



**A Matter of Competence, Integrity or  
(Dis)Honesty? How academic faculty  
understand and manage student cheating.**

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### **Abstract**

Academic plagiarism and cheating have received increasing attention in recent years, but the schools traditional rules and regulations on how to punish this type of infraction has not been updated in relation to how society treats other types of foul play. Previous research has traditionally studied cheating from two perspectives: moral and legal. The aim of this study was to document a third perspective, namely a learning perspective. Firstly an instrument that could measure the three perspectives was made. Then by using this instrument, the study aimed to investigate possible relationship between the perspectives, and how serious, how much observed and reported given cheating scenarios was. The participant in this study ( $N = 132$ ) was a mix of academic staff (e.g. professors, associate professors and administrative employees), recruited from universities and academies all over Norway. The results suggest that the instrument made is both valid and reliable. The learning, along with the moral and legalistic perspective, influences how serious academic staff regards different kinds of cheating incidences. This study did not however, based on too little variation in the responses, manage make any conclusions about what effect these perspective have on how cheating is observed and reported.

*Keywords:* Academic integrity, plagiarism, cheating, punishment, mutual knowledge, identity trust.



### **Abstrakt – Norsk versjon**

Plagiering og juks har fått økende oppmerksomhet de siste årene, men skolenes tradisjonelle regler og forskrifter om hvordan å straffe denne typen brudd har ikke blitt oppdatert i forhold til hvordan samfunnet behandler andre typer regelbrudd. Tidligere forskning har tradisjonelt studert juks fra to perspektiver: moralsk og juridisk. Målet med denne studien var å dokumentere et tredje perspektiv, nemlig et læringsperspektiv. Først ble ett instrument som kunne måle de tre perspektivene laget. Ved hjelp av dette instrumentet, var målet med studien å undersøke mulige sammenhenger mellom perspektivene, og hvor alvorlig, hvor mye observert og rapportert gitte juks scenarier var. Deltakerene i denne studien ( $N = 132$ ) var en blanding av vitenskapelig ansatte (blant annet professorer, første amanuenser og administrative ansatte) rekruttert fra universiteter og høyskoler i Norge. Resultatene tyder på at instrument laget er både gyldig og pålitelig. Læringsperspektivet, sammen med de moralske og juridiske perspektivene, påvirker hvor alvorlig vitenskapelig ansatte vurderer ulike typer juks og plagerings hendelser. I denne studien ble det imidlertid ikke, basert på for lite variasjon i svarene, trekt noen konklusjoner om hvilken effekt disse perspektiv har på hvordan fusk blir observert og rapportert.

*Nøkkelord:* Faglig integritet, plagiat, juks, straff, gjensidig kunnskap, identitets tillit.





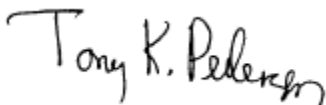
### Preface

The idea to this project was presented to the author in a discussion with Associate Professor Tove I. Dahl back in December 2010. We discussed the different project the supervisor was involved with at the time. She then introduced this topic, and gave details about what she and a team of US colleagues, inspired by Jude Carroll, aimed to explore in relation to a new and growing perspective on plagiarism and cheating.

Firstly the author looked up earlier research on the topic of plagiarism and cheating, to get inspiration and insight into how this topic has been regarded and dealt with previously. The process of creating and editing the practical details in this study has been a collaboration between the supervisor and the author. No previous instrument has been made to measure and compare the three perspectives on academic cheating looked at in this study. Therefore an instrument was created that aimed to measure these perspectives – both for current and future use both in Norway and elsewhere. The items initially culled to capture the learning, moral and legalistic perspectives came from multiple sources, and the measure describing different cheating scenarios was collected from a well established and validated study.

The process of recruiting participants to the study was done collaboratively by the author and the supervisor. The statistical analyses were conducted by the author, with the help and guidance of the supervisor.

This project has enriched the author by giving valuable insight into scientific methods and how to explore and work with an important topic that has important relevance for the pursuit of academic quality in higher education.



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A Matter of Competence, Integrity or (Dis)Honesty? How academic faculty understand and manage student cheating.

In order to expand our understanding of the concept of cheating (as in all other serious research), it is important to have proper tools to capture and measure the underlying factors involved in the concept being researched on. The aim of this research is to create a proper measuring tool that can be used to measure and expand our understanding of underlying factors involved related to how academic faculty understand and manage academic cheating.

However, in order to understand cheating it is important to get an overview of its history. Starting with the basics: what is trust? It can arguably be claimed that all kinds of cheating involve a breach of trust. What form of trust breaches does academic cheating take? How is cheating in the academic setting defined, and why ought we expand our understanding of what academic cheating involves? The following pages address these questions and set the stage for the research done for this thesis.

### **Trust**

Trust is essential for every day functioning. Without trust, chaos would reign; total anarchy would be the reality of the world, and Earth would be a chaotic place to live in. Trust is an essential element of community functioning. Lying is therefore a betrayal of the rules of human communities, argues Origgi (2008). Older research has also made similar claims. “With a complete absence of trust, one must be catatonic, one could not even get up in the morning”, claims Hardin (1992, p. 166).

Within the concept of trust lies integrity. When scientists in the social sciences talk about integrity, integrity is not the kind of integrity a computer scientist talks about, when they talk about the integrity or wholeness of their computer systems (Clarkson & Schneider, 2010). When social scientists talk about integrity, they talk about honesty, truthfulness and the moral principles behind people’s action, and also about whether they act according to the beliefs they claim to have, or that we deem them to have (Wehmeier, 2000).

Students may have legitimate questions about the role of integrity in today’s world and in our everyday lives given the media’s avid focus on breaches of integrity among; business people, academics, politicians and just about every other profession one can think of, claims McCabe (2005). It has become commonplace for the media to talk about celebrities and athletes as alleged role models for children and young adults, and then discuss this role in terms of their drug use, alcohol abuse and eating disorders. Fair and unbiased discussions around problems and flaws of character can be healthy, but it can also get blown out of proportions and can lead to possible miscarriages of justice.

### Aspects of Trust

Integrity is a big question in today's world. However research so far has not been able to identify cause and effect of trust. As in many other research fields, there is a disagreement among researchers about the general definition of trust. Two of the recent viewpoints in this field come from Stolle (2002) and Moldoveanu and Baum (2011).

Stolle(2002) argues that a stronger focus on trust will increase people's desire to take risks and therefore will increase productive social exchanges. He therefore sees generalized trust as an important ingredient for the social and the political realm. Furthermore Stolle (2002) suggests that there are three types of trust that vary in the source of the trust (rationality, identity and morality). His three forms of trust are:

a. Strategic or rational accounts of trust

“One trusts when one has adequate reasons to believe that it will be in the other person's interest to be trustworthy (Stolle, 2002, p. 400). For example, think of a situation where Kramer first meets George. Kramer has reasons to believe that George is trustworthy because (1) they are both participating in the same inter-department team on a project at work, and (2) it is in the best interest of George that their project is a success. In the same way George deems Kramer as trustworthy.

b. Identity- or group-based accounts of trust

“This is how trust extends from the people one knows to those whom one does not know in person, but who is identifiable as a member of a group to which one feels close” (Stolle, 2002, p. 402). For example, if we think of Kramer and George again, this time Kramer is working in an institution in a school. George is then hired to the same institution. Kramer identifies George as a group member based on this group membership, not based on other experiences with George, Kramer then deems George as trustworthy.

c. Moral trust

“Moral trust is based on the understanding that people share underlying values” (Stolle, 2002, p. 402). For example, this time Kramer and George are both students in the same school. They do not know each other from previous personal experience, but based on the acknowledged and shared underlying values of the school, they assume they share the same underlying values and deem each other as trustworthy.

In contrast with Stolle's (2002) definitions, Moldoveanu and Baum (2011) distinguish between *trust in integrity* and *trust in competence*. Moldoveanu and Baum (2011) argue that trust in integrity corresponds roughly to the moral view of trust, and trust in competence correspond roughly to the rational view of trust. They also assert that there are three kinds of knowledge that have an effect on trust ascriptions in social networks: shared knowledge, common knowledge and mutual knowledge:

1. Shared knowledge

Shared knowledge is where there is some kind of shared knowledge, but the people involved do not know that the information they have is shared with others. For example shared knowledge might be as trivial as that everybody in a given social circle knows that one in the circle is pregnant. Everybody knows it, but they do not talk about it because they do not know if everybody else also knows, because no one is talking about it, so no one wants to ruin the "secret". Academic example: The rules for cheating that exist in the university policy. It is available for everyone to know, but it may not be actively communicated among those for whom it is relevant. Faculty members may, for example, presume that students are already aware of the rules regarding cheating and therefore not feel it necessary to bring them up with the students themselves. A pitfall in this approach is that there is a lot of implicit knowledge that goes unexpressed and therefore may be understood differently by relevant parties.

2. Common knowledge

Common knowledge is where everybody knows P (a proposition or fact, for example), and finds P salient whenever P is relevant. For example common knowledge for all electricians in Norway is that if they are going to do an installation in a low voltage installation, they have to gather the rules and regulations for their particular installation from the regulations book NEK400 for low voltage installations. Academic example: All teachers know that leaving out references only a small part is copied, or re worded, is not allowed, and when this happens, then all teachers know that this is wrong. A Pitfall with this is of course that even though everybody *should* have this knowledge, one cannot be certain that actually everybody, especially that student knows or have this in mind when writing.

### 3. Mutual knowledge

Mutual knowledge is where everyone involved knows the shared knowledge. Shared knowledge is transformed into mutual knowledge when people communicate about this knowledge they have in common. For example, this time think back to the social circle in the shared knowledge example. This time the pregnant person has told people that she is pregnant and that it is not a secret. Now everybody talks about it and the knowledge becomes mutual for everybody in the circle. Academic example: A teacher that assures that their students knows what the universities policies are, by talking about them in class, making the knowledge mutual between the teacher and the students in the class. A pitfall in this approach might be that you never have a guarantee that every teacher actually makes an effort to make the knowledge mutual. Therefore good routines are needed, both for providing the knowledge, but also to quality assurance.

Through this section with several perspectives on trust, it is argued that currently trust is regarded as a multifaceted concept, but nevertheless an important part of any kind of discussion about cheating. Cheating is also multifaceted, and there are multiple theories, questionnaires and measures that each looks at a given part of the concept of cheating, and aspects of trust that underlay cheating. Therefore the next section provides some background information, earlier research and theories related to the concept of cheating, as well as insight into what the author and supervisor feel is missing from the story and how to address that. So what is known about the nature of cheating so far?

#### **The nature of cheating**

The reasoning behind each individual's decision to cheat is as varied as the spots on a Dalmatian. For example, time pressure, poor performance, low self-esteem, being a poor learner and having personal problems to mention a few. However researchers have found some combinations of influences that have a special negative influence on an individual's decision to cheat.

So what inspires students to cheat? A combination of self-efficacy and performance has an effect on whether students choose to cheat, suggest findings from a study done by Finn and Frone (2004). They argue that students with high academic self-efficacy and high performance reported less cheating than other students, and at the same time students with high self-efficacy but low performance were the ones that reported the greatest amount of cheating.

Furthermore Finn and Frone (2004) postulated that low performance combined with low school identification and school connection put students at a high risk of cheating. This claim was fully supported by their data. With these results in mind, they suggested that we can reduce cheating by increasing self-efficacy and promoting school identification, particularly among students who are struggling academically.

**A learning perspective.** It has been proposed in the research literature that learning should get a more prominent position the discussion about cheating, and especially plagiarism (Carroll, 2009). She emphasize that we should not just make assumption about cheaters' character, or worry too much about catching those who cheat. Rather, she argues, we should focus more on the learning behind the decisions to cheat. We should do this by turning our focus to clarifying what is meant by learning and encouraging students to do their own work within that framework, moving away from the catch-and-punish view of dealing with this issue. She argues that we should emphasize to the students that "bypassing learning through plagiarism means that the student bypasses the opportunity for their own development as well" (Carroll, 2009, p. 119).

Carroll (2009) argues most plagiarism is not cheating. She claims that the number of actual cases that involves deliberate attempts to gain an unfair advantage is a very small percentage of overall plagiarism. This point makes it even more clear that we should emphasize more on a learning or competence-based approach towards cheating in the spirit of developing a mutual trust relationship on the management of academic knowledge.

Institutions have a responsibility to ensure that students have the necessary skills to avoid cheating, argue Macdonald and Carroll (2006). They advocate the need for a holistic approach that emphasizes that the institutions need to ensure that students learn the necessary skills needed to do quality academic work, and how staff can minimize the opportunities for cheating through their assessment practices.

**Institutional regulations.** Institutional regulations should not be designed first and foremost to punish the rule breaker, they would argue, but to "rehabilitate the offender". Give the offender the means they need to avoid cheating in the future (Macdonald & Carroll (2006). They conclude that there is a need for putting "emphasis on promoting good scholarly, academic practices rather than focusing on potential problems and channeling all the institution's energies into deterring through detection and punishment" (p. 244).

Cheating in itself is a breach the trust somebody has ascribed to you, be it a friend, colleagues, institution or state. If one breaks the rules between an individual the state, the individual can end up in jail. If the breach is between an individual and an institution like a

university, the consequences can differ quite a bit depending on each individual institution's rules and policies. For example, one university might suspend a cheater for a transgression, whilst another university might give a cheater caught in the same transgression extra course work to be completed before taking an exam.

**The impact of cheating.** The decision a student makes to cheat is related to unethical behavior in the workplace, suggest McCabe, Feghali and Abdallah (2008). Their study on the relationship between academic integrity and business ethics underscore why it is important to put in work and research to prevent, or at least discourage cheating. If what this study suggests is accurate, under-response to cheating could have severe consequences, and the following example will help to make that even clearer. Think of a doctor that has cheated to get through medical school, and does not know the field as well as he or she should. This could in a worst case scenario lead to a late or even wrong diagnosis, but it can also lead to other adverse events, with potentially dire, if not fatal consequences for the patient.

### **Institutional perspectives on and management of cheating**

**Teacher reports of cheating.** Many teachers are reluctant to report suspected cheating. Also many prefer to respond with informal sanctions (for example just putting the grade down one point, or talking to the student and giving a warning) rather than formal measures (reporting the suspected incidence to the schools authority). Different use of informal and formal measures can lead to uncertainties for students regarding the potential severities of punishment, claim Hutton and Wehle (2006). Teachers vary widely, and there are any number of reasons to why teachers and/or faculties are reluctant to act on any suspicion of cheating: fear of backlash, time constraints, lack of administrative support, process protocol and misunderstanding of policies (Hutton & Wehle, 2006).

There are several reasons for this hesitancy. Dran, Callahan and Taylor (2001) identified some reasons for this behavior as including: lack of knowledge of institutional procedures, fear of litigation, the difficulties of proving cheating, the potential for damaging the students reputation and career, as well as the teacher's fear of getting a negative reputation.

Only 39% of asked teachers said they would report a cheating case to the appropriate authorities after they had determined that cheating had occurred, according to a study done by Nuss (1984) that looked into faculty and student attitudes towards cheating. Her study also revealed that 34% reported that they would lower the student's grade after talking with the students, 26% would just give the student a warning, and 1 % would ignore the matter or just lower the student's grade without discussing this with the students. Many of the teachers also indicated that their response would depend on the severity of the offense. Since only 39% of



all the cheating reported in this study would have been officially recorded, finding accurate numbers for how widespread cheating actually are is difficult.

Students find out what kind of knowledge is common by a) talking to their fellow students and b) by talking to their teachers. If the teachers are vague with this information, it can never fully become mutual. With unsure teachers, unsure students follow, and this can be related to a both unintentional transgressions, and intentional choices to take transgression risks. Because if they feel that their faculty teachers are unsure what the rules are, then they might not feel the need to know either.

Honor codes, is a document that is meant to formalize that the school and the student have the same identity and moral trust, it is also meant to make the schools policies towards cheating go from common knowledge to mutual knowledge. Honor codes implemented at a university reduce the likelihood that students will cheat, is the conclusion from a study performed by McCabe et al. (2003) on the influence of honor codes at universities. They concluded that if a university has implemented an honor code, then students are less likely to cheat. As a bonus, the honor code prevents cheating without placing much burden on the faculty. They also argue that having an honor code may increase the student's perceptions of the fairness and effectiveness of their school's integrity policies.

Honest students who perceive that faculty ignore obvious cheating have a larger risk of becoming cheaters themselves, claims McCabe (2005). His longitudinal study collected data from over 80 000 students and 12 000 faculty members in North America brings up the question of fairness again. His data and the comments he received suggest that if students perceive faculty as having a tendency to ignore obvious cheating incidents, especially where recycled exams and written assignments are perceived to have little relation to or value for their intended major, there is a larger chance that a student will cheat. This puts honest students at a clear disadvantage.

In addition to this clear disadvantage for an honest student, if faculty members ignore or trivialize academic dishonesty, sends a message that the core values of academic life are not worth enforcing, claims McCabe (2005). He argues that the most common rationale that students have for cheating is what he calls "the question of fairness". He claims that students who claim they normally do not even think about cheating, might feel that they have no choice but to cheat, when faculty members make little or no effort to respond to or prevent cheating.

**Student reports of cheating.** As much as 65% of students state that they would not turn in a classmate who they saw, or know have cheated, claims Rabi, et al. (2006) in their study

which looked at academic dishonesty among pharmacy students. Their data also showed that 25% of the participant stated they either “strongly disagreed” or “disagreed” that student’s should be punished for cheating. They argue that these results suggest either a lack of professionalism in the classrooms, or that the students may not the academic dishonesty as a part of professionalism.

**Professionalism and culture around student academic work.** Professionalism in this context is meant as a way of acting responsibly, ethically and honestly, by following the given rules properly. On the background that the rules are there to assure that for example, an educated medical doctor actually knows the field properly, to be able to practice safely. There is a need to begin such a discussion during students first year of study, is the conclusion of a study done by Rabi, et al. (2006). They claim we should not wait with professionalism discussions until students are near graduation or begin experiential learning, because it is at the Universities or academies where student train to be ethical and honest co-workers and professionals.

It is a challenge for institution to give students assignments that they don’t feel have low learning value or consider excessive, but doing so also shows that they take professionalism seriously, and enforces professionalism themselves. Such assignments can contribute to student cheating. McCabe (2005) argues that students very easily justify collaborative efforts on solo work, for example, if they consider the work unnecessary, excessive or perceive it as having too low or limited learning value for them.

Culture is one of the most important variable there is that influences ethical decision making, claims McCabe et al. (2008), and also influences what we consider cheating. “The perception of peer’s behavior has proven to be the one of the most significant explanatory contextual variables with perceptions of higher levels of academic dishonesty among one’s peers associated with higher levels of self-reported academic dishonesty”, is the conclusion of a cross-cultural study by McCabe et al. (2008, p. 455). They looked at differences between North American universities versus universities in the Middle East.

Furthermore McCabe et al. (2008) suggests that academic dishonesty is not only learned from observing peer behaviors, but that peer behavior also provides a kind of normative support for cheating. In this study both claims were fully supported by their data, meaning that one should not only look at single students and their individual factors, but we should not forget to look at the context in which the students find themselves.

McCabe et al (2008) also looked at the differences between the more individualistic societies of North America and the more collectivistic societies of the Middle-East. What they

found is that the more collectivistic a society is, the more cheating occurred, especially the kind of cheating that is done with another's help (collaborative cheating). They observed 10% US collaborative cheating, versus 58% Lebanese collaborative cheating. This result significantly supports that students are in fact strongly influenced by the collectivistic or individualistic norms of the society in which they are raised.

“One size does not fit all” when it comes to academic integrity, conclude McCabe, et al. (2008, p. 466), and this is also the most important policy implications of their study. Therefore if the “larger society is based on a collectivistic philosophy, it doesn't seem to make much sense to train the future leaders of that society in a different philosophy unless your objective is to catalyze large scale societal change” (McCabe, et al., 2008, p. 464). They therefore postulate that the current definitions of cheating should be redefined in the Lebanese, and other collectivist contexts, and that it is a bad idea for universities and academies to implement policies that may be fundamentally at odds with local societal norms, since this will create a tension between social and scientific/academic norms. A better strategy would be to develop collectivistic-appropriate teaching strategies so as to emphasize and take advantage of the power of collaborative work.

In addition to culture difference between students, a large proportion of students can nonetheless identify dishonest behavior in an examination setting, but have difficulty identifying dishonest behavior related to classroom assignments, claims Arhin (2009). He did a study where he looked at academic dishonesty in correlation with society. More specifically he looked at what he calls “Generation Y”, and what kind of effects being part of this generation has on cheating behavior.

From this Arhin (2009) concludes that students in “Generation Y” are characterized by peer dependence and desire for immediate gratification. He also claims that the extensive use of the internet by the later generations where cutting and pasting is commonplace may perhaps foster in many students a belief that this is the only way to write. Therefore he claims they might be ambivalent as to whether the cutting and pasting behavior and improper referencing actually constitutes academic dishonesty (Arhin, 2009).

**Sanctions against cheating.** One way of dealing with cheating is to require a student who is found guilty of violating the schools ethical policy to write a paper regarding the importance of ethics in the student's major field of study. Dran et al. (2001) wrote about a school that actually uses this way of punishing students who have been found to have violated the schools policies, the school in this study called this an sort of honor code system. It seems that schools that have implemented this way of punishing student's, look upon a cheating

incidence as an opportunity for learning rather than just punishing. Research has demonstrated multiple times that honor codes are effective in reducing cheating in academic settings (McCabe, et al., 2003).

From this background information it has been shown that students have different reasons for breaching trust, some deliberate, others naïve. The way faculty and students consider what is, and what is not cheating, is influenced by how collectivistic or individualistic the society is. The earlier research also tells us that the transgression of cheating is handled differently by teachers and the students depending on how the school rules are, especially where students and teachers may identify themselves with the formal institutional policies, through mutual knowledge and or identity trust. From the underlying factors of trust, the focus is now put on cheating, how it has been studied, and what can be done to expand the concept of cheating.

### **Cheating divided**

Cheating has been primarily studied from two different perspectives. Firstly from a moral perspective where the idea is that people should not cheat because they are morally obligated not to, much like an unwritten code of conduct (trust in the integrity of others). Secondly, cheating has been studied from a legalistic perspective where it is thought that people don't cheat because the penalties are too great and outweigh the risk taken. Therefore, one stays honest (trust in the honesty of others). A third perspective, the learning perspective differs from the other two in that from this perspective; academic competence is an important part of the process. Given the different implications these different views have for what we see, report and address, it is worth looking at how teachers' thoughts about cheating and how that might influence their cheating-related behaviors. Therefore all three perspectives will be represented in this research.

Being academically competent or competent in any field of work is all about fruitful learning processes and experiences. To achieve competence in any field of work, it is important that we are provided with functionally trusting learning environments and challenges that can help us to grow within our field in expected and appropriate ways.

In the learning perspective, an incidence of cheating is not only looked on as a negative thing, it is also looked upon as a teachable moment, a learning opportunity, for both the school and the student. From the school's side, if a lecturer finds out that one of his students is cheating, it could be a sign that something is not working in the class and changes must be made. If a student is caught cheating one can, for example, make the student do extra work in that subject in order to be allowed to stay in the class while at the same time offering an opportunity for the student to learn from his/her mistake.

Research to date has been giving more attention to the moral and legalistic perspectives around cheating and less so on the learning perspective. Yet all perspectives are possible, and each may have different influences on how faculty (and/or students) perceive and respond to the possibility or incidence of cheating.

This paper therefore proposed that faculty perspectives on cheating should be studied from at least three perspectives:

1. The learning perspective -with a focus on academic competence.
2. The moral perspective - with a focus on student integrity.
3. The legal perspective - with a focus on honesty and rule-following.

The first thing this study aims to do is create a measure that helps us capture these three perspectives. To measure the degree to which these three perspectives influence teachers to think in particular ways about cheating, that these ways may influence how teachers respond to a cheating incident. Is there a connection between the action they take and their perspective on cheating? The study also aims to identify patterns in how people with different perspectives think about cheating and how they subsequently act. The first hypothesis to be tested in this study is as follows:

**Hypothesis 1:** Is the measure made of the learning, moral and legal perspective accurate and internally sound?

It was anticipated that a collection of items to expand the measures of faculty perspectives on cheating, could be gathered and used to create a reliably sound measure. If hypothesis 1 is supported, then the study the measure will be used to check hypothesis 2.

**Hypothesis 2:** Based upon faculty perspective on cheating, are there differences in what faculty regard as cheating, what they observe of cheating and the actions they take when confronted with an incidence of cheating?

It was anticipated that the following pattern would emerge: Faculty with strong moral or a legalistic perspectives on cheating are more prone to report cheaters, compared to faculty with a strong learning perspective. It is thought that institutions that rely heavily on the moral and the legalistic perspectives, act in similar ways, because of the similarities between what can be done through these perspectives to punish cheaters (through the moral sense where people are made to feel bad because of the social stigmata of being labeled as a cheater officially, and receiving direct punishment beyond this as well. If hypothesis 2 is found to be supported by the data, the next step would be to assume that the actions of faculty members differ by perspective they have. However this is unfortunately beyond the scope of this study.

If there is support in the data that faculty also hold a learning perspective towards cheating, it the impact that the mismatch between their view and the more penalizing institutional policy may have on student behavior and institutional practice is worthy of closer study.

This project began by gathering information about how cheating is discussed in different fora, and to see if that could be informative about what kinds of themes to include in the creation of the measure on cheating perspectives.

### **Word Count Pre-Project**

This investigation was started by documenting how cheating is talked/written about for the general public and in academic journals. This would help to get a better insight into what is being focused on and written about regarding academic cheating, both in public media and in the research community. This preliminary study was started by gathered articles from the general public press, and articles from selected research journals. When that was done, a word count was performed in order to document and compare how cheating is presented in the two different fora.

#### **Method Word Count**

Press articles written in both Norwegian and English about cheating, plagiarism, and incidences of academic cheating were collected through the Norwegian page [www.etikkom.no](http://www.etikkom.no) (Skavlid, 2011) which is the front page for “The National Committee for Medical and Health Research Ethics (NEM)”.

All articles published in English and Norwegian in the period of 01.01.01 to 28.03.11 was put into a database (for a full overview over the articles see the references in appendix A). These articles were sorted into one of two groups, either in the “Norwegian press” group or in the “English press” group. The articles were about cheating and plagiarism almost exclusively printed the biggest student newspaper in Norway; [www.universitas.no](http://www.universitas.no) (Steinsbekk, 2011), and on their web page. The “English press” group contains articles from several different sites.

Using PsychINFO, PsycArticles, ERIC and PubMed, a third group was created with abstracts from research journals that published articles on the topic of cheating. Every issue from the period of 2000-2010 (where available), was searched for articles about cheating and/or plagiarism. Seven journals had published articles about these subjects. These Journals were: *Educational Psychologist*, *International Journal for Educational Integrity*, *Journal of Educational Psychology*, *Journal of University Teaching and Learning Practice*, *Medical Education*, *Psychological Reports* and *Research in Higher Education*.

From these searches, a total of 10 press articles for the general public were used in the Norwegian database, and 15 articles in the English database. From the 7 journals 57 abstracts and three general press articles were used.

#### **Word Count Results and discussion**

An initial word count was done using the tool “TagCrowd” (Steinbock, 2011). From this, a list was made that listed all the words, from most used to less used (unrelated common

words for example like “the”, “also”, “on”, “this”, and other unrelated words were removed from this list).

The list was then sorted to try and identify the cheating-relevant terms and their frequencies. A preliminary sort was done by one judge. The words were put into categories that were then given names and working definitions. Category definitions and contents were discussed and definitions clarified. Three independent judges then re-sorted the words into the categories. This process was reiterated several times until two more judges did a final sort, leading to the content definitions and inter-rater reliabilities shown in Table 1.



Table 1  
*Categories and category content from word count*

Category name	Category content	Reliability
The formal parameters	Policy Code Procedures	.66
The opportunity/catalyst	Behavior Strategies Performance Assessment	.44
The dirty deed (in its most basic shapes and forms)	Cheating/juks Misconduct Dishonesty Plagiarism Copying Fraud	.96
The culprits	Cheaters Students Professors	.92
The consequences	(Consequences) Expelled Retract	1.00
The moral imperative	Ethics Moral(s) Integrity Honor Fairness Responsibility	.54
The know how	Information Orientation Knowledge Understanding Learning	.62
The personal investment	Value Beliefs Attitude Motivation Self-efficacy	.65

As can be seen from Table 1, some of the reliabilities for this sort were notably lower than others. However the purpose of this preliminary project to identify themes rather than offer a definitive content analysis, so no additional sorts were done. However, the author feels that this sort, with the categories as they are, offer an acceptable thematic representation.

Table 2 presents an overview of the different frequencies that each source discusses in their writing when they write about cheating and plagiarizing.

Table 2

*Cheating category representation from each of the article sources (percentages indicate the percentage of words mentioned within each forum)*

<u>Category</u>	<u>Concept Frequency by Word Count per Forum</u>		
	<u>Norwegian Press</u>	<u>English Press</u>	<u>Journals</u>
Formal Parameters	<b>.00</b>	<b>.00</b>	.05
Opportunity/Catalyst	<b>.00</b>	<b>.00</b>	.07
Dirty Deed	.58	.66	.25
Culprits	.31	.24	.34
Consequences	.03	.03	<b>.00</b>
Moral Imperative	.08	.07	.11
Know-How	<b>.00</b>	<b>.00</b>	.06
Personal Investment	<b>.00</b>	<b>.00</b>	.09

As can be seen from Table 2 some interesting patterns emerge. First and foremost is how similar the Norwegian general press and the English general press write about cheating. Another pattern that can be seen from the table is that the general press does not tend to write about the Settings, the Formal parameters, the Opportunity, the Know-how and the Personal investment involved in cheating. Secondly all the concepts that the general press does not write about the research journals do, with one exception, research journals did not tend to write about Consequences.

However as seen from Table 2 the five concepts that the general press does not write about (Setting, Formal parameter, Catalyst, Know-how and Personal-investment), are not written much about by the research community either. Why is this? Is there a consensus that these are not as important for cheating as the others? If so then the question is why?

The concepts that the press actually does write about include the cheating itself, who cheats, the consequences, and the morals involved in the incidence. There is a pattern

emerging, and that is that the general press seems less interested in this “catalyst” and the settings where cheating occurs. This however, is something that the research community devotes some attention too, though still not much.

Maybe the press excludes these things for a reason. Maybe writing about the setting and “catalyst” does not sell to the general public. General press, as every other publication, has their targeted audience. It might be that to write more in-depth into why people cheat, is not wise for their viewer count. They do, however, write more about the fates of known people, like politicians, athletes, businesses i.e. who have been caught cheating, or are involved in shady circumstances.

When the look was shifted over to what the research community writes about, we can see from Table 2 that they, more than the general press, write about a broader range of topics related to cheating except for the Consequences of cheating. This is an interesting finding, and maybe this is because researchers feel that the punishment and consequences of cheating are more an administrative task, and that their job is to learn more about the underlying causes to why people cheat that precede the need to invoke any sanctions.

Given what the author learned about the field, and what is being written and discussed about both in the general press and in the research field, the range of concepts that to include in new measure is clearer.

This small pre project was informative about the concepts related to cheating, and the different ways audiences think about them in different social contexts. The concepts part was informative, and helped in the development of the instrument. Based on this finding the author believes that in able to give a wholeheartedly picture of the cheating that the press writes about, it is important for them to write more about the setting and the personal investments behind the cheating. This would give the everyday reader a more honest picture of what and why it has happened. Let us however not forget that cheating is still cheating no matter what the reason behind it is, but as in court there might be extenuating circumstances that needs to be taken into considerations. Also the only thing that the journal article does according to this study write about is the consequences. It is the belief of the author that is is important to look scientifically to not only the academic consequences, but also to the social and economical consequences, because these also exist.



### Method

The aim with the design of the instrument was to make it reliable instrument to measure the degree to which faculty hold learning, moral and/or legalistic perspectives on academic trust transgressions, and how that may influence their identification, observation and reporting of different types of documented cheating behaviors. This was planned to be done with an anonymous, on-line self-report questionnaire. It was also planned that the questionnaire should include items that touches the cheating categories suggested by the word count study, and also touches mutual knowledge and identity from the trust section.

### Participants

A total of 151 surveys were started. Of those, 19 were removed because of missing values on all but the demographic section, leaving us with 132 participants in the study. Within the sample, there were little gender differences, 74 males and 58 were females, all working in universities and academies in Norway (*skewness*=.211). All participants were between six age groups 20-29 to 60-69, coded 1 through 6 ( $M = 3.32$ ,  $SD = 1.168$ , *skewness*=-.121). An overwhelming part (82%) of the participants had studied for their academic degrees in Norway, with USA and United Kingdom with a shared second place (3%). Also participants from the disciplines of education (representing almost one quarter of all participants, 24%), and social science (10%) were most dominant in the sample.

The participant taught in a wide range of fields (31 in education, 25 in social sciences, 16 in technology, 14 in business, 11 in humanities, and 11 in medicine to mention some). In terms of position, 25 were full professors, 66 were associate or assistant professors, 14 were in an administrative position, and 15 had PhD position, to mention the main part of the participants.

### Materials

**The Learning Perspective.** The learning perspective part of the questionnaire included 10 self composed items written to capture the essence of the learning perspective as presented in the current literature (e.g. “When I discover someone cheating, I see this as an opportunity to teach that person something about academic expectations and practices”). The measure used a 7-point Likert scale, which ranged from 1 = strongly disagree to 7 = strongly agree with the statements (the full questionnaire is included in Appendix D).

**The Moral Perspective.** The composite measure designed to capture essence of the moral perspective included two statement items from Stephens, Romakin and Yukhymenko (2010) (e.g. “I believe that cheating on schoolwork is morally wrong”), and 8 self-composed items written to capture the essence of the moral perspective as presented in the current

literature (e.g. “Policies for how to deal with suspected cases of cheating are important for maintaining an institution’s academic integrity”). It was measured using a 7-point Likert scale, which ranged from 1 = Strongly disagree to 7 = Strongly agree with the statements.

**The Legalistic Perspective.** The legalistic perspective measure included 14 self-composed statements written to capture the essence of the legalistic perspective as presented in the current literature (e.g. “I am confident in my knowledge about my institutions policies”). It was measured using a 7-point Likert scale item, which ranged from 1 = Strongly disagree to 7 = Strongly agree with the given statements.

**Likelihood of Reporting.** The behavioral descriptions covered a broad range of possible transgressions (e.g. “Fabricating or falsifying a bibliography”, “fabricating or falsifying research data”, “Working on an assignment with other (in person) when the instructor asked for individual work and “Submitting a paper you purchased or obtained from a web site (such as [www.schoolsucks.com](http://www.schoolsucks.com)) and claimed it as your own work”) were originally written for students to rate, so the items were modified to capture how serious faculty regard the behavior is, how often they have observed the behavior, and how many times they have reported the behaviors.

This part was measured with items collected from the “Specific Behaviors scale” in McCabe (2012) online survey of academic honesty. There were 26 cheating incidences listed for which respondents had to indicate three things.

First respondents indicated how serious they regarded the behavior using a 5-point Likert scale which ranged from 1 = Not relevant, 2 = Not cheating to 5 = Serious cheating. Second, they indicated the number of times they observed this per year using a 4-point Likert Scale, ranging from 1= Never, 2 = 1 to 4 = 3+. Third, respondents indicated the number of times they reported this behavior per year, using the same scale as “observations per year”.

**Demographics.** Items to measure gender, from which country each participant got their academic degrees, how many years they have worked in different faculty positions, current position, and the main topic(s) the participant is an instructor in.

### **Procedure**

The sample used in this study consisted of faculty members from 40 different institutions from all over Norway. Each faculty member from the institution contacted that either agreed on the phone to participate, or requested more information about the study before making an decision, received an email giving more informing about the study, and inviting their faculty to participate in the survey.

The entire survey was web-based, using Qualtrics, and each participant was given an email inviting them to join the study, with detailed information about the study, and with a link to the survey, which was totally anonymous. The survey used a self-completion format.

Each participant that finished the questionnaire was given the option to participate in a drawing for 4 online gift cards from Amazon.com, each with a value of 150 USD.

### **Statistical Analyses**

Descriptive analyses were run on the demographic section (age, gender, country of studies and topic of instruction), where mean and standard deviation is reported along with values for skewness and kurtosis. Values within range of  $\pm 2$  for skewness and  $\pm 7$  for kurtosis are considered to be within a normal distribution (West, Finch, & Curran, 1995).

In all factor analyses run, all missing values are excluded pair wise, except for “types of cheating where all missing values was excluded list wise since the matrix was not otherwise positive definite. The software would thus not allow pair wise excluding, and therefore list wise excluding was chosen for that analysis.

Regression analyses were run, also using the option to exclude missing values pair wise. The reason behind this choice is the size of the dataset. The dataset has few participants, therefore if cases were excluded list wise, the analyses would be even harder to run, and relevant data might be lost.





## Results

### Factor analysis

In all the three factor analysis on the different perspectives, we chose the option to exclude missing values pair wise. This decision was made for two reasons: Firstly on the background on the low numbers of participants in this study. And secondly because when the author studied the raw data file, a response trend was detected, where participants tended to answer less and less the further along the participant was in the questionnaire. One possible reason for this could be explained by the sheer length of the questionnaire and/or the timing of the data collection

In social science research some correlation among factors is generally expected, since behavior functions rarely act independently of one another (Costello & Osborne, 2005). Therefore a Principal component factor extractions was performed with Direct Oblimin rotation ( $\Delta=0$ ) using IBM SPSS 19, because Direct Oblimin allows factor to be related to each other. Separate analyses were performed on each group of items representing the three perspectives, and after recommendation from Tabachnick and Fidell (2001) regarding cut-off points for including a variable in a factor, the cut-off point of .45 was chosen. See Table 3 for the pattern matrix for the learning perspective items, Table 4 for the moralistic perspective items and Table 5 for the legalistic perspective items.

In the analysis of the learning perspective items, all 10 items were kept, yielding three distinct factors: 1. Awareness of learning opportunity (6 items), 2. Student responsibility (2 items), and 3. Teacher responsibility (2 items).

Internal consistency for each of the 3 learning factors was examined using Chronbach's alpha. The alphas ranged from  $\alpha \geq .5$  for student responsibility,  $\alpha \geq .6$  for teacher responsibility, to  $\alpha \geq .7$  for Awareness of learning opportunity. No substantial increases in alphas for any of the scales could have been achieved by eliminating variables. Student and teacher responsibility scales only consists of 2 items each, and are therefore considered unfortunate, and not well suited for this kind of analysis, the alphas from this analysis may therefore be unreliable (Tabachnick & Fidell, 2001). These measures are however used in subsequent analyses, therefore the results are interpreted with caution, and it is recommended that future research give attention to this measure.

Table 3

*Pattern Matrix, The Learning Perspective*

Items	Teacher Responsibility	Factor Student Responsibility	Evaluation Possibilities
When I discover someone cheating, I see this as an opportunity to teach that person something about academic expectations and practices.	<b>.732</b>	-.038	.173
Students caught cheating should be offered opportunities to learn how to perform well in academically acceptable ways.	<b>.683</b>	.208	.067
It is my responsibility as a teacher to create an environment where cheating doesn't happen.	<b>.624</b>	.099	-.045
Discovering a cheating incident is a sign that I may need to make adjustments in my teaching.	<b>.593</b>	-.398	-.052
I can provide information to students that reduce the likelihood of cheating.	<b>.587</b>	.098	-.217
I can modify my teaching in ways that reduce the likelihood of cheating.	<b>.530</b>	-.187	-.437
Students can perform well academically without cheating.	-.055	<b>.81</b>	-.079
Students can learn how to do academic work without cheating.	.360	<b>.652</b>	-.036
I can give assignments that reduce the likelihood of cheating.	-.074	-.072	<b>-.924</b>
I can give tests in ways that reduce the likelihood of cheating.	.008	.338	<b>-.694</b>
$\alpha$	.726	.527	.645

*Note.* n=94

As described by Table 4, all items are kept from the factor analysis, distributed into two factors: 1. Institutional Integrity (6 items), and 2. Student Improbability (3 items).

Internal consistency for each of the factors was examined using Chronbach's alpha. On the original scale included item Q14\_10 ("There are times when cheating is acceptable"), alpha of .477 would be achieved for factor 1; however the reliability analyses (if item deleted) showed that an alpha of .817 would be achieved if Q14\_10 was deleted from the scale. Therefore Table 4 is presented without Q14\_10. The alpha for Institutional integrity (factor 1) was  $\alpha \geq .8$ , and  $\alpha \geq .7$  for Student Improbability (factor 2).

Table 4

*Pattern Matrix, The Moral Perspective*

Items	Factor	
	Institutional Integrity	Student Improbability
Policies for how to deal with suspected cases of cheating are important for maintaining an institution's academic integrity.	<b>.905</b>	-.040
Faculty members who fail to report suspected cases of cheating lack academic integrity.	<b>.864</b>	-.154
Strict consequences for documented cases of cheating are important for maintaining an institution's academic integrity.	<b>.825</b>	-.030
I would feel guilty if I did not report a suspected case of cheating to the appropriate authority	<b>.724</b>	.230
Our University/College has a moral obligation to pursue suspected cases of cheating.	<b>.688</b>	.215
I have a moral obligation to deal with suspected cases of cheating	<b>.636</b>	.314
People should feel guilty if they cheat on a test or exam	-.092	<b>.934</b>
I believe that cheating on schoolwork is morally wrong.	.055	<b>.870</b>
Students who cheat lack academic integrity.	.175	<b>.639</b>
$\alpha$	.817	.796

*Note.* n=94

Using the same cut off criteria (Tabachnick & Fidell, 2001), item Q15\_7 ("It is okay to use discretions when dealing with a suspected case of cheating".) did not load on any of the factors, and Table 5 is therefore presented without this item.

Therefore described by Table 5, all the legalistic perspective items besides item Q15\_7 are distributed among 4 factors: 1. Knowledge of institution policies (4 items), 2. Student consequences (4 items), 3. Faculty consequences (2 items), and 4. Rule reasonableness (3 items).

Internal consistency for each factor was examined using Chronbach's alpha. The alphas range from  $\alpha \geq .7$  to  $\alpha \geq .9$ . Also here no substantial increase in alphas for any of the factors could have been achieved by eliminating variables. In this analysis there is also one factor that only contains two variables. However their factor loadings are high ( $\alpha \geq .9$  for factor 3). It is common to keep small factors if their factor loadings are very high. So this factor is kept for further analysis, even though the alpha could be unreliable.

Table 5  
*Pattern Matrix, The Legalistic Perspective*

Items	Factor			
	Knowledge of Institution Policies	Student Consequences	Faculty Consequences	Rule Reasonableness
I am confident in my knowledge about my institutions policies.	<b>.941</b>	-.048	-.187	-.327
I know my institutions policies for how to deal with cheating.	<b>.931</b>	-.073	-.141	-.302
My institution's rules are useful to me when I am in doubt about a suspected case of cheating.	<b>.761</b>	.012	-.226	-.490
I am required to report suspected cheating incident.	<b>.709</b>	.320	-.279	-.492
Cheating should have clear consequences.	.025	<b>.83</b>	-.016	-.307
Cheating is a very serious breach of rules.	.069	<b>.811</b>	-.101	-.288
It is reasonable to expel students who cheat.	.095	<b>.794</b>	.074	-.376
The penalty for cheating at our institutions is not harsh enough.	-.125	<b>.599</b>	.177	.166
There are negative <i>professional</i> consequences for people who report suspected cheating.	-.222	.062	<b>.965</b>	.175
There are negative <i>personal</i> consequences for people who report suspected cheating.	-.157	.058	<b>.963</b>	.116
I think the <i>personal</i> consequences for persons caught cheating are reasonable.	.461	.330	-.229	<b>-.910</b>
I think the <i>academic</i> consequences for persons caught cheating are reasonable	.324	.244	-.133	<b>-.908</b>
I think the consequences for cheating at my institution are reasonable.	.506	.138	-.168	<b>-.889</b>
	$\alpha$	.865	.763	.933

Note. n=94

Because of the regression analysis, it was advisable to reduce the number of possible cheating behavior into larger classes of behavior. A full overview of the factor loadings are listed in Table 6.

Using the same cut off criteria as earlier (Tabachnick & Fidell, 2001), two items Q16\_1\_4 ("Getting questions or answers from someone who has already taken a test".) and Q16\_1\_12 ("Receiving unpermitted help on an assignment") did not load on any of the factors, and Table 6 is therefore presented without these items. Item Q17\_1\_11 ("Turning in work done by someone else") loaded high on two factors, so this item was excluded from further analysis's. Finally, Item Q16\_1\_1 ("Fabricating or falsifying a bibliography") was originally the lowest correlated item on factor 2, but this item does not meaningfully fit into the factor. Therefore this item was also excluded from further analyses.

In this analysis pair wise exclusion of missing data was not an option given by SPSS, so the method list wise exclusion were used, giving more missing data than the three earlier factor analyses, which is taken into consideration in the interpretation of the factor's validity.

As Table 6 indicates, all variables are distributed among 6 factors: 1. Stealing or Fabricating Exam Work (6 items), 2. Purchased or Completely Plagiarized Work (4 items), 3. Falsified Premise for Work (4 items), 4. Cheat Notes (6 items), 5. Plagiarizing Classmate Homework (2 items), and 6. Undocumented Sources (2 items).

Internal consistency for each factor was examined using Chronbach's alpha. The alphas range from  $\alpha \geq .7$  to  $\alpha \geq .9$ . Also here no substantial increase in alphas for any of the factors could have been achieved by eliminating variables. In addition, also here there are factors with only two items, so also their alphas may be unreliable. However their factor loadings are high, so the factors are kept for further analysis.

Table 6

*Pattern Matrix, Types of Cheating*

Items	Factor					
	Stealing or Fabricating Exam Work	Purchased or Completely Plagiarized Work	False Premise for Work	Cheat Notes	Plagiarizing Classmate Homework	Undocumented Sources
Fabricating or falsifying research data	<b>0,756</b>	0,068	-0,078	-0,02	0,182	0,149
Copying from another student during a test or examination <i>without</i> his or her knowledge	<b>0,702</b>	-0,03	0,289	-0,27	0,022	-0,012
Turning in a paper copied, at least in part, from another student's paper, whether or not the student is currently taking the same course	<b>0,685</b>	0,26	0,075	0,043	0,273	0,091
Copying from another student during a test <i>with</i> his or her knowledge	<b>0,59</b>	0,101	0,201	-0,361	0,067	-0,045
Helping someone else cheat on a test	<b>0,553</b>	-0,118	0,462	-0,07	0,179	-0,062
Turning in a paper from a "paper mill" (a paper written and previously submitted by another student) and claiming it as your own work	-0,037	<b>0,952</b>	0,102	0,081	-0,017	0,021
Submitting a paper you purchased or obtained from a Web site (such as <a href="http://www.schoolsucks.com">www.schoolsucks.com</a> ) and claimed it as your own work	-0,083	<b>0,779</b>	-0,133	-0,399	0,084	0,053
Copying material, almost word for word, from any written source and turning it in as your own work	0,359	<b>0,663</b>	0,003	-0,074	0,034	0,058
$\alpha$	.90	.85	.80	.89	.92	.86



Table 6  
*Pattern Matrix, Types of Cheating Continued*

Items	Factor					
	Stealing or Fabricating Exam Work	Purchased or Completely Plagiarized Work	False Premise for Work	Cheat Notes	Plagiarizing Classmate Homework	Undocumented Sources
Working on an assignment with others (via email or Instant Messaging) when the instructor asked for individual work	-0,004	-0,06	<b>0,901</b>	-0,09	-0,061	-0,07
Working on an assignment with others (in person) when the instructor asked for individual work	-0,029	-0,099	<b>0,872</b>	-0,084	0,064	0,094
In a course requiring computer work, copying another student's program rather than writing your own	0,338	0,268	<b>0,606</b>	0,028	-0,121	-0,081
Using a false or forged excuse to obtain an extension on a due date or delay taking an exam	-0,18	0,279	<b>0,577</b>	0,05	0,187	0,258
Using digital technology (such as text messaging) to get unpermitted help from someone during a test or examination	0,348	0,01	0,042	<b>-0,698</b>	0,156	0,001
Fabricating or falsifying lab data	0,391	-0,068	-0,088	<b>-0,593</b>	-0,115	-0,035
Using an electronic/digital device as an unauthorized aid during an exam	0,177	0,358	0,134	<b>-0,577</b>	0,126	0,018
$\alpha$	.90	.85	.80	.89	.92	.86

Table 6

*Pattern Matrix, Types of Cheating Continued 2*

Items	Factor					
	Stealing or Fabricating Exam Work	Purchased or Completely Plagiarized Work	False Premise for Work	Cheat Notes	Plagiarizing Classmate Homework	Undocumented Sources
Copying (by hand or in person) another student's homework	0,091	-0,049	0,04	0,148	<b>0,987</b>	-0,08
Copying (using digital means such as Instant Messaging or email) another student's homework	0,021	0,022	-0,11	-0,168	<b>0,926</b>	-0,03
Paraphrasing or copying a few sentences from a book, magazine, or journal (not electronic or Web-based) without footnoting them in a submitted paper	0,188	-0,211	0,01	-0,008	-0,054	<b>0,983</b>
Paraphrasing or copying a few sentences of material from an electronic source - e.g., the Internet - without footnoting them in a paper you submitted	-0,104	0,292	-0,013	0,005	-0,073	<b>0,835</b>
$\alpha$	.90	.85	.80	.89	.92	.86

Regression analyses using combined scores for seriousness, observed and reported as depended variables (DV), and used the factors derived from the learning perspective, the moralistic perspective and the legalistic perspective as independent variables (IV). However these analyses did not give satisfying results. This was believed be a result from the combined scoring. It was therefore decided that regression should be towards a more defined sum score, namely a sum score for each factor or types of cheating.

In total 18 standard multi regression analyses was performed. Each regression used the factors derived from the learning perspective, the moralistic perspective and the legalistic perspective as independent variables. The dependent variables were the categories for the different types of cheating, six for seriousness, six for observed and six for reported. Theses analyses were all backwards regressions, meaning that at the end is a model containing variables that do significantly contribute to the regression.

The author recognizes the problem by this large number of regression analyses, that it increases the chances for spuriously significant (or insignificant) findings. Given that the learning perspective factors have lower reliability than the moralistic and the legalistic perspective, it was necessary to run that many regressions to get a general sense of each perspective separately.

Table 6 displays the significances between the IV (the perspective factors) and the DV (Seriousness), the  $R^2$ , the adjusted  $R^2$ , and F values with degrees of freedom and significant levels of the total models. One example taken from Table 6, show that “Institutional Integrity” and “Faculty Consequences” placed together in a model, significantly influence how serious academic staff find “Stealing or fabricated work” cheating,  $F(2,82) = 14.214, p < .001$ .

As described from Table 7, the variable “Institutional Integrity Moral F1” is significant to the interpretation of the seriousness for all the kinds of cheating, except “Cheat Notes”. Table 7 also shows that institutional integrity is the only variable that is significant with more than one of the dependant variables.

On the basis of the small variance of the Observed and Reported measure, the overview of the significances between the IV (the perspective factors) and the DV (Observed), and the DV (Reported), the  $R^2$ , the adjusted  $R^2$ , and F values with degrees of freedom and significant levels of the total models, can be see Appendix B and C respectively. And these are not included in further analyses of the data.

Table 7

*Regression summary, Seriousness*

Variable	Stealing or Fabricating Work F1	Purchased or Completely Plagiarized F2	Falsified Premise for Work F3	Cheat Notes F4	Plagiarizing Classmate Work F5	Undocumented Sources F6
Teacher Responsibilities Learning F1	0	0	0	0	0	0
Student Responsibilities Learning F2	0	<b>.004</b>	0	0	0	0
Evaluation Possibilities Learning F3	0	0	<b>.055</b>	0	0	0
Institutional Integrity Moral F1	<b>.000</b>	<b>.009</b>	0	<b>.001</b>	<b>.019</b>	<b>.005</b>
Student Improbability Moral F2	0	0	<b>.001</b>	0	0	0
Knowledge of Institutional Policies Legal F1	0	0	0	0	<b>.086</b>	0
Student Consequences Legal F2	0	0	0	0	0	0
Faculty Consequences Legal F3	<b>.088</b>	0	0	0	0	0
Rule Reasonableness Legal F4	0	0	0	0	<b>.053</b>	0
R2	.257	.206	.167	.132	.103	.101
AdjR2	.239	.184	.147	.121	.069	.089
F(df1,df2)	14.214(2,82)***	9.331(2,72)***	8.229(2,82)**	12.583(1,83)**	3.087(3,81)*	8.243(1,73)**

*Note.* \* p<.05, \*\*p<.01, \*\*\* p<.001, Method: Backwards, Missing Values excluded pair wise. Values not included in the most significant model are replaced by 0.

### Discussion

This study investigated what influence perspectives on cheating (learning, moral and legal) have on how academic staff think and act in response to different cheating scenarios. According to factor and reliability analyses, and minor item adjustments, the measure developed for this study was both reliable and valid, therefore supporting hypothesis one. What influence the different perspectives have on higher education faculty, however, is only partially explored due to challenges with the dataset, and because of little similar previous research on measuring cheating in this way.

As hypothesized, the instrument created to measure three perspectives on cheating (learning, moral and legalistic), with minimal tweaking, achieved satisfying factor loadings, and with high alpha levels, suggesting the measure has viable factors containing items with sound internal validity. The analyses support a measure that is strong in terms of moral and legal perspectives, and decent in terms of the learning perspective. Future work on especially the learning perspective could strengthen the measure. It is, of course a goal in itself to create a measure that it is valid and internally sound. So, this was naturally the first step for this study.

The data suggested three factors define the learning perspectives (Teacher responsibility, Student responsibility and Evaluation possibilities). This measure was made of items out of the general idea the author had about the nature of this perspective based on prior research (Carroll, 2009; Macdonald & Carroll, 2006). Even though the factor loadings and alphas achieved good levels, the measure could still be improved to achieve even higher internal consistency. The author hopes that future research may be done to improve this measure, including more items to give the measure even more explanatory power.

It was no surprise that the factor analyses yielded stronger measures for the two more “traditional” perspectives on cheating (moral and legalistic), than on the learning perspective. The final items had high factor loadings, and achieved high alpha values, suggesting good and robust factors. The names given to the factors are believed to be approximately descriptive for the variables they represent.

Given the fact that there is no previous research (to the author’s knowledge) that has made/and or used a similar measures earlier, this research represent a first step towards making a measure that facilitates further exploration in future studies. The author believes that this scale can be useful to help researchers measure different perspectives on cheating, including the new measure on the learning perspective. For example, they may be used to map what attitudes do in fact exist among faculty who observe and reporting cheating at any

particular institution. This information can be used to help make better rules for helping faculty manage cheating in their classes.

Furthermore this study has, through the factor analysis of the learning perspective, given some support to the idea that there are, in fact, academic faculties who have a more competency-based perspective on cheating in general.

It is important that all educational institutes have a good and robust rule set that suits the institutions and academic staff's management of cheating and that the staff can use with confidence when cheating or plagiarizing is suspected. Further research is needed to map more closely if some academic staff might avoid reporting suspected cheating because they have issues with the current rule set (this could suggest they have a more learning orientated way of looking at cheating than moral or legal perspective), and the mandated ways of managing it.

Perspectives matter to the evaluation of how serious teachers regard different behaviors that could be regarded as breaches in academic trust or cheating. The author would like to be able to say more about how perspectives influence what people observe and report, but that was difficult in this study since, firstly, there were very few who reported observing trust breaches, yielding very little variance in the data. This could be for several reasons. Many of the types of cheating in this study happen outside of examination rooms, and are therefore arguably more difficult to discover. Also, some of the breaches may happen in classrooms or exam rooms, but simply not be observed because they are cleverly hidden.

Secondly there was even less variance in peoples reporting of trust breaches. This could be because a lot of cheating is never observed and discovered, and therefore not reported either. Another reason for this could be teacher attitudes towards specific kinds of cheating. Perhaps they observe what they regard as "not so serious" cheating, and therefore react with other means than reporting it. Future studies with larger samples are needed to better map how perspectives on cheating matter to what is observed and reported, and, if so, how. The author believes that this is arguably best performed outside of Norway, at larger institutions, with bigger student populations.

This means that the first part of hypothesis 2 is partly supported by the analyses, and that the second part is not properly addressed given challenges with the sample variance. The first part of the hypothesis looks to how faculties regard different potential cheating incidences and therefore what they consider cheating or not. Analyses shows that Institutional integrity, part of the moral perspective that addresses the moral integrity behind how institutions act, significantly predicts how serious a faculty member regards all but one of the

different kinds of cheating. However, it is not surprising that the perspectives that already exist (with rules and regulation supporting them) significantly influence how serious academic faculties regard different kinds of trust transgressions. By their very nature, school rules and regulations rely directly on the moral and the legalistic perspectives.

What is more interesting is the fact that Student responsibility and Evaluation possibilities influence how serious faculties regard “Purchased or completely plagiarized exam work” and “Falsified premise for work”. This finding suggests that faculty do believe that these kinds of cheating can be avoided, firstly by helping student to act in academic accepted ways, and secondly if there are administrative tools that give the faculty options that could help prevent cheating, by avoiding the use of recycled exams.

This result could have been influenced by faculties underlying beliefs about why these kinds of transgressions occur (e.g. the staff could blame themselves that they are not good enough teachers, and that might be the reason to why some student might cheat). An important point is that this study was run in Norway, which is a society that places high values on equal status and equal opportunities. However, to the author’s knowledge, no higher education institutions in Norway have rules and regulation in place to help the faculties rehabilitate those who cheat, for any kinds of cheating within the school system.

Regression using “Stealing or fabricating work” as the dependent variables shows that especially an Institution’s integrity, but also Faculty consequences influence how serious a transgression academic staff think stealing or fabricating work is. This suggests that faculty would feel guilty or morally wrong if they discover this kind of cheating and just ignore it. However the consequences they potentially could experience personally and/or professionally can arguably influence them again in their judgment of the seriousness of the situation. This could potentially make some faculties ignore “minor” cheating for fear of consequences.

These results are interesting because schools are identified as institutions for learning, yet their policies often do not open up all possibilities for learning when they do not allow trust transgressors the opportunity to learn from their mistakes. The question is, then, can an institution of higher education really pose as a serious learning institution, when it, a proclaimed place of learning, does not help their trust transgressing students more by giving them an opportunity to learn something from their mistakes rather than treating them punitively?

How does all this fit into the current literature? The ultimate goal for an institution, with all its students, faculty and staff, is arguably to build an “identity based trust” (Stolle,

2002), based on mutual knowledge (Moldoveanu & Baum, 2011). There are however some challenges to achieving such a goal.

Firstly, in the school context, what does identity trust entail? According to Moldoveanu and Baum (2011), it entails that a mutual knowledge and skill base has to be established, and that everyone in the community would have to be socialized into the same knowledge and skill base.

Secondly mutual knowledge is grounded in explicitly sharing shared and common knowledge. What exists of shared knowledge among students and faculty about academic trust breaches? What exists of common knowledge about academic trust breaches?

The data from this study make two interesting contributions to the task of finding answers for developing even better mutual knowledge. Firstly, given the results of the analyses on the three perspectives on cheating (learning, moral and legal), our data suggest that the perspectives on cheating that faculty hold vary, and this influences how they regard different trust transgressions.

Secondly, a learning perspective opens for greater opportunity to help students, teachers and administrative staff practice managing potential trust breach temptations before punitive actions even need to be considered. This can then become the basis for establishing an identity-based trust that is shared by an entire higher education community. Therefore it is arguably ideally an institution's job is to create a learning environment where mutual shared perceptions are created.

The word count study suggested content for items to include in the instrument that deals with a broad range of cheating considerations. The perspective measures and the trust transgressions measures both had items together touched on all the categories of issues found in the word count study (see Table 2 for a full overview). The author suggests keeping these categories in mind when developing a general and suitable mutual knowledge base, so that a broad range of cheating aspects is included.

Further work is required to gain a better understanding of the current findings, and the author suggest doing so by recruiting an institution, and initiate a project that can aims to help creating a learning environment where mutual shared perceptions, and measure the effects of this. Also, more work to validate the instrument using different samples, and comparing with other related and unrelated measures, this study represents a start in the work needed to expand our rule set towards cheating.



### **Limitations**

Data collection was challenging for this study. Recruiting subjects took several weeks, and not all participants completed the questionnaires fully. The author and supervisor were satisfied with the job done to recruit participants ( $N= 132$ ), although more participants would have been preferred. With the small sample size of this study, some important limitations are worth mentioning.

Small sample size makes factor analyses less accurate and reliable. However Tabachnick and Fidell (2001) argue for a rule of thumb that states that if a factor solution has several high-loading variables ( $>.80$ ), then the sample size is not required to be extensively large. Though some of the factors already seem adequate, the learning factors could be stronger. Therefore, more research is needed to support particularly the learning scale made. A larger sample size (e.g.  $N> 500$ ), would enable a more robust and reliable factor analysis, and provide more reliable findings.

Another possible limitation with this study is that all the participants are working in higher education. It is important that findings can be generalized, and it is possible that this sample could be difficult to generalize from, to primary and secondary schools, for example. Nonetheless, these findings were intended to be a contribution to discussions within institutions of higher education. In that regard, this sample is adequate. Cheating in primary and secondary schools, on the other hand, would have to be explored directly in order to make any claims about teacher perspectives on the definition, observations and reporting of cheating behaviors there.

### **Conclusion**

Based on this study, the instrument created is found to be a somewhat robust and valid measure. Furthermore, the learning perspective, along with the moral and legalistic perspectives, has been found to influence how serious faculties regard different kinds of academic trust transgressions, suggesting the importance of learning more about how learning perspectives may broaden what we heretofore know about cheating from existing research. Two building blocks is need to establish mutual trust in institutions of higher education, firstly one must be socialized into the same identity trust, and secondly one must make sure that both shared and common knowledge is made to mutual knowledge. When these two blocks are in place, then one can start talking about mutual trust.



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## Appendix B

Table 8

*Regression summary, Observed*

Variable	Stealing or Fabricating Work F1	Purchased or Completely Plagiarized F2	Falsified Premise for Work F3	Cheat Notes F4	Plagiarizing Classmate Work F5	Undocumented Sources F6
Teacher Responsibilities Learning F1	0	0	0	<b>.046</b>	0	0
Student Responsibilities Learning F2	0	0	0	<b>.066</b>	0	0
Evaluation Possibilities Learning F3	0	0	<b>0</b>	0	0	0
Institutional Integrity Moral F1	<b>.040</b>	0	<b>.053</b>	0	<b>.004</b>	0
Student Improbability Moral F2	0	0	<b>0</b>	0	0	0
Knowledge of Institutional Policies Legal F1	0	0	0	0	0	0
Student Consequences Legal F2	<b>.027</b>	0	<b>.004</b>	0	<b>.001</b>	0
Faculty Consequences Legal F3	0	0	0	0	0	0
Rule Reasonableness Legal F4	0	0	<b>.045</b>	0	<b>.097</b>	0
R2	.069	0	.143	.073	.184	0
AdjR2	.045	0	.109	.049	.152	0
F(df1,df2)	2.855(2,77)	0	4.212(3,76)**	3.040(2,77)	5.730(3,76)**	0

*Note.* \* p<.05, \*\*p<.01, \*\*\* p<.001, Method: Backwards, Missing Values excluded pair wise. Values not included in the most significant model are replaced by 0.

## Appendix C

Table 9

*Regression summary, Reported*

Variable	Stealing or Fabricating Exam Work F1	Purchased or Completely Plagiarized F2	Falsified Premise for Work F3	Cheat Notes F4	Plagiarizing Classmate Homework F5	Undocumented Sources F6
Teacher Responsibilities Learning F1	0	<b>.003</b>	0	0	0	<b>.070</b>
Student Responsibilities Learning F2	0	0	0	0	0	0
Evaluation Possibilities Learning F3	0	0	0	0	0	0
Institutional Integrity Moral F1	0	0	<b>.093</b>	0	0	0
Student Improbability Moral F2	0	0	0	0	0	0
Knowledge of Institutional Policies Legal F1	0	0	<b>.003</b>	<b>.026</b>	<b>.012</b>	<b>.017</b>
Student Consequences Legal F2	0	0	<b>.014</b>	<b>.021</b>	0	0
Faculty Consequences Legal F3	0	0	0	<b>.015</b>	0	0
Rule Reasonableness Legal F4	0	0	<b>.076</b>	<b>.040</b>	<b>.032</b>	0
R2	0	.122	.146	.176	.091	.153
AdjR2	0	.110	.099	.132	.067	.128
F(df1,df2)	0	9.617(1,69)**	3.137(4,74)*	4.013(4,75)**	3.856(2,77)*	6.228(2,69)**

*Note.* \* p<.05, \*\*p<.01, \*\*\* p<.001, Method: Backwards, Missing Values excluded pair wise. Values not included in the most significant model are replaced by 0.

