



GÖTEBORGS UNIVERSITET

STUDENT

0001-YCR

TENTAMEN

TIA301 Tentamen

Kurskod	--
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Bedömningsfrist	--
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Skapad av	Golsa Nouri Hosseini

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 capacity to act or also it also can be described as act or intervention that generates effects. For human, agency can be defined as the capacity to act independently and exercise free will in their surrounding or society. If you take the same perspective and concentrates on the outcomes of the action, then equally we can apply the same digital artifacts or technology, defining the agency in the is the capacity a non-human or an digital artifacts has to act and influence behaviour and society changes. For example, in workshop where human and artifacts interacts to produce things, with introduction of a technology such as a 3D printer, it would change the processes and how the interaction was previously done. Certain skills and process would became outdated and the 3D printer would make possible to generates things in that workshop that would be impossible before the injection of this technology. In brief, the introduction of a person or a technology in workshop would generate changes in the process and things will start to happen.

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2 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

Affordances are action possibilities. They are properties inherent with a material things. like for example a chair, we can say a chair has an affordance to seat a human, like any human, you or me, but not an elephant.

Ord: 39

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

One affordance of the digital artifacts is the reproducibility. Basing on Von Newman architecture digital artifacts inherited reproducibility as one of its affordances. Reproducibility as an affordance has an influence socio-technical phenomena, because it allows recombination and reframing of technology and this in turn creates a generative environment with no end goal result that would lead to digital innovation.

Lets look at digital artifacts versus analog, in this case Analog, the copy is representation of the original copy. while for digital to make sense we need data and algorithms, time and space are decoupled. The digital allows copies to be made without a marginal costs. Meaning that the growth for an organization is exponential and requires necessary physical things such as stores, trucks, etc. Digital artifacts affordances are in fact important as recombination and reframing of technology and this in turn creates a generative environment that can lead to digital innovation for an organization.

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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

As per Von Newman architecture digital artifacts has affordances such as reproduciblity and reprogramability, these affordances, allows recombination and reframing of technologies in a process that is emergent with no end goal. For example we can link Artificial inteligence (AI) technology and the NVIDIA company. Their early investment and interest in the GPU although with no end goal, let the company to recombine and reframe different technologies that after a considerable amount of time lead them to AI and machine learning

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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

Indeed, Boundary objects are bridges between two different social worlds, as result it is plastic, in other words it is plastic enough that facilitates collaboration and interaction between group of different social worlds, without offering a solution or imposing rules or end outcomes, but it adapts to the context of these worlds, and convey meaning that is understood by these groups, thus, facilitating in this case communication, collaboration and interaction.

However, it is important to note that boundary objects are robust enough that maintain identity as it is recognisable between the two different groups or worlds. A practical example is a football, where two players from a different world can play, in this case, the football facilitates communication and collaboration and interaction between the two different players but it is also robust enough that maintain the same identity that is recognizable by both players.

Another way to recognize its bridging function is to take for example a map as boundary object. In this example a map used by various group such as construction company, architects, local authorities, and researchers to solve potential area for city development will foster collaboration between these diverse groups, although the map is subject to different interpretations or it will be used differently by the groups, however it would provide a convergence point, where shared agreement and opinions can be exchanged. So these interaction and collaboration can lead for an innovative potential city development.

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6 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 concrete example would be Apple Platform, considering that knowledge is not just inside of the company(apple) but outside, then the apple platform, allows contribution from third parties vendors (apple play store) by developing new apps that boost apple quality and diversity. In this case, the third parties gain by using apple vast users and also collaboration between with other vendors. Apple gains by offering more diverse and quality offering to the users and users gain by having better user-experience and overall quality.

Boundary Resource is defined as regulations or API or softwares that serve as interfaces at arms length between the platform owners(apple) and the Ecosystems third parties developers

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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

One of the competing concerns that can arise due to the process of corporate digitalization is internal collaboration versus external collaboration. One aspect of traditional companies they rely on the internal knowledge to drive product innovation in the company, however in a digital age this notion is no longer applicable because no company has the monopoly of knowledge, meaning the knowledge lies outside. It is important for companies to address this competing concern, by allowing outside knowledge to be used inside the company for product innovation. A way to mitigate this competing concern is for a traditional company to allow outside knowledge to be used inside the company. For example, Netflix have offered money to outside developers to improve their movie prediction algorithms. This sort of initiative has helped Netflix to improve its current algorithms and offer better service to its customers. In this technology age, it is important for companies to leverage internal and external collaboration, by letting inside knowledge outside (inside out) and letting outside knowledge inside the company(outside in). Because Knowledge is no longer a monopoly for any company but it lies outside (Third parties).

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