Reality according to People
(A Seminar to Learn Academic Thinking)

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Abstract

Starting to study at university confronts students with many challenges, for example to check theories concerning their plausibility and credibility. The internet with its wide variety on information complicates this survey process. Reports of "fake science" increase the felt uncertainty.

In our seminar, we address this topic to first semester students in Social Work Studies: What is "reality"? How do we individually construct our world? How does communication between people with different experiences (hence realities) work? Based on sociological and psychological theories, students are asked to check on their own perceptions of specific social questions (e.g. gender, demographic change, poverty), thus being confronted both with different perspectives on these topics and with the particular evolutionary history and effects.

Keywords: analytic thinking, academic thinking, reality, perspectives

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Introduction

Starting to study at university confronts students with many challenges, of which self-organized learning (in contrast to the organized learning at school) is just one. One big task in every study subject is the one of analyzing texts, to interpret the sense behind it and to discuss the results of scientific research (Pitz-Klauser, 2019). The difficulties with for example checking theories concerning their plausibility and credibility are shown in one question a student asked after a session in Introductory Psychology: *"Thanks for this great summary of all those different learning theories. I think I understood all of them. But – which one is the true one?"*

This question was one of many which showed us the importance of showing students a way to get to a sense of the "truth" or "reality" in science. So this became the major topic of our seminar "Reality according to People" – What is „true"? How do we individually construct our world? How does communication between people with different experiences (hence realities) work?

The seminar takes place in the first semester in Social Work Studies. It is the fifth part of a module in which students are faced with four other lectures, all broaching the issues of the humanities and social sciences (e.g. educational science, health science, psychology, sociology). This fifth seminar is constructed in a team-teaching mode, giving teachers and students the possibility to approach the more theoretical contents of the other four lectures on a more practical level, and to see similarities and differences in the distinct sciences. As for our own background as a psychologist and a sociologist, we based our seminar on sociological and psychological theories. The purpose was to ask students to check on their own perceptions of specific social questions (e.g. gender, demographic change, poverty), and thus to confront them with different perspectives on these topics and with the particular evolutionary history and effects. This paper is about our seminar schedule, about how it worked out in this spring semester, and about our future plans to deepen this subject.

The Protestant University of Applied Sciences in Bochum

Our university in Bochum is one of the smaller universities in that area. There are about 2,400 students studying at this semi-private university, which is mostly funded by the protestant church of North Rhine, Westphalia and Lippe, but being re-funded by the State of North Rhine-Westphalia. Most of the students at our university are enrolled in BA Social Work (around 1,300 all in all; 200 students enlisting new each semester), which is a study program of six semesters with one practical placement semester in the second year. As a university of applied

sciences it is not uncommon for our students to come from families with a non-academic background; not all of our students have passed an A-level exam at school, but got their permission for studying by completing a vocational training before starting their BA-studies.

Among other things, in the first semester students start a propaedeutics module, in which they are taught about techniques of academic work (e.g. how to write a paper, how to do literature research) and about the basics of empirical research (quantitative and qualitative research methods). This module is being finished after the second semester with a term paper. The other extensive module in the first semester is the one about humanities and social sciences, as already mentioned. And of course there are several other modules for the students to pass, e.g. an introduction to social work or to ethics.

The biggest task for us as teachers is to get to know the way students *think* – and getting along with their sometimes understandable need of "too-economic" thinking. This also includes to help the students understand the function of scientific language and thus communication in science (see e.g. Pitz-Klauser, 2019; Anselm & Werani, 2017; among others). The seminar "Reality according to People" has been constructed as one first step on this way.

"Reality according to People" – the seminar schedule

The seminar started with the question "What is 'true, what is 'real'?" and gave a short first definition:

„A conviction shared by everybody has the quality of reality."
(Aristoteles – or somebody else?)

This definition already shows two things: First of all, that "reality" is strongly connected to the people defining it, and secondly, that sometimes you can't be sure that what is supposed to be "real" is actually still real – us living today can't be sure that it was really Aristoteles saying so (it might have been also Thomas of Aquin or maybe even somebody completely else...). We don't have to go back to Aristoteles to be confronted with the "truly real" problem. In 1984 already, just some years back, but even before the prominence gaining of the internet, the philosopher and sociologist Jean Baudrillard pronounced the „end of the world as we know it", emphasizing that reality is no longer what happens in the real world, but what is reproduced or simulated for our consumption. He called this the „murder on reality" (see Thorpe et al. 2016, p. 197):

1. There's so much information in modern world – we can't gather all of it, and find out what actually happened.
2. Media simplify everything for us, and decide what „really should be done". This reproduction of single pictures and stories results in us accepting this as „reality".
3. Things and situations in the physical world – in their unexplained and unpacked shape – are no longer accessible for us.
4. All complexity is lost...
5. Hence: We live in a world of expanding information and decreasing meaning.

To give a practical example, the students were asked to read one of two articles (Hölig, 2017, or Schwartmann, 2017), both broaching on possible effects of propagating fake news via the internet on future German elections. Both articles mentioned the so-called "Clinton Gate" during the US-election as an example, but one of them did so to emphasize that there won't be any effect on elections outcome, the other one came to just the opposite conclusion. The students hence were asked to express their opinion about the articles' argumentation. This was build in as an example on how the same "fact" (here: "Clinton Gate") can be used for creating a different "reality".

Another example on how to create reality by combining "facts" with a certain argumentation line is shown in figures 1 and 2.

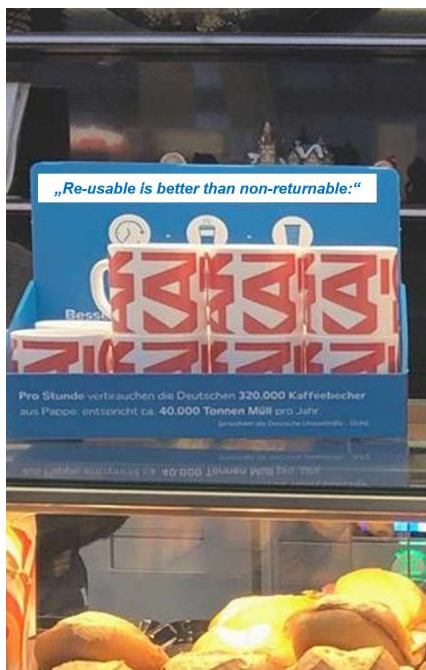*fig. 1: an example: avoiding trash at EvH University*

Fig. 2: "Pro Stunde verbrauchen die Deutschen 320.000 Kaffeebecher aus Pappe, entspricht ca. 40.000 Tonnen Müll pro Jahr." [translation: „Each hour Germans use 320,000 coffee cups made out of cardboard. That's about 40,000 tons of trash each year."]

Figure 1 is a photo of an advert in our university's cafeteria, pointing to some of the most common not-neccessary rubbish that every one of us is producing. On the ad there was a note of just how much trash is produced by those cardboard coffee cups (see fig. #). The students' first research task hence was to find the reference for these numbers, and to list arguments for or against the reliability of the numbers.

This task was followed by these questions:

➢ "Which questions did you ask?"

➢ "How do these questions relate to academic thinking?"

Tab. 1: the seminar's schedule and contents (as realized in spring term 2019)

(1)	Introduction: topics and teams
(2)	Sociological and Psychological views on „reality"
(3)	External contributions: Astrophysics and Applied Computer Science
(4)	Reading and Discussion of a paper („Why do the lambs remain silent?", Mausfeld 2015)
(5)	Students' Teamwork on and Presentation of self selected topics

Giving this as an introduction to our seminar, we showed the students our seminar schedule (see tab. 1) and asked them to split up in different small groups for their own research field.

The topics for the student teamwork were given by us (environmental pollution; criminal behavior of foreign people, of old people, of youth; drugs and addiction; gender pay gap; „this is how boys just are/ girls just are"; poverty in old age). We took care that these topics weren't too politically biased, as we hoped that as a result of their research students find out by themselves that every topic has always to be reflected by the cultural, political and individual background of where and when it is being published and presented.

Out of the wide field of sociological and psychological theories, we concentrated in one session on construction theory (in sociology) and on systemic theory (in psychology; connecting to the sociology session one week earlier). The sociological view ("Construction Theory"; Berger & Luckmann 1966/ 2004) focused on how experience first forms individual knowledge, and then this in turn builds collective knowledge, which is then called „reality". Synthesizing on that, for the psychological view systemic theory was introduced, emphasizing that „reality never can be seen without its observer" (von Schlippe & Schweitzer 2000, p.87), and giving hints on the Theory of Mind, on the construction of stereotypes and categorizations.

To detach the topic of reality and its uncertainty from the underlying allegation of uncertainty in social sciences, we also invited two scientists from the field of STEM science. In one of those session, an astrophysicist (Julia Heuritsch, DZHW[1]) talked about „ reality in astrophysics". The session concluded with the epistemic realization that one can only get small glimpses on reality, depending on what you are looking at at the very moment. In another session, an information scientist (Martin Hirsch, FH Dortmund[2]) gave some insights on how to easily alter reality in the media.

The article of Mausfeld (2015) was again an attempt to show the close connection between facts and argumentation line. The article is about criticism on neo-liberalism and so-called "elite

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[1] Deutsches Zentrum für Hochschul- und Wissenschaftsforschung, Berlin [German Centre for University and Science Research]

[2] Fachhochschule Dortmund, Fachbereich Informatik [University of Applied Sciences in Dortmund, Department of Information Technology]

democracy", discussing current political development in the framework of historical and cultural developments and backgrounds. The students were asked to read the paper in advance of a session, so that the focus then could be on the discussion of this paper.

Meanwhile, during the whole semester, students parallel worked in their teams and on their research project. For this, we provided them with draft questions and -papers to guide their research. In the semesters last session students then were asked to present their research results (see tab. 2 for the given structure on their presentations).

Tab. 2: given structure for power point presentation and paper synopsis of students' research results

(1)	formalities: title, topic; students' names; etc.
(2)	leading question: introduction to topic – why this topic, what was the purpose?
(3)	first research results: What was found out after a "quick" research? Where did you look? Which questions followed this? What was the guideline for detailed research?
(4)	detailed research results: What was found out after the detailed research? Where did you search? Which results underline your first research results, which ones stand in contrast to them? Why do you think this is so?
(5)	summary and conclusion: What do you make out of it? What is the connection to this seminar?
(6)	references

The seminar then ended with a conclusion and a reference to the whole module's content.

"Reality according to People" – the reality…

Organization of seminars takes place months before the seminar itself takes place. So when we planned this seminar about one year before it actually happened, we thought of a joined seminar with another university in another country, so that students exchange, experience and discuss about their topics and different (international) realities. Unfortunately due to full schedules on both sides and different term times this didn't work out as planned. So we had to keep on our own "German" reality and hope for the diverse students' backgrounds to make up for the missing international perspective in at least some aspects.

We of course had a certain purpose in mind when we organized and started the seminar. Asking the students about their purpose of attending our seminar and what they expected, these were their answers:

- *„To get some hints on how to discuss with right-wing extremists."*
- *„If someone's psychological ill – how to tell them that their perception is wrong."*
- *„Why some people need drugs to get along with their lives."*
- *„How do you identify fake news? For example, on the internet."*

This shows that not only students weren't aware of abstract theories on "reality building", but that their interest in „science" and „scientific thinking" didn't seem to be very pronounced at all. We hoped that this would change over the course of time.

How far away students actually were from any kind of "analytical thinking" was shown when confronted with the first research tasks on the coffee cups (see fig. 1 and 2 above): What did the students do? – They asked "google", and were content with finding a reference there… It was then when we teachers pointing to questions like „How many Germans are there, and how many cups does every German then use every hour?", "How many cups are these per day, per week, per month, per year?" or „How much weight does one cardboard cup have?", that the students noticed that a quick internet inquiry didn't answer the question.

We started our seminar with about 50 students. All of them assigned themselves to the different small teams and topics. During the following weeks and with exam time coming up, however, there were less and less students attending the seminar. This is a quite common problem not only at our university, but it is a problem showing that at least for some students the (most) important part of their study program is "to pass the exam", and not "to gain insights in certain subjects": Once they found out about the exam procedure, they economically altered their study schedule to adjust it to their other needs. In the end there were nine students attending the last session, presenting their research results on drugs and addiction; gender pay gap; „the way boys are / girls are…"; and protection of the environment, and engaging in motivated discussions about those topics.

Asking the students what they took from the seminar for themselves, they gave the following feedback:

- *„I now know that there is a distinction between perception and reality."*
- *„I feel more sensitive about realities."*
- *„Too much academic-scientific working... Sometimes asking myself: ‚Why am I sitting here?!"*
- *„I now know that my reality is not everybody else's reality."*
- *„Until this last session I didn't know why we were supposed to do this presentation. Now I understand* [*the connection to the module assessment*]*."*

Comparing this to the expectations they expressed at the beginning of the seminar, it seems as if students now were sensitive about the aspects we wanted them to notice – which probably is as much as you can expect after the first semester.

Feedback from this term's module exams show that this reflection („My reality is not everybody else's reality") only seems to work, if this is told to be the main purpose of a (methodological) seminar; it doesn't work if it isn't explicitly the *main topic*, but just a *method* within a seminar otherwise related to for example a specific psychological or sociological topic as demographic change.

Conclusion and plans for the future

Not only for future seminars, but for the whole development on "teaching academic thinking", we plan to establish some sort of „trans-disciplinary tool box" on how to help students learn academical/analytical thinking. So far we have established a small „think tank" with the two of us, and some colleagues from other universities and with other academic backgrounds, to exchange ideas on this topic. Our "trans-disciplinary tool box" shall be characterized by following aspects:

✓ applicable in any discipline,

✓ conveying critical thinking skills,

✓ science theory,

✓ statistics literacy &

✓ deductive reasoning.

The purpose of the presentation of our seminar at IUT and of this paper was and is to arouse interest in peer university teachers, getting into contact, and maybe working together on this subject of "teaching analytical thinking" within the future practical-scientific society. We look forward to exchanging and working with you.

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