Last Name	First Name	Matriculation Number

Exam
CSCW

June 21st, 2018

You have **90 minutes** to work on the exam. You can reach up to **90 points**. The information on the points provided with each question gives you a hint on how much time you should invest to write an answer.

You can give the answers to the exam tasks either in English or in German. **All your answers have to be in one and the same language throughout the whole exam**.

Do not use your own paper sheets, but only the ones provided in the exam.

Please, put matriculation number on **each** paper sheet.

If you have to make any assumptions, highlight and/or describe them accordingly.

Good luck!

Section	**1**	**2**	**3**	**4**	**5**	**6**		**Σ**
Points possible	12	22	14	18	8	16		90
Points reached								

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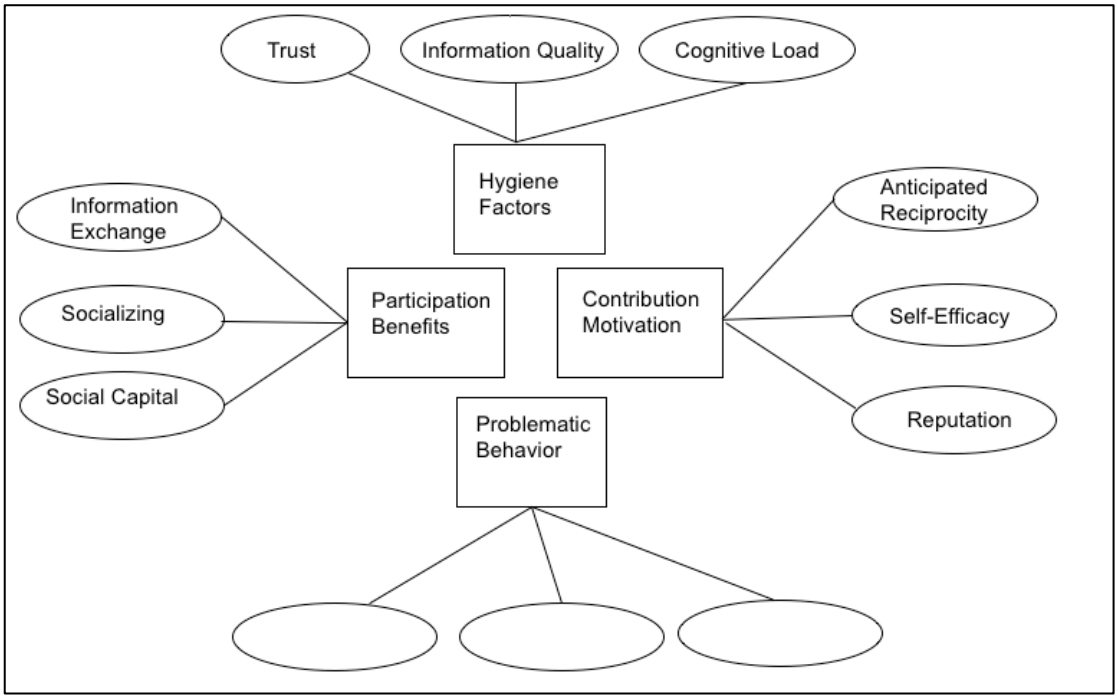
Section 1:
Sociotechnical Design in Online Communities
(12 points)

Consider the following for this section: In the lecture, we discussed the benefits and problems of social networks and contribution motivations. We further covered design principles on fake and true news from Facebook and Twitter in your Homework 4. While referring to the lecture and your own experience with social networks, answer the following questions.

Question 1.1
(3 points)

See the model of behavioral problems and theories in social networks. Add the missing pieces for problematic behavior.



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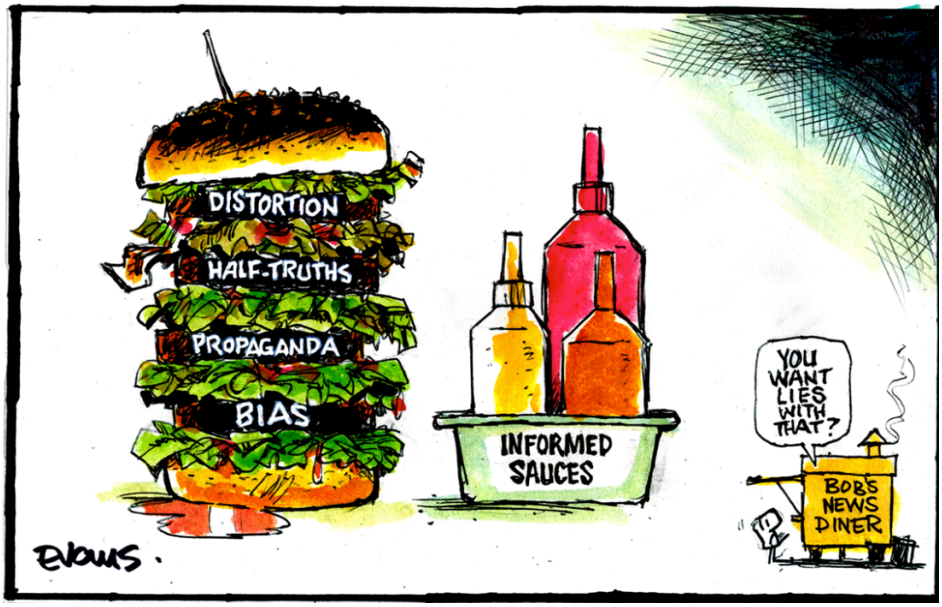
Question 1.2
(9 points)

An upcoming phenomenon are fake news in today's news. It became even more difficult to identify them from true news. Discuss what **design principles** can make your Twitter or Facebook entries more trustworthy. Refer to the cartoon below, design principles on establishing hygiene factors and avoiding problematic behavior, as well as your solution to Homework 4.



https://www.cagle.com/malcolm-evans/2018/05/bobs-news-diner#.WwbMuC_5wvo

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Use it for your answers. Indicate the number of the question you are answering.

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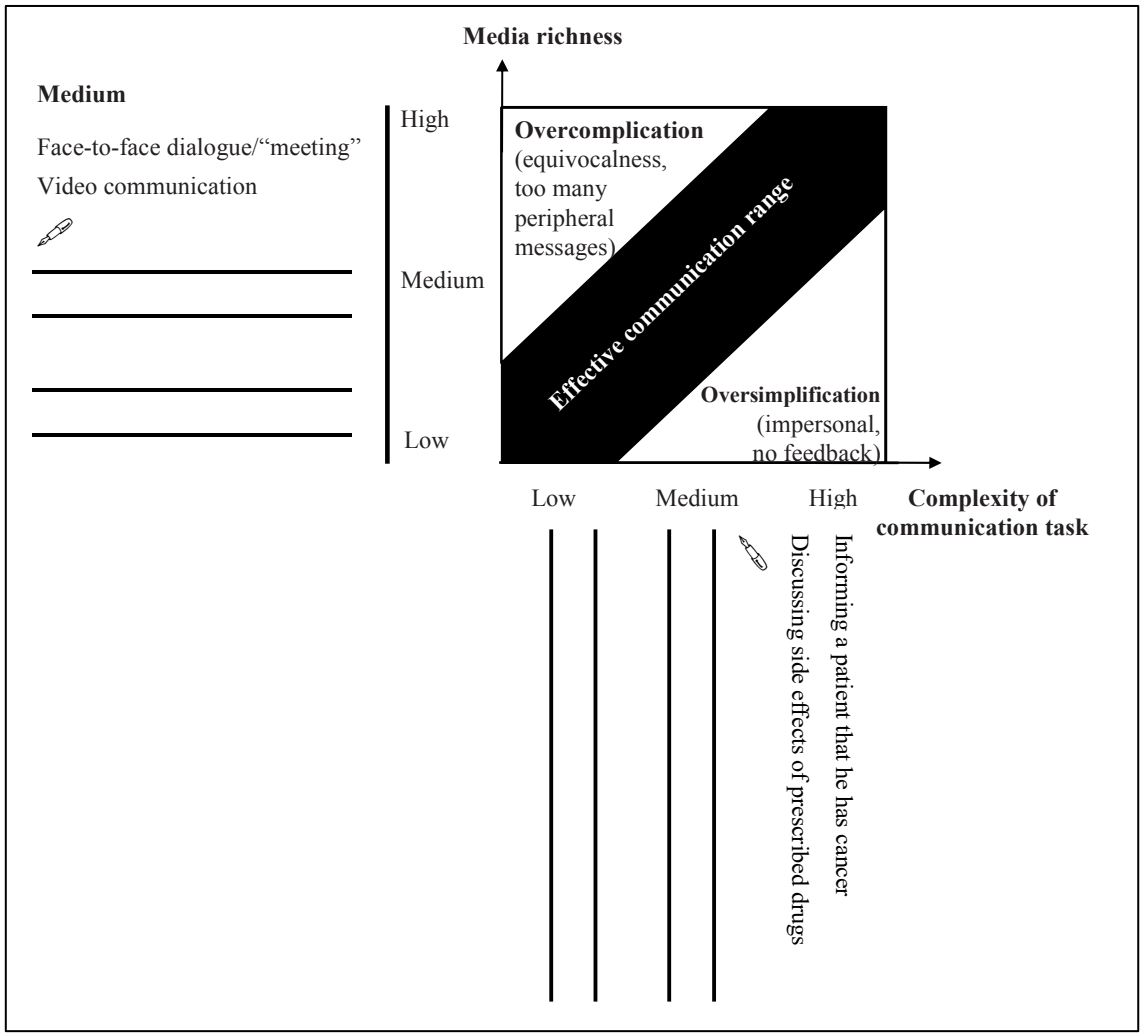
Section 2:
Dyads and media richness
(22 points)

Consider the following for this section: In the lecture, we were extensively talking about problems when two people are working together and how media can help here. When solving Homework 1 you made also many experiences when designing a doctor-patient communication. In the following, refer to the lecture slides on media richness and your experiences in the group work and daily life.

Question 2.1
(10 points)

The following shows the model of Media Richness Theory, but some examples of media and tasks are missing.



Picot, A. et al.: Information, organization and management. Springer, New York (2008).
Daft, R.L., Lengel, R.H.: Organizational Information Requirements, Media Richness and Structural Design. Management Science. 32, 5, 554–571 (1986).

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a) Complement the graphics for the doctor-patient encounter. Name at least four different tasks of various complexity that occur during communication between and doctor and a patient. List four media that fit those tasks such that the communication falls into the “effective communication range” (see picture above). You can assume that the tasks involve communication between the doctor and the patient, without human intermediaries (secretary, office assistant, etc.)

b) Argue for the position of each medium or technology on the Y-axis (continuum between low and high media richness) while referring to the characteristics of this medium or technology.

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Use it for your answers. Indicate the number of the question you are answering.

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Question 2.2
(4 points)

The Media Richness Theory works well for dyads. For larger groups it can be shown that it does not always work properly. In the lecture we discussed another theory which better explains the media characteristics and media choice for larger groups.

Which theory is it?
While referring to this theory, point out where the Media Richness Theory is incomplete.

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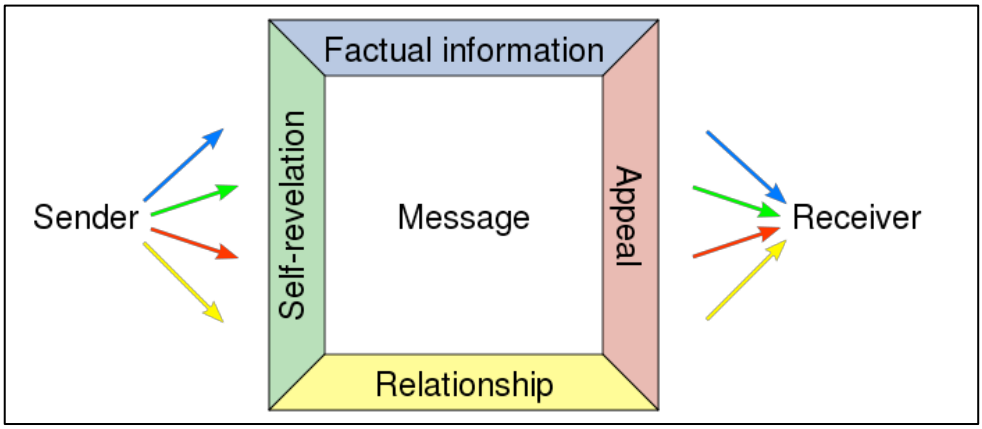
Question 2.3
(8 points)

In the real life, you often need to choose well what is the correct media to avoid misunderstandings. However, messages may also carry a misunderstanding because of how they are constructed. The "four sides of a message" model can help identifying reasons for misunderstandings.

Look at the following message and provide a likely interpretation according to the sender (*Doctor Fine*) and according to the receiver (*Mister Sheffield*). Which side of the message was encoded in a way which may lead to a dissonance?



Source: Wikipedia: Original: Schulz von Thun, Miteinander Reden, Rowohlt Hamburg 1981, S.30

Call from a doctor on the answering machine: *"Mister Shegle… oh, sorry… Sheffield! Mister Sheffield, here's doctor Fine. You visited me… let's see… two weeks ago. I've got your blood test results back from the lab. They seem fairly okay. No needs to worry, just, your TIBC-values are slightly over 470. Eghm… And your ASAT goes up to 50. And GGT seems rather high with 0.93. Aaaand. Yeah, Bilirubin is 1.5. Anyway. I mean, they are high but nothing to worry about. We should see each other next year to repeat the tests. Take care and good bye."*

Doctor Fine thinks her message conveys the following:

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Mister Sheffield understands the message the following way:

It is likely that they misunderstand each other because:

You can assume that Mister Sheffield's knowledge about medicine is mediocre, that he visits his doctor only when he really needs to, and that he cares about his well-being through sports, proper food, etc. He probably knows about the specific medical terms as much as you know.
There is no need to know what the values (TIBS, ASAT, GGT, and bilirubin) mean to solve this task. For the messsage interpretation message from Doctor Fine's perspective it may help you to know, that the values are right at the upper limit or not too far beyond it.

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Section 3:
Addressing Group Effects in Small Groups and Awareness

(14 points)

Consider the following for this section: During the lecture and in Homework 2 we covered extensively group effects and different modes of group work. You were able to identify group effects and how to overcome critical incidents in your small team collaboration.

Consider the following meeting:

Peter, Paul and Mary are on a software-project together and today they have meeting to discuss the next steps.

S1: Mary: *Hi guys! So for the next milestone we need to design a logo, define all use cases and set up a GitHub account.*

S2: Paul*: I would be interested in defining the uses cases but I do not really know how that's done*.

S3: Peter: *Well, I do not care. You choose.*

S4: Mary: *So for the logo I already had an idea and started a bit on it. The use cases I know how to do so probably it is easiest if I just do it.*

S5: Paul: *Then I will set up the GitHub I guess.*

S6: Peter: *Sure thing, good meeting guys!*

Question 3.1
(8 points)

Refer to the conversation between Peter, Paul and Mary, identify four group effects and link them to the text (refer to the sentence numbers – S1, …, S6). You can make assumptions about the mood of the meeting participants but state clearly where you make assumptions.

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Question 3.2
(6 points)

In the lecture we also covered the concept of awareness as a "prerequisite for cooperation". Awareness is defined as:

> Awareness is an understanding of *the presence* and activities of *others within a shared hybrid environment*, which provides a *context for mutual orientation and opportunities for situative reactions*

Prinz, W.: Awareness. In: Schwabe, G.; Streitz, N.; Unland, R.: CSCW-Kompendium, Springer Heidelberg et al., 2001

Now think again of the discussion between Peter, Paul and Mary. They do not meet in person and, still, work together on the software project. Where do you see problems of awareness in this remote set up?

a) Identify at least 3 problems/limitations of awareness.

b) Describe how tools like Skype and other systems for distributed collaboration (e.g., Google Docs for shared editing, WhatsApp for instant messaging, etc.) can help with those limitations of awareness?

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Use it for your answers. Indicate the number of the question you are answering.

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Section 4:
IT Tools as Equipment
(18 points)

Consider the following: During the lecture, we introduced the concept of *Being* and *Way of being* by Heidegger which addresses topics relevant for computer science, such as *being-in-the world* for situated action, *already-having-found-oneself-there-ness* for context-dependence, *humanness* as potential victim of technology and *equipment* and *readiness-to-hand* for discussing how people engage in practices. While taking together all your expertise from the lecture, please, solve the following task.

Question 4.1
(8 points)

Have a look at the photo below and, especially, at how the tablet (look closely: it is a computer!) is being used.

http://worth1000.com

a) Explain the term “equipment” based on this example and differentiate it from “substances”.

b) Is the tablet “ready-to-hand” or “present-at-hand”? Argue while explaining those two terms and referring to the photo above.

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Question 4.2
(10 points)

We provide a statement from an advisor who was given a tablet computer with a dedicated software for financial advisory encounters called FineAdvice several months ago. He explains how he uses the provided tablet and the dedicated system, as well as other software products on this device.

Apply the theory of Heidegger to interpret the following statement. What is the actual advisor's equipment? Why did it become the equipment?

Answer the question while using Heideggerian terminology and by referring to particular sentences or phrases from the advisor's opinion.

Advisor's opinion: "*It was really a big deal. They rolled out the tablet to the whole organization, to all advisors and made several training rounds with us. They explained each and every feature – it's really impressive what the new software can do! I don't even remember all those things. But they are great! (…) Normally, when doing the advice, I jump over all sorts of features – I do not think that going through the client's situation and banks accounts is what people care for. And the visualizations are useful only sometimes. I would show one or two to the client. They look fancy, so I can show off a bit. I click myself through as quick as possible to get to the summary which includes the contract – it's a standard contract we had on paper before. It opens as a PDF and I can edit it with some other program they put on the tablet as well and do some markings as well. It feels quite natural. I wish, I had it before.*"

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Section 5:
Engineering Collaboration in Large Groups
(8 points)

Consider the following: During the lecture and the homework, we introduced the Collaboration Engineering approach. It relies on the assumption that collaboration activities can be predefined and scripted in a way that (almost) guarantees for the desired output. We have extensively discussed the underlying concepts (six-layer model of collaboration, ThinkLets, facilitator) in the lecture and you had an opportunity to apply your knowledge in Homework 3. You, also, participated in a ThinkTank session. While taking together all your expertise from those sources, please, solve the following tasks.

Background story: Imagine the team from Section 3 again: Peter, Paul and Mary. It is a software project that should help advisors in the bank to provide useful information during the consultation with the client. Instead of generating use cases by themselves, they decided to involve the clients and advisors in defining the use cases. Mary plans a workshop now.

Question 5.1
(8 points)

Help Mary to prepare the workshop on completing the use cases for the software project*. Fill in all fields in the table below.

*If you are struggling with the collaborative behaviors, have a look at the set of relevant ThinkLets provided on the separate sheet of paper entitles “ThinkLets Cheat Slip” (no need to employ all provided ThinkLets; you are also allowed to create your own ThinkLets – to do so provide the overview, inputs, and outputs; you are also allowed to combine the ThinkLets to one collaborative behavior).

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Layer	Content		
Collaboration Goals	Develop uses cases together with the clients and advisors such that they fulfil the requirement of a software that supports the banking consultancy service		
Group Products	A list of 4 use cases that fulfils the advisors' and clients' requirement and in what order and priority they should be implemented in the next months		
Group Activities			Identify time plan and by when the use cases should be implemented
Group Procedures		Specify the most important 4 use cases -> reduce, eval	
Collaboration Tools (conventional, non-IT)			Write a timeline on the whiteboard and draw a line by when each use case should be finished.
Collaborative Behaviors		Pin the tail on the donkey	

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Section 6:
Technology Appropriation in Organizations
(16 points)

Consider the following: We have extensively discussed various theories and concepts that shed light on the issue of technology acceptance and appropriation especially in organizational context. Reflecting on what you learned about acceptance and appropriation, Unified Theory of Acceptance and Use of Technology (UTAUT), Adaptive Structuration Theory (AST) and malleable software. Try to apply this knowledge to reflect on how students and teachers use OLAT at the UZH.

Question 6.1
(4 points)

Provide a list of four patterns in which OLAT has been appropriated by yourself, your fellow students or your teachers.

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Question 6.2
(4 points)

While referring ot the *Unified Theory of Acceptance and Use of Technology* (UTAUT/UTAUT 2.0) explain why OLAT has spread widely across the UZH.

Question 6.3
(4 points)

While referring ot the *Adaptive Structuration Theory* (AST) explain why OLAT has been appropriated the way you described in 6.1.

Question 6.4
(4 points)

While referring to the concept of *malleable software* explain why OLAT has been appropriated the way you described in 6.1.

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