STUDENT

0004-EEO

TENTAMEN

TIA301 Tentamen

Kurskod	--
Bedömningsform	DO
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Bedömningsfrist	--
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ⁱ HT23 reexam: Welcome to examination!

This examination consists of open questions, sometimes referred to as 'essay questions'. It includes **7 questions**, each rewarded with a maximum of 3 points. The examination is limited to **2 hours.** To pass it you need **13 points** (60%)

The grading will focus on the overall capability to explain and apply ideas. It will assess whether (1) answers are logically coherent, whether (2) they are grounded in readings, lectures, and discussions, and, when applicable, that (3) answers engage the key concepts of the course.

Advice:

Please, read the questions carefully! Each question normally consists of multiple requests, such as: "**Define**... and **explain**... **illustrate** ... with an example..."

If you feel unsure about how to respond or don't remember exactly what papers or lectures said, trust your instincts and stay focused on the question. Explain in your own words, to the best of your abilities. Do *not* start to broadly talk about related things, to show you know other things.

It could be worth noting that longer answers are not necessarily better answers, since long texts increase the risk of ending up with inconsistencies.

¹ HT23 reexam Question 1

Describe the concept of *agency* and explain how it can be applied to understand the role of technology in a socio-technical system. Include an example of how technology is an agent of change.

Fill in your answer here

Agency is a possibility to act and with agency you can affect soical structure (for an example laws and norms). Traditionally humans are seen as they have agency but not objects/materiality and digital materiality.

However, with digital materiality and Actor- Network Theory (ANT) we get the chance to see digital artifact and technology as they also have agency and can therefore understand the role and impact of technology in a socio-technical system. The concept, digital materiality, explains and help us understand the importance of technology and digital artifacts, and also gives us an opportunity to analyze how the affect social structures. Meanwhile ANT can be used as a framework in organizations for an example and analyze the importance of digital artifacts.

Within ANT we have the concept generlized symmetry, which are an important and relevant concept when we explain technological agency. Generlized symmetry see humans and non-humans as they have equal possibility to act, not to necessery to the same extend, but they both have agency. This is very important in a socio-technical system, to make it more clear we can take an example. With generlized symmetry we see humans and non-humans as both important agencys in example hospitals. This means that humans (e.g. doctors) and non-humans (e.g. respirators) are both important and can both affect norms and other social strucutre in the hospital, and most important, save lives.

An example of how technology is an agent and has affected social structure could be smartphones. It has for an example given us opportunities to easy maintain and develop relationships that are long distance. Smartphones have also affected the norms of how we spend our time, with increased screentime. This have for an example lead to new norms/regulations of some schools collecting childrens phones before lectures.

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Besvarad.

HT23 reexam Question 2

Use your own words to define the concept of *affordance*. Discuss its significance – how it can help us – in understanding the properties of material things.

Fill in your answer here

Affordance means a possibility to act upon something/someone, the affordances can be different depending on who affords it. For an example, a door handle affords me to open the door. However, a dog does not afford to open the door. The Von Neumann everything machines (with inputs giving outputs) affords us programmability and reproducbility. We can give an everything machine new inputs and we can also use inputs to another machine.

While understanding material things and their importance in the social structure digital materiality can be a abroad concepts. However, with affordance we can easier measure the importance of digitalization, digital artifacts and technology. The concept let's humans realize the importance of digital materiality. But also how organizations can improve, develop and aim towards innovation for their products. It helps us humans to not only focus on the material, interface or color of the aritfact, the concept helps us more understand and analyze what digital materiality can afford us, what it can provide us instead of the looks of it. And for the society, we can accept and analyze the importance of digital materiality more, with less bias.

Ord: 188

Besvarad.

3 HT23 reexam Question 3

Identify one affordance that is distinctive to digital artifacts. Explain how this affordance is intrinsically linked to the digital nature of the artifact. In your response, select a specific example and argue how this digital affordance has influenced socio-technical phenomena, such as innovation, usage, business models, or organizational practices.

Fill in your answer here

There are different kinds of affordances, both basic and aggregate (aggregate are multiple basic affordances combined). One example of an aggregate affordances is malleability. Malleability affords us the possibility to update already existing software, instructions or inputs. This leads to possibilites to develop a product and therefore provide better user experience even after the consumer bought the product.

To make this more clear we can use an example, Passat and Tesla. Volkswagen have produced the model Passat for many years, when a human have bought their Passat they can only be provided with new functions if they buy a new one. However, with Tesla the company can give their cars new instructions and inputs which will give the consumer new functions even after they bought the cars, with an software update. This opens up for a market after the consumer bought the car. This increases and enhance the relation between the consumer and organization. So this leads to Tesla being able to aim development and innovation both before they launch an car but also afterwards. Perhaps that Tesla have a entitie only for the software updates and this also leads to users/consumer being able to get a better user expernice.

Ord: 200

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4 HT23 reexam Question 4

While the literature presents several perspectives on generativity, there is consensus that generative processes are *emergent*. Describe the characteristics of an emergent process and provide an illustration of how one such a process has played out in the development or evolution of a specific digital technology.

Fill in your answer here

With generativity you want to aim an generative environment and innovation, there are different ways of aiming towards that. One example is putting technology in the main focus, others argue that humans should be in the main foucs.

An emergent process is one way of aiming towards generativity. The main purpose with an emergent process is so create an environment that does not have any specifc end-goal, where the group can redo the process and create feedback-loops. When you aim towards emergent process the group for an example should have the chance to try and error, and by redo it they can aim innovation and better results. By creating feedback-loops you create an environment that accepts honestly, new perspectives and new skills to give their opinion. This creates new patterns and can enhance a the product/platform.

An illustration of how such a process could be played out could be for an example if Spotify wanted to develop something with the application. Then they could create such a process where they don't have any end-goal with it or which kind of improvment they want to develop. They could then create a group, with different skills to get different perspective of it. There could be one UX-designer, one with coding skills, one with data skills for an example. If it was a bigger group they could perhaps divide it in two groups in the begging and then show each other an idea to create feedback loops. Then continue togheter by try and error and aim innovation togheter.

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5 HT23 reexam Question 5

We have discussed the role of boundary objects as 'bridges' between different social worlds.

- Describe how a boundary object serves to connect these diverse groups.

- Analyze the usefulness of this bridging function in the context of design processes, particularly in fostering collaboration and innovation across distributed and interdisciplinary teams.

Fill in your answer here

Boundary obejcts can be seen as a bridge between different social worlds. This bridge would connect and help the different social worlds communcation and collaborate. By letting people with different skills, educational backgrounds and expertise collaborate there is a risk that they would have a hard time understanding and collaborating with each other. However, with the bridge and boundary objects you create a possiblity to make this more possible for them. By being both plastic and adaptive, givning them space to act upon, but also having control. This could for an example be providing with APIs. APIs would be seen as the bridge the helps them collaborate.

This fosters innovation since they get different teams/perspective to develop and they can for an example collaborate through a desgin obejct so it is easy to follow the process and where in time they are. By having a boundary object and a specific bridge, it alos reduces the risk that it will be any misscommuncation since different teams work in differnt ways otherwise.

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HT23 reexam Question 6

Give a concrete example of a platform boundary resource, as discussed in our course. Explain how it is useful to (1) the platform owner and to (2) an independent application or service developer.

Fill in your answer here

A platform boundary resource is when platform owners and third-party developers fosters co-optetion (collaboration and compeition). It is important for the platform owners to have a arm length's between them and the third-party developer and balancing control and orchestration.

One example could be Apple, they collaborate with third- party developers (it could be other small business or just one stakeholder). By collaborating with third-party developers they aim innovation and can be provided with expertise that they perhaps do not have inside the organization. However, these people/other business are also their competitiors and therefore can Apple not provide them with all inside information. They could for an example provide third-party developers with their APIs, this will increase the possibilties for third-party developers to aim new ideas but at the same time they will not be provide with information that are "too much" for people outside the organization to get.

This is useful for the third-party developers since they can collaborate with one big tech-company and develop a special relation. If the third- party developers provide Apple with good ideas they could also get revenue. From Apple side this is a important part for their innovation and developing their ecosystem. The best expertise and skills do not always have to be inside the organization, therefore are third-party developers important for their development as a company.

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7 HT23 reexam Question 7

As established firms take on digital innovation, they encounter various competing concerns that need to be carefully managed. Identify one such competing concern that arises specifically due to the process of corporate digitalization. Explain the origin of this competing concern and resonate on how firms can balance or mitigate it.

Fill in your answer here

Digital innovation increases the chances to aim both collaboration and competion in the ecosystem. With this, balancing orchestration and control is hard but also important. One compeition concern could be who is going to pay who. When Spotify and Vovlo started to collaborate to aim innovation and develop the possibilites to play Spotify and have it as a application in the car. They started their collaboration and had ideas of how they would collaborate. However, Volvo wanted Spotify to pay, since they would be in their car. At the same time, Spotify wanted Volvo to pay, since they provide them with their service.

Firms can balance this by early dicussing standards in their collaboration, how they want to collaborate and what kind of regulations they can have between the two companies.

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