, which give relevant information of the status of the underlying thesis, provide the basis for the “Dean of Studies” for the following decision-making process and serve as a support in the plagiarism detection process.

All the aforementioned investigative activities, belong, among others, to the activities of the subprocess of “Manual plagiarism rework”, which represents an important part of the plagiarism review process.

The assessment conducted by the “Plagiarism Hunter”, whether a concrete thesis contains with a certain probability obvious indications of plagiarism, is provided in a summary of the aggregated results, generated in the already explained (sub-)processes. The analysis results in a document, the so-called “Plagiarism Reporting Results”. The “Plagiarism Reporting Results” represent a detailed summary about the SPoC’s (preliminary) determination of the results of the underlying thesis, especially a list of findings which passages do not comply with scientific standards. Additionally, the summary of these specific findings include a list of concrete, questionable, suspicious and conspicuous text passages (with indications of their original sources). Besides that, the externally created report of the anti-plagiarism software as well as the summary of the “Plagiarism Reporting Results” will be uploaded to the “Workflow Portal”.

The next process step will be automatically executed by the “Workflow Portal”. After the SPoC is specifying the (preliminary) plagiarism reporting results of a given thesis in the workflow portal, the system automatically sends out an information message, particularly an e-mail, to the responsible “Dean of Studies” and to the thesis supervisor, informing

¹⁴⁸²For more details: see [TU 07].

¹⁴⁸³[TU 16]: TU Wien. 2016. “Provisions of the Chapter Study Law of the TU Wien Statute (online 27.10.2016)”, p. 2: § 1 (*Body responsible for study matters*).

them that the preliminary determined results of a specific thesis including the plagiarism report(s) are available in the portal for review.

Right after that, in an ideal situation, the “Dean of Studies” immediately reads the message that new information is available and starts the analysis of the preliminary results, which are provided on the “Workflow Portal”. In addition, the system supplies the current entity with the information about which supervisor is responsible for mentoring the present thesis, also in form of an e-mail. It has to be noted that the concrete determination of an possible plagiarism allegation can exclusively be decided by the responsible “Dean of Studies”, because in our proposed workflow process only this entity has the necessary authorization and (organ-legal) responsibility of such matters (according to the applicable university law and the Statutes of the TU Wien¹⁴⁸⁴), especially regarding to this type of “final decisions” in the context of possible plagiarism allegations.

During the review of the summary of the “Plagiarism Reporting Results” the “Dean of Studies” decides and determines, based on the provided summary of the faculty’s “Plagiarism Hunter” (which serves here as a support function in the current decision making process), whether the present thesis represents (with a special probability) a concrete “case of plagiarism” or not. As already mentioned in the context of some investigative activities of the plagiarism review (sub-)processes performed by the SPoC, it is also important to take into account whether the limit of the calculated text similarity has been exceeded. Furthermore, also other relevant factors which are provided and summarized in the “Plagiarism Reporting Results” are used for the decision-making whether the underlying thesis constitutes a concrete case of plagiarism or not.

After the “Dean of Studies” verifies the “Plagiarism Status” of a scientific thesis, the subsequent process depends on the Dean of Studies’ decision about the (non-)presence of a possible plagiarism allegation. It has to be noted, that the further handling of cases of plagiarism, presented in the current plagiarism review process, may vary from case to case and depends on the procedures of the respective faculty and/or university.

In cases where the aforementioned, specific and predefined limit of text similarities is exceeded, the underlying thesis is quite likely a concrete “case of plagiarism”, which initiates further steps which have to be taken. Here, it has to be noted that in every single case where plagiarism was detected with a high probability, additional (process) steps must be taken. Furthermore all involved and affected entities of the related thesis will be informed about the student’s scientific misbehavior. Therefore, the next step performed by the “Dean of Studies” is to inform the respective thesis supervisor that the underlying thesis is likely plagiarized. Additionally, further manual steps, which are related to the actual plagiarism review process, and which can vary depending on faculty and university, have to be taken by the respective thesis supervisor in cooperation with the responsible “Dean of Studies”. The following steps, which depend on the specific faculty or university, are not part of our described process. At this point, the workflow of our proposed process

¹⁴⁸⁴[TU 16]: p. 2: § 1 (*Body responsible for study matters*).

for a standardized detection and prevention of plagiarism terminates. Here, it has to be mentioned that if a plagiarism allegation actually exists and it is confirmed by the “Dean of Studies” and the responsible thesis supervisor is notified, the corresponding thesis MUST be withdrawn at the respective Deanery. A new submission of the revised student’s thesis (assuming that the revised thesis is allowed to be re-submitted under the same topic as well as title) is required. This is the only possibility for obtaining a university/academic graduation. Clearly, this involves initiating a new iteration of the workflow process in form of our proposed plagiarism control strategy. Immediately afterwards, regardless of whether a negative assessment of the students’ underlying thesis was made or which further and concrete consequences were imposed – which are not part of the described procedure –, the submission process starts again from the beginning for the student.

Additionally, in cases of suspected plagiarism, both the “Dean of Studies” as well as the supervisor of an affected thesis have the possibility to make use of the SPoC’s professional support in the context of the further handling procedure for such cases of plagiarism. Furthermore, the faculty’s single point of contact also provides thorough answers to any questions which possibly arise during the analysis of the preliminary results or after finalizing the review and verifications process of a student’s thesis, especially with focus on the list of suspicious findings specified in the “Plagiarism Reporting Results” by the SPoC on the “Workflow Portal”.

In cases where the predefined “Plagiarism Index” does not exceed a specific limit, the underlying thesis does not represent (with a high probability) a possible “case of plagiarism” and our described workflow process ends for the “Dean of Studies” at this point in time. Here, it has to be mentioned that in such cases, where no obvious signs of scientific misconduct, especially text plagiarism, could be detected, the students’ scientific thesis passes through our proposed workflow without further manual processing.

After the review and verification process of the “Dean of Studies”, including the closer examination and evaluation of the report (including of the predefined plagiarism results) is finished, all involved entities will be informed. The special focus hereby lies on the thesis supervisor.

It has to be considered that in every single thesis submission (independent whether a concrete case of plagiarism or a plagiarism suspicion exists), the information of the particular investigation results of the underlying thesis will be communicated to all involved entities.

At the same time and in addition to the “Dean of Studies”, the respective thesis supervisor also receives the automatically-sent message that a plagiarism report as well as the summary of the “Plagiarism Reporting Results” (including possible suspicious plagiarism references) of a supervised thesis are available for review on the “Workflow Portal”.

After reading the e-mail concerning the availability of a complete “plagiarism results” data set for a student’s thesis submission on the portal (which consists of the student’s thesis, the externally created “Plagiarism Report” and the SPoC’s plagiarism assessment

in form of a summary specified in the area of the “Plagiarism Reporting Results”), the next activities, like the inspection of the corresponding documents, reports as well as results, are executed by the respective thesis supervisor.

Therefore, the next step of the process is performed by the responsible thesis supervisor, which comprises a thorough analysis of the underlying plagiarism reporting results which were discovered during the aforementioned plagiarism review process. The supervisors’ detailed inspection of the currently available “Plagiarism Reporting Results” is done in order to examine possible strengths and weaknesses of the SPoC’s preliminary plagiarism findings, but also to find and evaluate possible correlations between these results and the plagiarism results (like, e.g., concrete text passages containing suspicious signs of plagiarism), which were independently detected by the thesis supervisor during the reading and review process (as part of the underlying evaluation process) of the respective thesis.

Here, it is also conceivable that the thesis supervisor gets in touch with the responsible faculty’s single point of contact in order to make use of the SPoC’s professional support in the context of his/her plagiarism expertise, but especially to provide specific answers to questions, which possibly arise during the exhaustive inspection of the Plagiarism Report(s) and the SPoC’s indication list of suspicious findings (specified in the “Plagiarism Reporting Results”) for an underlying thesis.

In addition to asking questions to the faculty’s single point of contact regarding specific passages of a student’s written work which do not comply with scientific standards, the thesis advisor can also use the SPoC’s list of possible plagiarism results as the basis of grading and assessment of the students’ underlying thesis in order to issue a certificate for the written work. Therefore, the list of results can also serve as a basis for support in the following evaluation and assessment process, especially with regard to scientific misconduct, but also in order to verify if the student complied with standards and rules of good scientific practice (specifically with focus on text plagiarism).

It has to be mentioned that the respective thesis supervisor has a very important role, especially for the conclusion whether the underlying thesis constitutes a concrete case of plagiarism or not. This is based on the fact that, for judging written works, a specialized knowledge is needed to spot and understand subject-specific expressions and abnormalities.

Due to the (subject-oriented) know-how, expertise as well as competence of a thesis supervisor with special regard to the topic, which has to be investigated by a student in the context of a scientific thesis, it is obvious, that exactly this described entity, which is responsible for mentoring a student’s thesis, is familiar with the usage of such subject-related expressions and can therefore detect possible subject-related cases of plagiarism much easier than, for instance, the SPoC.

After the detailed inspection of the plagiarism results is finished, further (manual) steps are performed by the respective thesis supervisor. Examples for subsequently executed tasks in form of subprocesses include activities such as the grading of the underlying

student's thesis, the thesis advisor's justification on the grading of the thesis in form of a review report of the student's thesis as well as the issuing of the certificate for the given work.

Besides the aforementioned examples, also other activities, which possibly occur as parts of the plagiarism review process and which also affect the thesis supervisor, belong to the activities of our proposed subprocess "Further manual steps". Here, it has to be noted that we do not focus on these mentioned steps and tasks, which are necessary and have to be taken by the respective thesis supervisor in order to finalize a student's thesis submission. Therefore, they are no longer part of our proposed workflow process and our described "Plagiarism Control Strategy" ends (after the accomplishment of these unspecified steps) at this point.

Noteworthy is the fact that our proposed standard workflow process takes into account a helpful reminder function in form of sending e-mails to the responsible "Dean of Studies" and to the respective thesis supervisor in order to inform them about the availability of the underlying results of plagiarism reports of a student's thesis and that they have not been read or analyzed yet. Our workflow is considering a reading period, which means in terms of our process, that the advisor of a thesis MUST review the provided plagiarism reports within 14 days. The reading state of the thesis and its corresponding results can be successfully confirmed and therefore marked "as read" at any time by a checkbox function on the portal (executed by the respective thesis supervisor).

If this circumstance of providing a reading confirmation does not occur in time, the backend of the workflow portal automatically sends out an info message, particularly an friendly e-mail reminder, to the responsible thesis supervisor after 12 days, that the concrete "Plagiarism Reporting Results" have not been read so far. Hence, the reminder contains a request to change this situation and thus to read the provided results within the next two days, which belongs to the respective thesis supervisor's responsibilities. After another two days, to be more precise after the expiry of the reading deadline of 14 days in total, the thesis advisor receives a last reminder about the circumstance. Right here, it has to be noted that both events (one targeting the "Dean of Studies" and one for the thesis supervisor) of the processes "Read e-mail (plagiarism report is available)" are activities, which can be executed in an iterative way. Therefore, here, the realization of the step "Reminder" represents a feedback loop (in the context of sending the respective reminder message).

After the deadline of this mentioned period of 14 days, the reading status of the review of the underlying results of the corresponding plagiarism reports cannot be changed anymore via the checkboxes on the "Workflow Portal" by the respective thesis supervisor.

Not illustrated in the process in Figure 5.3, but certainly reasonable, is that regardless of whether there is a reading confirmation or not, the responsible "Dean of Studies" will be informed about the current reading status of the provided summary of plagiarism results of a corresponding student's thesis (including the responsible advisor who is mentoring the respective thesis) via e-mail.

When all involved and affected entities (also including the relevant student) were informed about the current “Plagiarism Status” of an underlying thesis, the workflow is finished and our proposed process for a standardized detection and prevention of plagiarism ends at this point.

Finally, it is important to mention that, regardless of the concrete plagiarism result, our proposed plagiarism review process will inform all entities, which are involved and affected by our designed workflow.

For the reader’s convenience, Figure 5.3 summarizes all (individual) aforementioned described process steps and components of the organizational workflow, which is implementing our proposed “Plagiarism Control Strategy” based on a cross-functional standard flowchart in one (simplified) illustration.

It is obvious that without the implementation of our proposed workflow for a standardized academic plagiarism detection, every faculty had to conduct their own, faculty-internal procedures for plagiarism handling. Earlier on, neither a uniform way for a TU-wide handling of plagiarism checks nor a central contact point for inquiries concerning questions of academic misconduct (especially text plagiarism), existed.

Our approach for a standardized prevention as well as detection of possible cases of plagiarism is unifying different organizational units (like faculties) as well as entities based on a workflow-oriented system, with which the interdisciplinary cooperation of all responsible entities as well as faculties can be guaranteed. In addition, the coordination and communication process of these entities is simplified, which contributes to the fact that the organizational effort is reduced. This circumstance helps to accelerate the review process for spotting cases of plagiarism in the context of the submission procedure of scientific theses at the TU Wien.

Now, the question “Which concrete entities are important components of such an organizational process?” arises. Figure 5.4 provides answers to this question and represents all involved entities, which have important roles and which are acting in our proposed organizational workflow for the standardized detection and submitting process of given students’ theses in form of an interdisciplinary cooperation process.

The concrete functionality and typical characteristics of the aforementioned, thoroughly described workflow for the detection of text plagiarism at the TU Wien is technically implemented in the system of the “Plagiarism Workflow Portal”, which represents a kind of a “Workflow-Management-System (WfMS)”. It also manages the interaction of all involved organizational actors and will be described in the next section.

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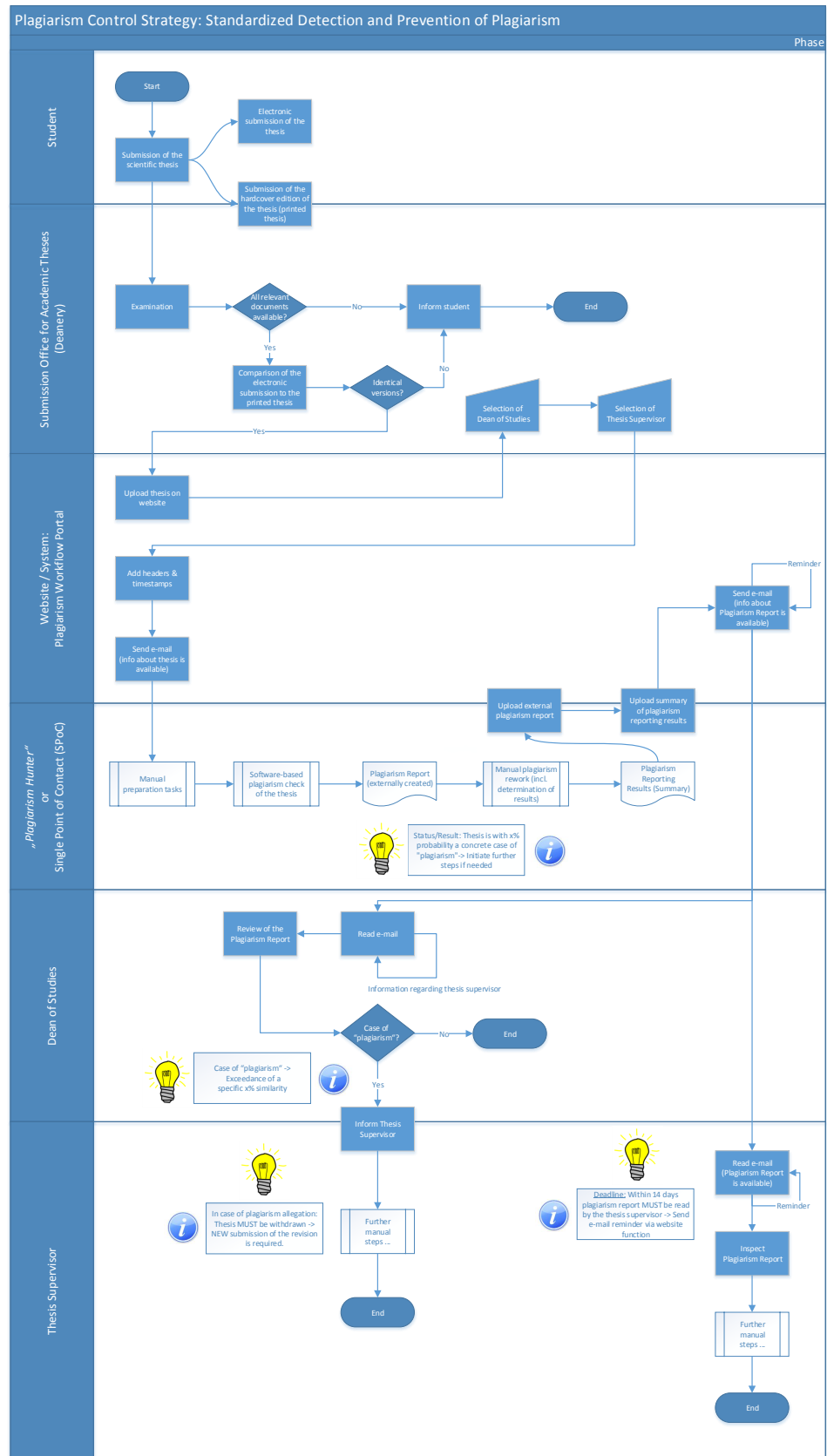


Figure 5.3: Plagiarism Control Workflow: Standardized Detection and Prevention of Plagiarism
(Source: Own representation)

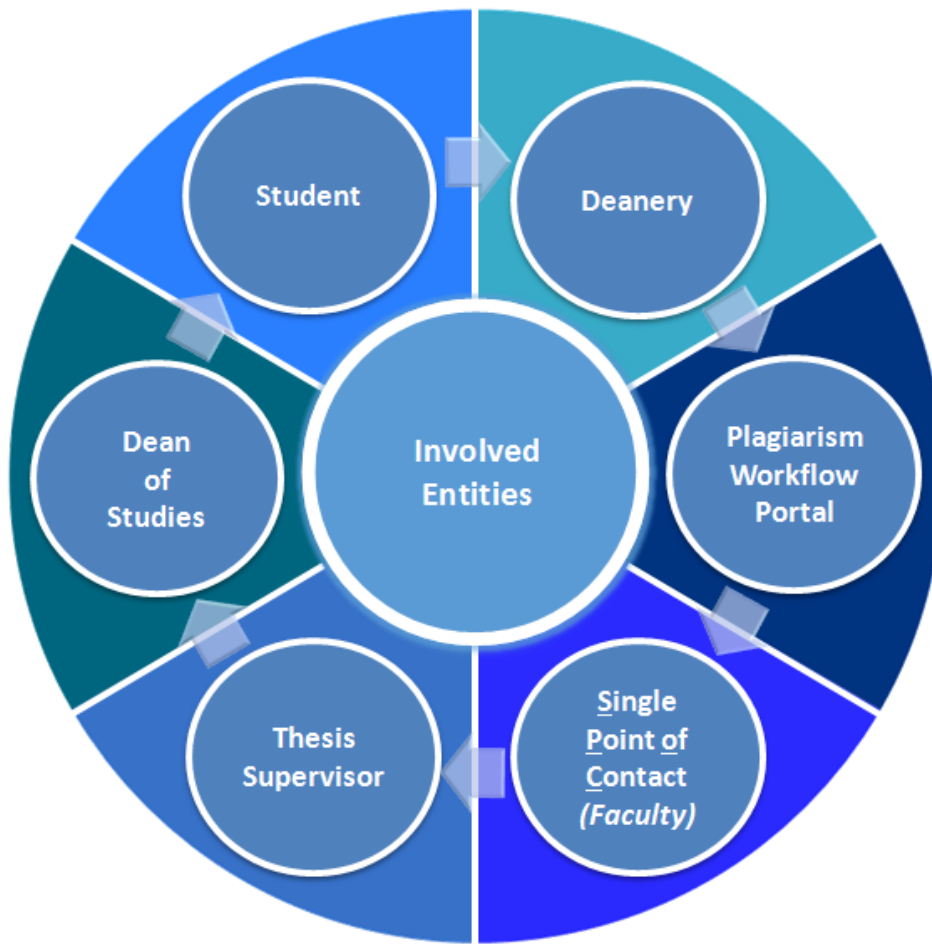


Figure 5.4: Involved and Supported Entities of the Plagiarism Detection Workflow
(Source: Own representation)

5.4 Plagiarism Workflow Portal

The web-based “Plagiarism Workflow Portal” represents the main software for the organizational handling of plagiarism checks at the TU Wien and embodies therefore the realization and concrete implementation of several relevant parts of the aforementioned proposed plagiarism review process in the context of the submission procedure of academic theses.

The workflow portal provides a central interface for the faculty-internal coordination as well as the handling of professional plagiarism checks, based on a third-party plagiarism analysis software. The centralized software organizes the internal management of such plagiarism reviews within a faculty. Concerning our proposed workflow for a standardized

detection of plagiarism, the portal acts as a graphical user interface (*short: GUI*) for combining all relevant information, which is related to a concrete student's thesis in the context of the submission procedure. This also includes the aggregation of the SPoC's manually investigated plagiarism results as well as the findings of the "Originality Report" generated by an external anti-plagiarism tool.

The system is responsible for the input and forwarding procedure of information like, documents, which are required in the context of the plagiarism review process in order to provide them at the right time at one single location.

Through the implementation of our proposed idea of a standardized procedure for plagiarism detection in form of a web-based portal, the coordination of involved actors, both faculty-internal¹⁴⁸⁵ and external entities, is simplified with regard to a faculty-internal point of view.

Furthermore, the provided notification system, which is integrated in the back-end system of the portal, informs all affected entities via e-mail, in order to give them the information that the next required resource (which includes documents as well as information which is related to a concrete student's thesis) is available, which are essential for the further procedure. Additionally, the portal ensures an efficient execution of all subsequent process steps of the described workflow by suggesting and initiating the next activity of the process. Therefore, the aforementioned examples indicate that the "Plagiarism Workflow Portal" represents a "coordination interface" from an interdisciplinary perspective, which organizes the alignment of faculty-related actors in the context of the plagiarism detection procedure. Beside the aspects of coordination, the communication process of all involved persons is facilitated.

Noteworthy is the fact that some particular tasks of the aforementioned plagiarism review process can be (partially) automated in a practical way by technically implementing the characteristics and some basic functions of our introduced entity "Plagiarism Workflow Portal" in the framework of a web-based portal. The reasons presented so far provide evidence that the back-end system of the portal constitutes a so-called "Workflow-Management-System (WfMS)"¹⁴⁸⁶ with which the interdisciplinary and faculty-internal cooperation of all involved and affected entities can be ensured.

Primarily and specifically applied for our concrete case, the system is intended for the coordination as well as interaction of employees within a faculty. Due to the adaptability of our proposed workflow for detecting plagiarism in the academic context, it is also imaginable that other entities from different faculties are included and therefore not only a faculty-related, but also university-wide communication and coordination within the framework of a web-based portal is possible.

Based on what has been mentioned so far, it has to be noted that a distinction between the terms "entity" and "user" is needed. Although the entity "student" is an essential

¹⁴⁸⁵Here, the entity "student" is not included.

¹⁴⁸⁶The definition of this term is described and explained in Section 5.3.1.

actor in the aforementioned process described in Section 5.3.1 (for the simple reason that without this entity the plagiarism review process would not be initiated), it is not an active user (in terms of user groups) of the workflow portal. Therefore, a student has neither direct interaction with nor authorized access to the workflow-oriented system.

For that reason, the interdisciplinary cooperation and communication between all responsible entities (of a faculty), with exception of the entity “student”, is managed by introducing the “Plagiarism Workflow Portal”.

Subsequently, Table 5.1, provides important insights into relevant and fundamental milestones (in the context of software engineering and project management) of the technical realization of the corresponding development process.

Year/Timescale	Technical Development Stages	... within the Context of	... implemented by
02.2015-07.2015	1st Prototype	Project Start: Course “AG Rechtsinformations-recherche im Internet”	Eduard Thamm, Sebastian Neuner
08.2015-10.2016	2nd Development Stage	Continuous Development: Project Assistant, Study Assistant	Michael Abseher, Nicole Wagner
12.2016-07.2017	3rd Development Stage	Project as Part of the Bachelor Thesis	Aysel Öztürk
03.2017-10.2017	4th Development Stage	Project as Part of the Bachelor Thesis	Alfred Soare, Viktor Vidovic

Table 5.1: Significant (Development) Milestones of the “Plagiarism Workflow Portal”

Here, it has to be mentioned that the thesis at hand will not focus on technical aspects, in terms of used technologies, concepts as well as their backgrounds, which were used during the development phase of our proposed workflow process. An important fact is that the idea of our standardized process for the detection and prevention of plagiarism arose in the summer term of 2015 (March 2015) in cooperation with the supervisor of the thesis at hand, Ao.Univ.Prof. Mag.iur. Dr.iur. Markus Haslinger.

Therefore, Table 5.1 provides an overview over significant development stages of the technically realization of the underlying process, which is anchored in the core functionality of the system of the “Plagiarism Workflow Portal”.

As already stated, it is obvious that the involved entities (according to Figure 5.4)¹⁴⁸⁷, communicate and interact through the described portal (examined from an organizational

¹⁴⁸⁷ ... with exception of the entity “student” which represents no active user of the website of the “Plagiarism Workflow Portal”.

point of view). Now the questions “Which entities of the process are actual and active users (in terms of user groups) of the workflow portal and which organizational tasks as well as activities can they perform while using this system?” arise. Furthermore, we explain which particular roles, duties and responsibilities, especially in the context of the interaction and the (information) handling of the workflow portal, do concrete actors have. Additionally, we give an overview and clarify to which user group a specific entity belongs.

In the next couple of paragraphs, we give a brief description of each involved user group and their specific roles as well as corresponding duties which are required for the accomplishment of an activity or task (in the context of the execution of a process step, defined in the requirements specification of our proposed system¹⁴⁸⁸). The special attention here lies on aspects of the interaction with the “Plagiarism Workflow Portal”. The workflow portal, which is especially designed for the TU Wien, consists of the subsequent actors.

Submission Office for Academic Theses (Deanery) An employee of the Submission Office for Academic Theses will gather all relevant information about the student’s thesis submission (like, e.g., the title of the scientific thesis, the thesis supervisor, the date of submission and other study-, student- and submission-related data) and enters this data (relating to a student’s final thesis) in the portal. Additionally, the person of the Dean’s Office is conducting a correct selection of the responsible “Dean of Studies” as well as thesis supervisor and “Plagiarism Hunter”. Furthermore, the staff of the Deanery uploads the student’s thesis to the website of the “Plagiarism Workflow Portal”. Finally, the system saves all entered thesis meta data.

Faculty’s Single Point of Contact (SPoC) The faculty’s “Plagiarism Hunter” receives a notification in form of an e-mail from the back-end system of the workflow portal, that a new student’s thesis is available on the website in order to perform the subsequent plagiarism review process. Afterwards, the SPoC downloads the student’s thesis and conducts some preliminary activities. Besides performing the external plagiarism check with a third-party anti-plagiarism software (which is executed outside the proposed portal), the faculty’s single point of contact also conducts other manual plagiarism detection checks in order to identify possible cases of plagiarism. After the evaluation of the plagiarism results is finished, the SPoC uploads the externally created plagiarism report (which also represents an “Originality Report”). Additionally, the faculty’s “Plagiarism Hunter” provides a brief summary in form of short comments of the “Plagiarism Reporting Results”. It contains the aggregated plagiarism results, including a list of specific text plagiarism findings and the assessment, whether a concrete thesis contains with a certain probability obvious indications of plagiarism¹⁴⁸⁹. This information

¹⁴⁸⁸For more details: see process description in Section 5.3

¹⁴⁸⁹This circumstance is represented in form of a checkbox on the portal.

is stored on the “Plagiarism Workflow Portal”. Finally, the SPoC’s entries as well as the plagiarism report on the portal are saved by the system.

An important aspect, which has to be mentioned, is that the faculty’s single point of contact has the authorization to view his/her completed and finished works (concerning activities of the accomplished plagiarism review process) in form of an archive on the portal.

Thesis Supervisor Our workflow system informs the respective thesis supervisor that a particular student’s thesis, which is supervised by this actor, as well as the corresponding plagiarism report and the underlying results are available for review on the portal. The e-mail neither contains the concrete plagiarism results nor the results indicating whether there exists a specific plagiarism suspicion for the examined student’s thesis. This is for the simple reason that we want to ensure that the responsible supervisor has a look at the portal, where the respective thesis as well as the plagiarism report are provided for the further review in form of an inspection of the existing and preliminary determined results. Furthermore, a thesis supervisor has to mark and confirm a complete “thesis submission record” as read, which is realized by a checkbox function on the corresponding portal. The “reading state” of an underlying and examined thesis must be actively set by the user, which corresponds in our given scenario to an activity which has to be executed by the respective thesis supervisor (see Figure 5.7). It has to be noted that the reading confirmation must be given within 14 days. Otherwise, the backend of the workflow portal automatically sends an e-mail reminder with a request to do this, first after 12 days and then after another 2 days. If the reading period of a student’s thesis of (overall) 14 days is expired, the “reading state” cannot be actively set (in terms of a successful confirmation) nor changed on the “Plagiarism Workflow Portal” by the thesis advisor anymore¹⁴⁹⁰. In cases where a successful reading confirmation was given, the system of the portal saves the changes and archives them. The website of the workflow portal displays not only currently present theses (which were not completed so far in the context of our proposed workflow), but also provides archived theses for the inspection. Furthermore, thesis supervisors can get in contact with the faculty’s single point of contact, in cases where questions arise during the review and inspection process of the preliminary results of an underlying thesis.

Dean of Studies The workflow portal provides the responsible “Dean of Studies” with the information about which thesis supervisor is responsible for mentoring a submitted thesis in form of an e-mail. Furthermore, the “Dean of Studies” also receives, in parallel to the thesis supervisor, the same automatically-sent message that a plagiarism report of a supervised thesis is available for review on the “Workflow Portal”, which is required for the analysis and his/her subsequent decision making process for the determination whether a student’s thesis actually constitutes plagiarism or not. Besides submitted theses, which are not finished in the context of the plagiarism review process, also archived

¹⁴⁹⁰Exception: If the responsible administrator of the portal enables this function.

students' theses are provided on the "Plagiarism Workflow Portal". The presented portal also displays the concrete submission date as well as the precise title of an examined thesis. Additionally, the website provides the respective "Dean of Studies" with the information about whether there is an actual read confirmation for an examined student's thesis submission. In cases where a successful reading status of the underlying thesis is available, also the exact date when it was marked as "read" by the thesis advisor is shown on the portal. Here, it has to be noted that our presented system always notifies the responsible "Dean of Studies" about changes to the current advisor's reading status of the plagiarism results of an underlying student's thesis via e-mail. The procedure of sending such e-mail messages is performed either at the point in time when it was marked as "read" by the respective thesis supervisor or after 14 days, in cases when the reading confirmation is still missing after this period. Additionally, the corresponding thesis record will be marked as "closed" and displayed in the section "archived theses" after 14 days.

Administrator of the "Plagiarism Workflow Portal" The administrator of the presented portal is responsible for tasks like the management of the employed user groups (their assigned permissions, rights as well as their user roles). Data as well as system maintenance are especially important in order to ensure a permanent flow of communication (comprised with the handling procedure of the corresponding information). Due to the fact, that all users receive notifications and information messages from the back-end system of the "Plagiarism Workflow Portal"¹⁴⁹¹, depending on their assigned roles and responsibilities in the current plagiarism review process for a concrete student's thesis, it has to be considered that there are preliminary activities which have to be performed before our proposed workflow process can start. Therefore, data management and the associated maintenance of it, which is especially an important aspect in the context of the roll-out process of the system, has to be taken into account. Hence, users as well as their roles must exist before an employee of the "Dean's Office" selects the relevant actors (in terms of the responsible "Dean of Studies" as well as "Thesis Supervisor" and "Plagiarism Hunter") in the corresponding assignment process for an underlying thesis which has to be checked for plagiarism. Faculty-related user data (like name, title, gender, e-mail address and more of all involved actors, which is possibly relevant with regard to a currently examined student's thesis in the context of the plagiarism review process) has to be entered and added to the system by the administrator of the "Plagiarism Workflow Portal" in order to initiate an efficient start of the underlying workflow process. The administrator is the only person who has the permission to make changes in the operating system of the workflow portal (like, e.g., manually setting whether the reading state of an examined thesis may still be changed or not after 14 days).

To give the reader an appropriate understanding of how some relevant activities of our proposed process for a standardized prevention and detection of plagiarism (described in Section 5.3) are anchored as core functionalities of the presented "Plagiarism Workflow

¹⁴⁹¹For registered users of the portal the relating e-mail address is stored in the system.

Portal”, we will subsequently provide various screenshots. The screenshots illustrate how specific tasks of the aforementioned plagiarism review process for the TU Wien, especially with focus on the entity “Plagiarism Workflow Portal”, are implemented and what are typical characteristics when dealing with such a system. Furthermore, we will also give important insights into a (faculty-internal) perspective of how the system looks like for specific (end) users/user groups while they are interacting with the described portal.

The screenshot shows the 'Plagiarism Assessment Portal' interface. At the top, there is a header with the 'raum law' logo, the portal name 'Plagiarism Assessment Portal' and 'Institute of Law', and logos for 'TU WIEN', 'TISS', and 'upTUdate'. Below the header is a navigation bar with links: Home, Plagiarism, Deanery, Hunter, Dean, Advisor, Account, Workflow, About, and Contact. On the right of the navigation bar are language options 'DE' and 'EN'. The main form area contains the following fields:

- Title:** A text input field containing 'My Master Thesis about ...'.
- Dean of Academic Affairs:** A dropdown menu with options 'test DEAN (test_dean)', 'The ADMIN (admin)', and 'Nicole WAGNER (nwagner)'. 'Nicole WAGNER (nwagner)' is currently selected.
- Advisor:** A dropdown menu with 'Nicole WAGNER (nwagner)' selected.
- Hunter:** A dropdown menu with 'Nicole WAGNER (nwagner)' selected.
- Thesis:** A text input field with a search icon and the text 'Durchsuchen...' followed by 'MyMasterThesis_final.pdf'.
- Uploaded:** A text input field containing the date '10.01.2019'.

At the bottom of the form is a blue button labeled 'Add'. Below the form, there is a footer line that reads 'Copyright TU Wien, 2015 - 2017'.

Figure 5.5: Plagiarism Workflow Portal: View for adding a new thesis for the user group “Deanery”

Here, it has to be mentioned that the overview over submitted as well as closed theses (archive) corresponds to the same view of the user group of the “Dean of Studies”. For this reason, Figure 5.7 illustrates only the scenario in which the “reading state” of an underlying thesis as well as the concrete plagiarism results are set. Therefore, the view of the currently reviewed student’s thesis and the determined plagiarism results are displayed.

In what follows, we shed some light at the realization of the third pillar of our approach for a standardized detection and prevention of plagiarism (explained in Section 5.2). The information homepage for teachers is integrated into the “Plagiarism Workflow Portal”, which provides relevant information about the topic of plagiarism in Austria to all users of the portal. Furthermore, the website informs the organizational staff of a faculty about the further plagiarism handling procedure of confirmed cases of plagiarism. This is possibly relevant during the review process of a student’s thesis. It is important to mention that the website is integrated into the portal because only authorized academic

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The screenshot shows the 'raum law' portal for plagiarism checks. The header includes logos for TU WIEN, TISS, and upTUdate. The navigation bar has links for Start, Plagiarismus, Dekanat, **Plagiatsjäger**, Dekan, Betreuer, Konto, Workflow, Über RIR Teaching, and Kontakt. The main content area is titled 'Eingereichte Diplomarbeiten' and contains a table with the following data:

Titel	Eingereicht am	Gutachten
My Master Thesis about ...	10. Januar 2019	Upload

Below the table is a link for 'Archiv'. The footer states 'Copyright TU Wien, 2015 - 2017'.

(a) Overview over submitted Theses which have to be reviewed

This screenshot shows the 'Plagiatsjäger' section of the portal. It features a 'Kommentar:' field with a text area containing the text: 'On closer examination and evaluation of the underlying thesis as well as the plagiarism report there could be no particular plagiarism suspicion determined.' Below this is a checkbox labeled 'Plagiatsverdacht besteht'. Under the 'Gutachten:' section, there is a 'Durchsuchen...' button and a file named 'PlagiarismReport_final.pdf'. A large blue 'Hinzufügen' button is at the bottom. The footer includes 'Copyright TU Wien, 2015 - 2017'.

(b) Specifying the plagiarism results and uploading the plagiarism report

Figure 5.6: Plagiarism Workflow Portal: View for the user group “Faculty’s Single Point of Contact (SPoC)”

employees of an university should have access to that particular content regarding to the problem field of plagiarism.

After the overall picture of the “Plagiarism Workflow Portal” has been presented, especially focus on the plagiarism review process for a faculty, it is obvious that the presented system with its underlying workflow process can easily be adapted for other faculties of the TU Wien. The flexible implementation of new processes and workflows (also containing the modification and extension of existing processes in the context of organizational

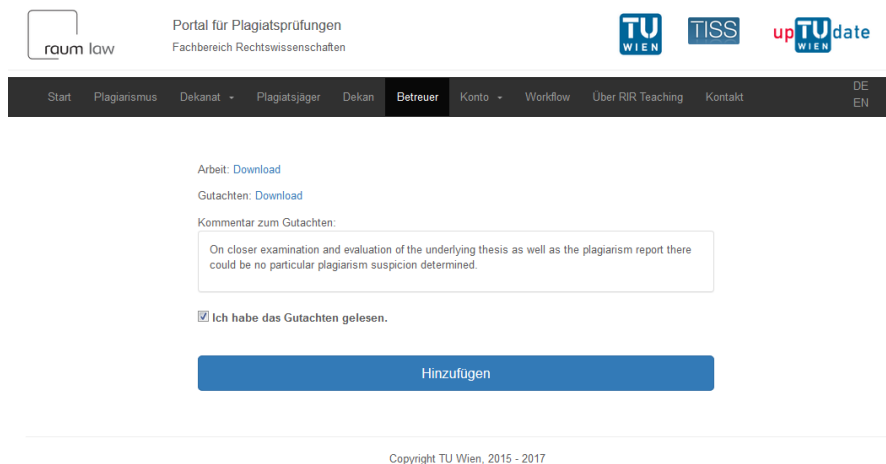


Figure 5.7: Plagiarism Workflow Portal: View for the user group “Thesis Supervisor” during display of concrete plagiarism results

tasks) as well as a possible adaptation caused by a change in the current employee structure, illustrates even more that the currently described system represents a “Workflow Management System (WfMS)”. Exactly these discussed features (i.e. an adaptation to new requirements) turn out as significant advantages in the context of the usage of our designed workflow portal.

5.4.1 Important Aspects and Concluding Remarks of the “Plagiarism Workflow Portal”

After the overall picture of the system of the “Plagiarism Workflow Portal” has been presented, we now want to briefly discuss its specific goals.

One reason for the transparency of the continuous information flow between all involved entities (thoroughly described in Section 5.3) is that we want to guarantee that all affected entities (with focus on the university staff) are informed about an actual “case of plagiarism” and therefore they can possibly react faster in terms of intervention as well as the execution of other necessary steps which have to be taken in the context of plagiarism allegations.

This timely recognition of a confirmed case of plagiarism committed by a specific student turns out to be a major advantage which probably contributes to a significant simplification and an increase in efficiency of the handling of the problem of plagiarism (in context of actual plagiarism procedures).

Additionally, with our proposed “Plagiarism Control Strategy”, we want to ensure that no independent assessment of the student’s scientific thesis by the advisor can be made without taking into account the results of the respective preliminary plagiarism reports of the professional plagiarism checks. For instance, cases where good grades were issued

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raum law Portal für Plagiatsprüfungen
Fachbereich Rechtswissenschaften

TU WIEN TISS upTUdate

Start Plagiarismus Dekanat Plagiatsjäger **Dekan** Betreuer Konto Workflow Über RIR Teaching Kontakt DE EN

Eingereichte Diplomarbeiten

Titel	Begutachtung	Eingereicht am	Gutachten gelesen am
My Master Thesis about ...	Gutachten	10. Januar 2019	Noch nicht gelesen.

[Archiv](#)

Copyright TU Wien, 2015 - 2017

(a) Overview over unfinished theses

raum law Portal für Plagiatsprüfungen
Fachbereich Rechtswissenschaften

TU WIEN TISS upTUdate

Start Plagiarismus Dekanat Plagiatsjäger **Dekan** Betreuer Konto Workflow Über RIR Teaching Kontakt DE EN

Abgeschlossene Diplomarbeiten

Titel	Begutachtung	Eingereicht am	Lesebestätigung
Testarbeit_19012018	Gutachten	16. Januar 2018	19. Januar 2018 09:08
My Master Thesis about ...	Gutachten	10. Januar 2019	17. Januar 2019 17:42

[Zurück zur Hauptübersicht](#)

Copyright TU Wien, 2015 - 2017

(b) Overview over finished theses (archive)

Figure 5.8: Plagiarism Workflow Portal: View for the user group “Dean of Studies”

although there are existing plagiarism allegations can be eliminated. Therefore, the advisor knows about possible plagiarism suspicion(s) concerning an academic thesis which he/she is mentoring. This circumstance should also influence the following evaluation and grading process in the context of issuing the certificate for an underlying thesis of a student.

As explained in Section 5.3, the “Dean of Studies” is an important entity in our proposed workflow process, especially when making the decision whether a student’s thesis actually constitutes plagiarism or not. Therefore, this actor should have all relevant information which is related to a concrete student’s thesis (like, e.g., the title as well as the concrete supervisor of a student’s written work, the determined and founded plagiarism results of the SPoC with a list of probable indications of signs of plagiarism) at any time. Also, we give special attention on the “Dean of Studies”’s notification about the reading status of the plagiarism results, indicating that the respective thesis advisor is also informed about the provided plagiarism reports in form of the summary of possible plagiarism findings,

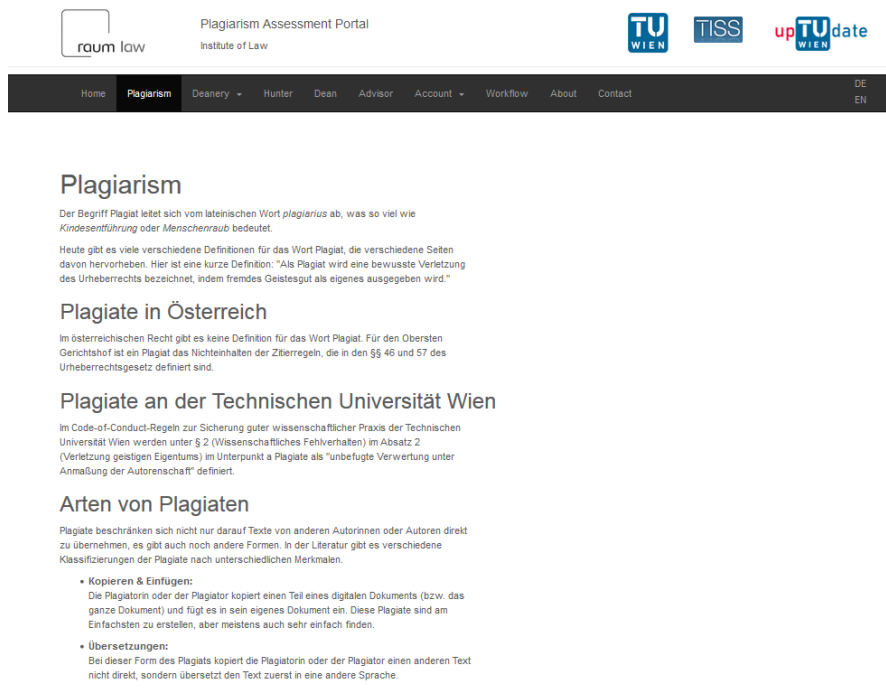


Figure 5.9: Plagiarism Workflow Portal: Information homepage for organizational staff

which are available on the “Workflow Portal”.

Furthermore, through this mentioned information handling, which here also serves as a kind of information transfer, we want to achieve that all involved actors have the same information regarding a student’s submission of an academic thesis at the TU Wien (from the submission of a student’s thesis to the presence and review of the underlying plagiarism results including a possible detection of concrete plagiarism findings). All organizational entities are informed about the “state” (and concrete results) of the currently investigated student’s thesis and this circumstance holds despite the fact, that they act in different divisions of the various areas of responsibilities¹⁴⁹². Noteworthy, is the fact that through the organizational cooperation of all described entities which is realized by the implementation of our proposed workflow process in form of the described “Workflow Portal”, we want to ensure a faster interaction and reaction of all involved actors especially related to cases which represent confirmed cases of plagiarism allegations. Also, a faster communication of necessary steps which have to be taken in the context of the further handling of such cases is present.

In view of all that has been mentioned so far regarding our proposed standard workflow process, one may suppose that a quick intervention in the detection of possible cases of plagiarism is of particular importance, but nevertheless the corresponding approach

¹⁴⁹²It should not be forgotten that all organizational actors have clear boundaries in the context of their scope of responsibility, especially in their authority of decision-making.

of prevention of such cases should have priority, which is certainly realized in practice through the implementation of our described “Plagiarism Control Strategy”.

The aforementioned detection and prevention process was tested as part of a pilot experiment in practice at the TU Wien. In this experiment, both strengths and weaknesses of the approach were unveiled. A summary of the relevant aspects of the conducted experiment, together with the main findings, is provided in the next sections.

5.5 Practical Example and Pilot Experiment at the TU Wien

Our approach for identifying cases of plagiarism in the context of the submission procedure of students’ (final) theses was implemented through the aforementioned, thoroughly described detection and prevention process (also consisting of the “Plagiarism Workflow Portal”) and was tested in practice as part of a pilot experiment in the academic context, to be more precise, at the TU Wien.

A (comprehensive) pilot experiment is suggested in order to show the relationship between theory and practice to discover possible strengths and weaknesses (also consisting of the analysis of possible weak points of the workflow portal), as well as to recognize important factors (which can influence and also contribute to the continuous improvement and further development of the process) of our presented workflow in practical use.

Additionally, the practical use of our plagiarism review process provides relevant information about existing (and future) challenges regarding the problem of plagiarism, in form of detecting possible trends, especially in the academic context. Therefore, we give the readers insights into the increasingly important area of plagiarism research.

Furthermore, the impressions of the practice were collected while performing the pilot experiment and result in a summary about typical signs for student plagiarism. To put it in a nutshell, a brief summary of various, frequent and recurring mistakes in the context of written theses, with special attention on violations of scientific integrity (especially with focus on text plagiarism and cases where the original reference is missing or at least an insufficient highlighting is existing), will be offered.

The conducted experiment not only consisted of one part. Instead, various components of the aforementioned plagiarism review process¹⁴⁹³, which included the workflow, the “Plagiarism Workflow Portal”¹⁴⁹⁴ as well as the plagiarism check(s), were relevant ingredients of the test arrangement while performing the experiment. Besides an external software, which was used for the first plagiarism detection, also a manual analysis of the software-based results as well as an independent, manual review procedure of an underlying thesis, performed by the respective faculty’s SPoC, is executed for detecting

¹⁴⁹³See Section 5.3 for more details.

¹⁴⁹⁴For more details: See Section 5.4.

the manifestations of (text) plagiarism. Therefore, for testing the underlying workflow process for spotting possible cases of plagiarism in its practical use, several test runs were used in the experiment based on the productive environment of the faculty at the TU Wien. Here, it has to be noted that some activities (which have to be done before the pilot was started and which concerned the roll-out of the underlying plagiarism review process) and the basic conditions (which are important for the realization of the pilot project) had to be discussed and defined before the described experiment could be performed.

First of all, we want to clarify what is meant by the term “pilot experiment”. Before we started with the experiment, there was no unified plagiarism detection in place (either at the TU Wien nor within certain faculties). Therefore, we conducted a trial test to evaluate the process we defined before in order to identify possible factors and trends which are relevant for the detection and prevention of plagiarism in the academic context. Noteworthy, is the fact that we set up a pilot test which is the first attempt to carry out and to test a uniform detection and review of plagiarism at the TU Wien. Furthermore, our defined process which facilitates a standard procedure for dealing and handling cases of plagiarism was employed in order to test and detect possible strengths and weaknesses in the practical use (also in terms of an efficient use of the workflow process). Here, it has to be mentioned that the pilot experiment regarding the aforementioned plagiarism review process was performed for one particular faculty and the plagiarism examination of students’ theses concentrates primarily on Master’s theses. The reasons for this approach are, that after a successful and stable test operation has been realized, this procedure can easily be extended and adopted to other faculties (additionally consisting of an extension of the review process to other types of scientific theses like Bachelor’s as well as PhD theses), until finally a university-wide and unified plagiarism handling is accomplished. In general, while realizing the teaching experiment, we followed the tactics of “start small and build on it”.

As a result, the findings obtained in the context of the testing phase of the practical experiment were used on one hand for the improvement and testing of our proposed workflow (which provides useful test data, during the trial test, which are essential for the further development and adaption of the workflow process for other faculties) and on the other hand to contribute to the quality assurance in the academic field, especially at the field of action of the TU Wien. Additionally, the realization of the experiment gives important insights into relevant factors, which are possibly helpful for the development of further strategies and measures to prevent, detect and combat student plagiarism at the university level.

The experiment was conducted over a time span of 15 months, which covered four submission dates within two winter terms (2016 and 2017) at the Faculty of Architecture and Planning, to be more precise, the Institute of Spatial Planning (E 280) at TU Wien. It has to be noted that the initiator of the pilot project was the Department of Law (E 280-01), which is affiliated with the Institute of Spatial Planning in terms of the university-related structure of institutes.

As indicated previously, mainly Master's theses of the corresponding faculty and a few exceptions (like habilitations and PhD theses, which were not part of the aforementioned submission procedure at the Institute of Spatial Planning) were checked for plagiarism during the experiment.

Our described experiment consisted of a roll-out phase of about half a year in the summer term of 2016, which included, among others, various preliminary activities (such as setting up the test environment of the teaching experiment). Besides a constant improvement regarding the implementation of the aforementioned proposed workflow process, there were examples for numerous preparation works, including the presentations of our proposed concept of the workflow in Dean's meetings (like, e.g., sessions of the heads of all responsible faculties) as well as participation and consultation discussions with the respective Dean, Dean of Studies, the Vice Dean of Studies as well as the responsible Vice Rector for Academic Affairs in order to receive the permission to introduce our proposed workflow and start with the pilot project. Furthermore, an important point was the coordination and communication process of the involved actors (selected employees of the Dean's Office, the responsible Dean of Studies and the Vice Dean of Studies and all possibly relevant thesis supervisors) before the first test run of the workflow process could be started. Besides that, also the required licensing as well as the pricing of the utilized third-party anti-plagiarism software was a relevant topic which had to be clarified with the responsible organizational entities of the TU Wien. All these and further preliminary activities were required for the introduction of the pilot project in practice and contributed to the overall realization of the experiment.

After clarifying important cornerstones and preparations of the planned project, defining the boundaries with decision makers of the university as well as to give the whole project a frame, we can now focus on vital issues which were essential for the performance of the underlying teaching experiment.

The realization of the experiment was only possible, thanks to the willingness of the involved actors to cooperate. We highlight here especially the employees of the Submission Office for Academic Theses (in our concrete scenario the Dean's Office of the Institute of Spatial Planning (E 280)). The staff from the Dean's Office gathered and provided the students' theses as well as all relevant submission meta data (like, e.g., title, submission date and thesis supervisor of an academic thesis which has to be examined and other student- and submission-related data). Another important topic was the general agreement to support the coordination process of all faculty-involved actors by working together while performing required organizational steps of our workflow process. The willingness to cooperate and to interact was granted by the respective Dean's Office, on one hand in order to support the conducted pilot project and on the other hand to contribute as vital part to the plagiarism research in the academic field, especially to provide results for the scope of the TU Wien. Furthermore, the decision about the actually used third-party plagiarism analysis software had to be clarified with the respective "Dean of Studies". As a result, based on existing evaluation methods in the area of plagiarism software systems

and due to the best matching method according to our predefined requirements of our initial scenario, the anti-plagiarism software “turnitin”¹⁴⁹⁵ was agreed upon.

This brings us to the topic of a signed student’s declaration of consent about a (software-based) plagiarism check of his/her scientific thesis, which has to be given by the student during his/her submission process and which constitutes the legal basis for performing such third-party plagiarism checks in the context of our proposed plagiarism review process.

The Dean of the respective faculty as well as the “Dean of Studies” wanted explicitly to pursue a plagiarism prevention strategy instead of a plagiarism combating strategy. Therefore, it has to be mentioned that our intended focus on the plagiarism detection clearly lies on preventing and not on combating scientific misconduct. At this specific point, we note that the plagiarism review process is always executed before the final assessment of the underlying thesis is completely finished and the final certificate is issued.

Having defined what is meant by pilot experiment and what were the initial situation as well as the test arrangement, we will now move on to discuss the key parameters of the conducted pilot experiment.

According to the defined user groups in Section 5.4, the author of the thesis at hand had the role of the faculty’s “Single Point of Contact (SPoC)”, also called “Plagiarism Hunter”. Here, it has to be noted that the plagiarism hunter’s role was shared by two persons. Therefore, the author of the thesis at hand took over the operational part (like, e.g., activities and duties which are exactly assigned to the spectrum of tasks of the described entity in the context of an executing level of the entire plagiarism review process). Examples include the preliminary activities, like the upload of a student’s thesis for performing a plagiarism check while using an external plagiarism detection software, as well as the aggregation of the plagiarism results of the “Originality Report” with discovered findings based on manual plagiarism detection checks and of course the process of reviewing and providing the summarized plagiarism results. The determined results of the “Plagiarism Hunter” build the fundamental basis for the assessment whether a concrete thesis actually constitutes plagiarism or not. However, the advice in the current and preliminary decision-making process, whether an underlying student’s thesis represents a concrete case of plagiarism or not falls into the responsibility of the supervisor of the thesis at hand. In addition, while conducting the trial run, there was a minor change in the executed process flow. The respective “Dean of Studies” was only informed in actual cases of plagiarism (with a high probability) where his/her interaction is required. He/she was not actively involved in cases which represent theses without signs of plagiarism. Therefore, the decision-making process in the context of our proposed plagiarism detection is relocated and is now under the responsibility of the “Plagiarism Hunter(s)” while performing the pilot experiment. Furthermore, the consultation in the decision-making process is essential because it needs an university-legal organ for

¹⁴⁹⁵[tur20]: turnitin. *Online: Plagiarism Detection Software: turnitin (Homepage).*

such kind of decisions, which were applied to our initial situation the supervisor of the thesis at hand (Ao.Univ.Prof. Mag.iur. Dr.iur. Markus Haslinger). Here, it has to be noted that the final decision about whether an underlying thesis demonstrates plagiarism or not definitely remains with the responsible Dean of Studies. An important aspect while performing the pilot was that the experience which was gained during the teaching experiment in the role of a faculty's "Plagiarism Hunter" or SPoC was summarized as (expected) trends, which are essential in the field of the continuing plagiarism research. The obtained plagiarism expertise in form of investigated trends provides important insights into future expectations regarding the topic of plagiarism in the academic context.

Besides to assuming the role of the SPoC, the author of the thesis at hand was also allowed to take over some tasks of the administrator of the "Plagiarism Workflow Portal" in order to set up the test arrangement, create user roles/groups and to start the initial communication process in form of e-mails to all possibly involved entities (about the access and other useful/important information regarding the use of the workflow portal). The "Administrator of the "Plagiarism Workflow Portal" (thoroughly described in Section 5.4) is responsible for the user data management in order to create users of all involved actors and also to assign these users to user groups. These have different permissions and can subsequently be selected in the current plagiarism review process of an underlying student's thesis.

Subsequently, we briefly summarize the concrete activities which had to be performed in order to ensure the accomplishment of the pilot experiment. Hereby, the special focus lies on activities of the faculty's entity SPoC, through which we gained important impressions and experience while slipping into the role of the faculty's "Plagiarism Hunter" in order to collect, interpret and evaluate the experiences during the process.

1. Arrangement and coordination with employees of the Deanery: Collecting of all provided student- and submission-related data (especially, the electronic submission of the thesis, which had to be examined).
2. First interaction with the "Plagiarism Workflow Portal": Upload of the student's thesis and entering the thesis meta data (like, e.g., the title of the scientific thesis, the thesis supervisor, the date of thesis submission and other relevant data).
3. Removing all personal and student-related data in a student's underlying thesis^{1496,1497} and making considerations about the subsequently used method for the assignment of reports to results and to depersonalized student works.

¹⁴⁹⁶Needed, according to the Austrian Data Protection Act and the General Data Protection Regulation (GDPR) in order to avoid further potential problems due to the external plagiarism check performed by an third-party plagiarism detection software. For more details: see Regulation (EU) 2016/679.

¹⁴⁹⁷[Eur16]: *REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).*

4. Manual file editing and preliminary works: Performing activities related to file processing like the reduction of the file size of an underlying student's thesis. This is due to possibly existing file size limitations of the used anti-plagiarism software.
5. Upload and plagiarism check of the depersonalized student's thesis on turnitin¹⁴⁹⁸, which represents the external plagiarism software. Afterwards, waiting until "Originality Report"¹⁴⁹⁹ provided by turnitin is available and downloading the document with details of the plagiarism results.
6. Manual review of the presented plagiarism results of the "Originality Report", but also an independent, human-based and extensive analysis of the respective thesis is done. These investigation-related activities of the plagiarism review process result in an aggregation of both plagiarism findings.
7. Evaluation of the preliminary plagiarism results: After summarizing and examining the aggregated plagiarism findings, the first evaluation of them is conducted. Furthermore, the first assessment whether the underlying thesis represents a concrete "case of plagiarism" is done.
8. Consultation of the second plagiarism expert about the preliminary assessment of the SPoC's provided plagiarism results: In this stage of the plagiarism review procedure, the second, independent assessment of suspicious plagiarism findings (based on the provided plagiarism results) of an underlying student's thesis by the "Plagiarism Hunter" will be performed. This usually corresponds to the final decision whether an examined student's thesis demonstrates plagiarism or not.
9. Various subsequent activities in the context of the plagiarism review process, including preparation tasks which are relevant for the later publication of the plagiarism reporting results. Examples are the file size reduction of "Originality Reports" provided by turnitin¹⁵⁰⁰, as well as the subsequent assessments of reports for theses.
10. Specifying the (aggregated) plagiarism results on the portal: Upload of the "Originality Report" to the "Plagiarism Workflow Portal". Additionally, the summary of the analyzed and confirmed plagiarism findings (in form of a list of indications of plagiarism including the suspicious text passages) as well as the concrete assessment whether the underlying thesis contains obvious indications of plagiarism or not, is provided on the portal.
11. Coordination, overview and control of further activities of all involved entities of the described workflow process in order to ensure an efficient execution of subsequent process steps of our proposed plagiarism handling procedure at the TU Wien.

¹⁴⁹⁸[tur20]: turnitin. *Online: Plagiarism Detection Software: turnitin (Homepage)*.

¹⁴⁹⁹[tur13]: Blog turnitin: "Does Turnitin Detect Plagiarism? To kick off our new blog, we'll tackle the #1 student misconception: that Turnitin detects plagiarism."

¹⁵⁰⁰[tur20]: turnitin. *Online: Plagiarism Detection Software: turnitin (Homepage)*.

During the trial run, there was a modification in the workflow of our proposed process. The respective “Dean of Studies” was only informed in cases where the likelihood is very high that the examined thesis is plagiarized. Referring to the aforementioned list of tasks which have to be performed, the first two described activities are only required when a change to the performed workflow (concerning our approached process) is made. Therefore, these minor changes relating to the shift of performed activities from the staff of the Dean’s Office to the faculty’s SPoC, represent the second modification in the execution of our designed process flow.

Furthermore, the realization of the described experiment was useful in order to show the relationship between the theory of our designed workflow process and the practice in form of the conducted experiment which results in the pilot project including the differences to the initial situation.

According to the sixth point of the list provided above, it has to be noted that in general it has to be distinguished between an extrinsic and an intrinsic plagiarism analysis. Here, first an extrinsic analysis, followed by an intrinsic analysis of the respective theses was performed. For more details about extrinsic and intrinsic plagiarism detection approaches see Carnahan’s work “*Plagiarism Detection*”¹⁵⁰¹.

Furthermore, during the pilot experiment, it turned out that tasks which were performed in the context of the plagiarism analysis process of a student’s thesis are activities which are very time-consuming and take most of the time of the entire plagiarism handling procedure.

In addition to the performed activities described in the non-exhaustive list from before, the SPoC also provided answers to any questions that arose during the plagiarism review process, like, e.g., in the context of the roll-out process of the workflow portal, but also regarding the user access and the general functionality of the “Workflow Portal”. This also includes questions regarding the review of the provided plagiarism results and the analysis of the list of plagiarism findings of an underlying student’s thesis by the respective thesis supervisor and the responsible “Dean of Studies”. Furthermore, the faculty’s “Plagiarism Hunter” clarified questions related to specific students’ theses (with special focus on suspicious text passages), but also general questions regarding plagiarism were answered. Besides the SPoC’s professional support in cases of suspected plagiarism, also debriefings with affected thesis advisors (in exceptional cases also with the respective “Dean of Studies”) in order to discuss and analyze the concrete plagiarism reporting results (especially the SPoC’s list of suspicious findings) in detail, and also debriefings with the students who have been accused of having plagiarized in their written work took place. In the context of such meetings, together with the respective supervisor who is responsible for mentoring the student’s thesis in which significant signs for deficiencies of scientific integrity were identified, relevant questions and problems which were detected during the plagiarism review process were clarified.

¹⁵⁰¹[Car+17]: Carnahan et al. 2017. *Plagiarism Detection*.

Noteworthy is the fact that the faculty’s “Plagiarism Hunter” shared her plagiarism expertise, which was constantly growing with new theses which had to be examined and investigated for plagiarism, with other employees of the faculty (like, e.g., various thesis supervisors and of course the “Dean of Studies”).

Table 5.2 gives an overview over important key points of the modified and tested plagiarism detection and prevention process, which was performed in the context of the pilot project within the scope of some submission deadlines at the Faculty of Spatial Planning. As a matter of course, we provide the student-related information only in an anonymous form.

Therefore, Table 5.2 shows relevant information about the total number of submitted theses per submission deadline which were subject to the plagiarism detection procedure, how many of them were written by male and female students and how many of the examined theses did not comply with scientific integrity at the first glance. The latter point refers to those theses which contained suspicious signs of “abnormalities” in the context of plagiarism or – at least – content which does not comply with common practices of good scientific standards. Here, it has to be noted that the introduced term of “abnormalities in students’ theses” does not correspond to actually confirmed and classified cases of plagiarism. The main reasons for this fact are that, on the one hand, we pursue a prevention-based approach for the detection of suspicious text passages and, on the other hand, we would presuppose that there was the conscious intention of the student to deceive the faculty in order to receive the academic degree. The final judgment about whether a thesis is indeed plagiarized cannot be given solely based on the first analysis of the plagiarism reporting results.

Therefore, the conspicuous findings in form of “abnormalities” describe “special cases” in which “noticeable problems” or inconsistencies with regard to the citation quality and integrity of scientific texts (like, e.g., a non-uniform quotation and citation style was used) and in which this circumstance was given in greater extent in comparison to other theses. Another important fact is that our introduced term of “abnormalities” also includes theses which were first submitted in a non-readable (for the used anti-plagiarism software) file format in form of images (e.g., scans) instead of a required PDF file. Hence, an “abnormality” always corresponds to one special case which refers to a concrete (reviewed) Master’s thesis in our described scenario.

Referring to the column “Abnormalities (# Theses)” of Table 5.2 which represents the total number of Master’s theses in which signs of potential academic misconduct were detected (at the first impression), it should be noted that all insights obtained from these reviewed theses provide results for (future) trends. We also want to highlight that the numbers in brackets denote the number of theses which represent so-called “special cases” or “border cases” in which the (plagiarism) results of the examined theses did not completely conform to the standard or deviated slightly from the norm. The aforementioned “abnormalities” include cases which indicate an unconsciously self-plagiarized thesis (so-called “self-plagiarism”)¹⁵⁰². In another thesis, an incorrect usage

¹⁵⁰²It turned out later, that in agreement with the affected student as well as the supervisor the

of secondary quotation was used and in one thesis we recognized and discovered a very careless identification of citations (which was determined as “border case” in the context of scientific writing). Based on the plagiarism expertise of the involved plagiarism expert team, in such cases, we recommended a revision of the underlying student’s thesis. The expected outcome of this revision is to compensate existing deficits in relation to the used quotation style (like, e.g., the sloppy usage of quotations) and, hence, a thesis which complies with standards and rules of good scientific practice, especially with respect to a uniform and sufficient identification of citations. These recommended measures about the revision(s) of the affected theses were also accepted and realized in agreement with the involved thesis supervisors.

It is obvious, that all theses which contained any kind of such findings in the first inspection phase of plagiarism reporting results (represented in Table 5.2), must always be reviewed again in more detail. This circumstance leads to a significant time lag regarding the plagiarism review process within the framework of one corresponding submission procedure.

Time Period of Submission Dates	Total Number of Submitted Theses	... thereof female authors	... thereof male authors	Abnormalities (# Theses)
19.09. - 21.09.2016	10	5	5	1-2
17.10. - 19.10.2016	7	7	0	2 ⁽²⁾
25.09. - 27.09.2017	11	6	5	2 ⁽¹⁾
23.10. - 25.10.2017	9	5	4	1

Table 5.2: Overview over the submission dates of the conducted pilot experiment at the TU Wien (with special regard to detected “abnormalities” of reviewed student’s theses)

In the context of the tested plagiarism review procedure, which was realized in form of the pilot experiment (as part of the submission processes at the Institute of Spatial Planning at TU Wien), we checked a total number of 37 of submitted Master’s theses for academic misconduct, especially plagiarism. Additionally, we also conducted further plagiarism detection checks for other faculties (like, the Faculty of Civil Engineering and other Institutes of the Faculty of Architecture and Planning). In this context we reviewed one habilitation and two additional Master’s theses. We note, that the specific results of the runs of these external plagiarism detection procedures (which are not artifacts of the described pilot experiment) will not be discussed in the Master’s thesis at hand. Nevertheless, it became obvious that there is a demand for a standardized handling

self-plagiarism was made unconsciously because the student did not know that major parts of his/her written work were published online on a theses exchange website (so-called “Diplomarbeitsbörse”).

of plagiarism detection systems in which an interdisciplinary cooperation with other faculties at the TU Wien can be ensured.

In the next section we discuss the main findings of the practical example which emerged during the experiment in form of generalized trends.

5.6 Results: Findings from Practice for Practice

Subsequently, we will provide a discussion of the findings and the detailed results of the reviewed students' theses in the context of the plagiarism review process, described in Section 5.5. Therefore, a thorough analysis of the founded "abnormalities" (especially, pointed out in Table 5.2) is conducted. The obtained knowledge which was gained in the context of the realization of the tested plagiarism detection procedure at the TU Wien is summarized in form of investigated and generalized trends. Furthermore, we do not solely give important insights into the experiences, which were gained through the roll-out process of the system. Instead, we will also concentrate on spotting cases of plagiarism. Lessons learned through the experience of the performed pilot experiment give important insights into existing and future expectations and possible challenges for the topic and problem field of plagiarism in the academic context. Thus, we will also provide answers to one of the research questions, which is a vital part of the Master's thesis: What are the expectations for the future regarding plagiarism in the academic context?

Having defined what is meant by the term "abnormalities" (in Section 5.5), we will now move on to discuss and interpret them. With special regard to the aforementioned "special cases" in form of theses which contained such "abnormalities" (see numbers in brackets of the column "Abnormalities (# Theses)" of Table 5.2), shows that in 3 of 37 Master's theses, the plagiarism expert team recommended a revision of the underlying theses due to the fact that these theses contained conspicuous findings. These students' theses represent so-called "border cases" and – we assumed – possible "plagiarism findings" or at least inconsistencies in the context of scientific citation guidelines after the first analysis of the plagiarism reporting results. On closer examination of these results and after discussions with the affected theses supervisors and the authors of the written works about the results of the reviewed students' theses, it turned out that for two of them we could not confirm them as actual cases of plagiarism. The third case was later on determined as a case of "self-plagiarism" (with agreements of the corresponding thesis supervisor and the involved student) . Here, it has to be noted that the missing self-references of his/her previous written work were repaired by the affected student through revisions and textual modifications of the underlying thesis. Therefore, the aforementioned theses were not identified as cases of conscious academic misconduct, especially regarding text plagiarism (with special attention of major text acquisitions without mentioning the underlying sources/references). Although, minor uncertainties in the context of a correct and a uniform identification of citations and quotations (complying with scientific guidelines) were often present, the conscious intention of the

students to deceive the faculty in order to receive the academic degrees was missing and could not be proved easily.

For those three theses in the pilot experiment which slightly deviated from the norm in the context of citation quality, the involved “Plagiarism Hunters” suggested revising the affected text passages in order to facilitate the respective students to submit a final version of their Master’s thesis which complies with common practices of good scientific standards. This procedure is an important aspect which strengthens, on the one hand, the image of the respective university and, on the other hand, also the quality of the written work of the underlying student in compliance with scientific as well as academic standards.

The subsequent, non-exhaustive list summarizes the main findings together with the lessons learned from the practical example and pilot experiment at the TU Wien. Furthermore, we give vital insights into what are typical signs of student plagiarism and which challenges students face in the context of scientific writing. Furthermore, the list tries to answer questions like “What are typical, often occurring problems (like, e.g., suspicious text passages which contain suspected text plagiarism)?” and “What are the concrete problems or deficits with regard to scientific work (in relation to final theses)?”. These findings are described in terms of potential challenges in the academic field and can be seen as starting points for possible improvements and recommendations.

- There are some visible deficiencies regarding scientific integrity by the easy, loose and sloppy handling of well-known scientific citation rules.
- Obvious problems in the practice of scientific standards regarding citation quality and therefore the integrity of scientific texts were observed. Several word-to-word copies of text passages or paraphrased snippets were not properly identified as text acquisitions (like, e.g., with quotation marks at the beginning and at the end of direct copied or paraphrased text snippets). This also includes cases in which the source was provided in the particular thesis.
- There exist relevant inconsistencies in the context of common quotation and citation rules (in compliance with scientific standards). For instance, the source and/or author reference is given (in the bibliography or in footnotes), but it is not easily recognizable and clear how much of the text has been taken from this source. Furthermore, it was often not obvious where a text adoption starts and where it ends. Therefore, in some analyzed text snippets it was not clear whether the student of the underlying thesis is expressing his/her thoughts or the ideas of the referenced author of the listed source are repeated.
- Often, uncertainties with respect to the usage of (generalized) paragraph citations, especially discovered in listings were determined among students.
- Minor uncertainties and missing knowledge about the use and clear, uniform identification of citations (like, e.g., highlighting with quotation marks) and sources/authors

in theses according to a correct and scientific way¹⁵⁰³ were noted. According to the legal definition of the term “plagiarism”¹⁵⁰⁴, it is not only required to provide the original author as well as the referenced source, but also to give an appropriate acknowledgment and identification of the copied and adopted text snippets. These points may result in a sloppy usage of applied citation rules in the investigated students’ theses.

- Frequent and recurring errors and “abnormalities” in analyzed students’ theses were imprecise source references, especially visible in listings, which were not highlighted in a proper way (like with quotation marks).
- Problems in form of a correct and uniform way of providing quotations while using different citation styles. Sometimes adopted text snippets are given surrounded by quotation marks and sometimes the text is only highlighted in a specific format (like, e.g., printed in italics). Both styles were determined within one examined student’s thesis.
- A confused perception about the reuse of text parts of an already published student written work, which represents a typical case of “self-plagiarism”. The problem is that in cases of not highlighting parts of the original work in a proper way one cannot clearly distinguish between new and already published content in the scientific context.
- A lack of knowledge about the correct, scientific usage of word-for-word quoted passages from third sources (so-called secondary quotations¹⁵⁰⁵) without any identification. It is widely agreed upon that such secondary citations should be avoided or sparingly used in scientific theses. Indeed, it is also not allowed to borrow the text of the secondary source and cite instead the (obviously not obtained or available) primary source which was mentioned in the secondary source.
- The student’s thesis submission in a (for the used anti-plagiarism software) non-readable file format in form of images, like scans, instead of required PDF files also causes noticeable problems in the first investigation phase of the detection of possible cases of plagiarism.
- It is essential to ensure and conduct a manual review procedure of an underlying thesis for detecting various manifestations of (text) plagiarism. One reason for that fact is that the independent and the externally created “Similarity Index” of the plagiarism detection software, represents only a text similarity index and never a “Plagiarism Index”. A value of the “Similarity Index” does not automatically mean that the underlying thesis constitutes a particular case of plagiarism and vice versa.

¹⁵⁰³See also terminology and definition of the term “plagiarism” in the context of dealing with the problem of plagiarism at the TU Wien. For more details: see [TU 15]: p. 1 f (1. *What is plagiarism?*).

¹⁵⁰⁴[UG 19]: *Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG)*. BGBl. I 120/2002 idF I 3/2019, § 51, Paragraph 2, Sentence 31 UG.

¹⁵⁰⁵[dok20]: Online: doktorandenforum.de: “Richtig zitieren”: Section “Sekundärzitate”.

Instead, the results of the external plagiarism check in form of the “Originality Report” should only serve as support in the following decision-making process of an examined student’s thesis in the context of spotting cases of plagiarism.

- Although there was a considerable lack of citation quality determined in some theses in form of a few copied word-to-word passages which were not highlighted appropriately, there should always be kept in mind the extent of possibly plagiarized content in comparison to the whole written work of the student. Furthermore, the conscious intention of the students to plagiarize should not be forgotten in the context of the plagiarism review process.
- In many cases, it is not easy to judge whether an examined thesis constitutes plagiarism or not. Because the conscious intention of the students to deceive the faculty cannot be proven easily. Additionally, every examined thesis is in its own form “unique” and the results cannot be generalized.

It has to be noted that the aforementioned trends are based on experiences at the TU Wien, but can surely be extended and applied also to other universities.

Another important aspect is that the testing phase of our performed pilot experiment turned out to be very successful. One reason for this claim is the prevalent acceptance and practical use of our introduced plagiarism detection workflow by all involved actors, especially highlighted here are the thesis supervisors. Also, we want to mention the willingness to cooperate of the employees of the Submission Office for Academic Theses. Furthermore, a stable operation of the system of the workflow portal (“Plagiarism Workflow Portal”) was observed. Additionally, positive feedback of various users was given in the context of the teaching experiment in order to test a uniform detection and review of plagiarism at the TU Wien. Furthermore, it can be stated that our proposed plagiarism control strategy for a standardized detection and prevention of plagiarism in the context of the submission procedure of scientific theses at the TU Wien was conceptualized in such a way that it can be easily adapted to other faculties or even other universities, which turned out to be a great advantage.

Noteworthy is the fact, that according to the responsible Vice Rector for Academic Affairs, based on the successfully conducted pilot experiment, it is planned that our proposed standard procedure for dealing and handling cases of plagiarism should be implemented in TISS, which represents the central website as well as information and services portal for students as well as academic staff at the TU Wien.¹⁵⁰⁶ This implementation step will ensure a university-wide integration and handling of plagiarism checks. Besides the advantage of a uniform way to perform plagiarism checks (independent of the faculty), also the cooperation within and between faculties (in the context of spotting cases of plagiarism) can be guaranteed and improved.

¹⁵⁰⁶TISS - Information Systems and Services of the TU Wien. For more details: see <https://tiss.tuwien.ac.at/>

The plan for future work is that also lectures, workshops, info events and courses will be offered and taught at the TU Wien in order to share knowledge about concepts and possible suspicion signs of plagiarism.

An important point, which also has to be mentioned, is that the respective supervisor of a student's thesis is always involved and informed through our proposed information handling in the context of the plagiarism review process.

Summarizing all facts together, it can be stated that our presented workflow for plagiarism detection, tested in form of a pilot experiment and practical example at the TU Wien significantly contributes to the quality assurance in the academic field, especially the scientific community.



Conclusion and Future Work

6.1 Summary

It can be safely assumed that the list of cases of scientific theses containing extensive plagiarism revealed by the mass media is by far not exhaustive. This concern is also shared by leading experts for the detection of plagiarism, like Stefan Weber, Debora Weber-Wulff and Gerhard Fröhlich.

In this work we did not only provide a structured analysis of essential background information in the area of scientific misconduct (amongst others plagiarism and ghost-writing), but we also gave the reader important insights into legal concepts in form of an extensive literature review of the current Austrian regulations regarding the topic of academic misconduct. After a thorough analysis of the different legal acts, it can be stated that the imposed legal consequences for students (especially, those who committed plagiarism in scientific theses), in particular, under the law regulating university studies, are manifold in the application area of universities. Due to the fact that universities have a legal permission to define specific handling procedures for dealing with the problem of academic dishonesty (and therefore to define the resulting consequences for students) in their respective statutes, it is obvious that every university may deal with the problem of plagiarism in its own way. This circumstance of a non-uniform way of handling cases of academic misconduct indicates that there is still room for improvements for the Austrian legalization and especially for their universities.

Furthermore, we investigated plagiarism from a practical point of view. To be more precise, we focused on detecting plagiarism in scientific theses. Therefore, we developed a standardized and organizational workflow for the detection and handling of cases of

plagiarism in the academic context. The prototype of the workflow, which is embodied in a workflow portal, was tested as part of a pilot experiment at the TU Wien.

Our approach for the identification of academic misconduct, especially text plagiarism, consists of a plagiarism review process and a manual and qualitative review of submitted theses, in order to give important insights into what are frequent and recurring problems and which challenges do students face in the context of their theses. Therefore, a discussion in form of a summary about typical signs for student plagiarism is presented. It can be stated that the decision whether an underlying thesis constitutes a concrete case of plagiarism or not, is not easy to figure out. This is because one should always take into account the conscious intention of a student to plagiarize and furthermore the plagiarized extent in comparison to the whole written work. Although we detected some visible deficiencies regarding scientific integrity with our workflow, these problems can possibly be solved by simply providing teaching lectures in which standards of good scientific practice (especially in the context of writing theses) are taught.

Due to a stable operation of the workflow portal, the testing phase of our performed practical example turned out to be very successful. This fact was underlined by the positive feedback from all involved entities, which were informed of a suspected case of student plagiarism at any time. For future work, it is planned to roll out our proposed standard plagiarism procedure provided by our workflow also to other faculties than the Department of Spatial Planning in order to ensure a university-wide integration and handling of plagiarism checks at the TU Wien.

An important aspect which is in the responsibility of universities, is that a prevention-based approach for the issue of academic misconduct, especially student plagiarism, is more effective than just pursuing a combating strategy against academic dishonesty. Therefore, it is required to raise the awareness and the sensitization of students regarding the topic of plagiarism and scientific misconduct.

Although the methods and misbehaviors used in cases of plagiarism and ghostwriting are different, such practices lead to the same result, namely the fraudulent pretense of a foreign performance as one's own. In the academic context, this circumstance contributes to a problematic loss of quality for universities, in their reputation, their research environment as well as the scientific theses written there.

All these described situations are subsumed under the heading of cheating, which not only undermines the basis and purpose of such institutions like universities but it also represents a fraud against the scientific society.

Plagiarism was probably always an issue in the academic context which universities had and have to face. It can be expected that this circumstance will remain being important also in the future and hence, our work provides important contributions for plagiarism research, in general, but also for the quality assurance in academia.

In the thesis author's opinion and as an interpretation of the plagiarism issue, in the near future there will probably be a trend towards "dirty campaigning" against politicians and

other prominent persons based on plagiarism allegations. One example was, for instance, Karl-Theodor zu Guttenberg, the former Defense Minister of Germany. Obviously this can only be realized if the accused person who wrote the scientific thesis has not complied with the “Guidelines of Good Scientific Practice” (e.g., by adopting sloppy work practices like forgetting quotes of the taken-over text snippets).

6.2 Future Work

Nowadays, there exists a wide variety of tools for detecting cases of plagiarism, which are continuously improved in their functionality. In this Master’s thesis we referred to an experimental evaluation of different plagiarism detection tools, conducted in 2013 by Debora Weber-Wulff. A possible approach would be to perform a new, extensive evaluation of different state-of-the-art tools and frameworks in which the results (based on predefined criteria) are examined and compared.

Another approach would be to adapt the functionality of such software detection tools. Hence, several software-based plagiarism detection systems could be extended with the comparison and detection of text similarities from results from search engines like Google Books.

Furthermore, due to the fact that we only provided an overview on the topic of ghostwriting so far, it would be interesting to investigate this issue in more detail. Currently, the literature concerning this topic is rather sparse. Especially the detection of cases of ghostwriting remains a major challenge in the academic context today. This is because a person’s unique writing style probably changes over the years of study and so, the judgment whether a given work is based on ghostwriting is not an easy decision procedure.

As mentioned in the thesis at hand, one possible approach for the useful detection of cases of ghostwriting is “stylometry”. Although there are tools for the detection of stylometric characteristics on the market, they are still often not mature enough to deliver profound results. Therefore, for the topic of ghostwriting and “stylometry” an experimental analysis could be conducted in order to evaluate and investigate the impact of different stylometric measures on the detection accuracy.

Finally, and in order to analyze different services offered by various ghostwriting agencies, a comparison in form of inquiries, could be performed.

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