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Exercise 1: Read „What is Social Informatics and Why Does it Matter?" by Rob Kling (1999) and write 10 most important things you learned from this article.
http://www.dlib.org/dlib/january99/kling/01kling.html

Social Informatics can be characterized as "the interdisciplinary study of the design, uses and consequences of information and communication technologies that takes into account their interaction with institutional and cultural contexts."

For building a workable application, which really helps people rather than making processes more complicated, knowledge about social issues of the target group(s) is required. Most likely an application is addressed to a heterogeneous audience consisting of multiple target groups and it is necessary to understand "how [those] people work and what kind of organizational practices" they follow. Thus, it is not sufficient to create a well-designed (from technical point of view) piece of software.

The *Productivity Paradox* is "an important social phenomenon", which describes the fact that "national statistics for labor productivity were not steadily increasing" even though huge investments into computerization were issued. In the 60th to 80th it was commonly expected that an intensive use of computer and telecommunication systems will lead to heavily increased productivity. For this phenomenon no uniform explanation exists among economists.

For the productivity paradox exist several "social explanations" (following part is quoted):

(a) many organizations develop systems in ways that lead to a large fraction of implementation failures; or
(b) few organizations design systems that effectively facilitate people's work; or
(c) we significantly underestimate how much skilled work is required to extract value from computerized systems

Those "observations suggest that many organizations lose potential value from the ways that they computerize" and indicate a major impact of *how* the computerization is performed. It is likely to assume that technology alone "is not sufficient to create social or economic value".

Issues, which derive from computerization in organizations, are totally different from those raised because of "public access to the Internet" at home. Both are equally significant and belong to the field social informatics, but require distinct "lines of analysis".

Technological determinism was found to be failing as analytical approach, which is considered to be "one of the interesting and durable findings from social informatics research".

The "popular *Nintendo generation* explanation" was found to be inadequate. It could be shown that sole growing up with technology does not necessarily result into faster learning of technologic aspects in the future if, e.g., the (organizational) environment does not encourages it as well.

The same software can be used in in very different ways depending on the *social context*.

Computerization does not help for every activity equally. Rather complex tasks may still be done on printed copies for several reasons (limitations in screen size, habits, …).

People's usage behavior regarding different applications belonging to the same type of software can only be explained using social informatics. Therefore, besides analyzing the technical part it is necessary to include social analyses for understanding how certain media types and certain media providers are used. This means that "technological design alone is not sufficient to insure a good quality" of software.

Information and communication technologies often describe complex, interdependent systems referred to as *socio-technical systems*:

- people in various roles and relationships with each other and with other system elements;
- hardware (computer mainframes, workstations, peripherals, telecommunications equipment);
- software (operating systems, utilities and application programs);
- techniques (management science models, voting schemes);
- support resources (training/support/help); and
- information structures (content and content providers, rules/norms/regulations, such as those that authorize people to use systems and information in specific ways, access controls).

For designing socio-technical systems *discovery processes* (contextual inquiries) are necessary to help understanding the target group and their needs regarding a system. Those include, among others, "workplace ethnography, focus groups, user participation in design teams, and participatory design strategies".

Social informatics distinguishes *technology* and *social access*. Technology access means the presence of a computer with internet connection and is seen as being easy to achieve. On the other hand, social access is referred to as know-how regarding how systems and services work. Even though it can be supported with well-designed systems, it is seen as difficult to establish. Additionally, it was shown that "the influence of [people's] initial computer skill would [not] decline with time". Therefore, a "reliable complementary" team of supporters (e.g. "skilled technical installers, trainers and consultants") greatly improves the workability of a computer system. This means, on the other hand, that "a weak local socio-technical infrastructure can undermine the effective workability of computer systems".

Some personal remarks to the article:

The author heavily simplifies and polarizes certain points (cf. section 2, paragraph 3 and others), which is especially notable because he at first elaborates on how other so-called “pundits” (e.g. the ones who publish in Weird magazine) “often oversimplify and polarize issues”, which makes them being highly unprofessional and not resistant against critics.

This and many other points (cf. esp. later article’s sections) creates the impression that the author is strongly convinced about social informatics being the only field creating remarkable solutions, which “are actually workable for people” (section 6). He even declines that there is a possibility to create such a system by accident (and thus by taking own social competences into account without being a high professional social informatics researcher). Contrasted with section 5 (“research about appropriate infrastructure comes from studies of systems that underperformed or failed”) and the explanation that the field “social informatics” was sponsored with public money to get “further developed” (section 7) after 25 years of existence this appears presumptuous.

The author, furthermore, assumes (at least the article creates the impression that he *assumes* that) that computer science is primarily about systems, which provide support for *communication-related tasks*. He totally neglects that there is a huge field of embedded systems (e.g. control systems in cars or airplanes, …), which does not primarily contribute to those kind of tasks. This becomes evident when he recapitulates the impact of computerization and reduces their *expected* consequence to productivity increase (cf. esp. section 3). Criticism-deservingly he only later points out that in fact *throughput* productivity is meant in social informatics research concerning the “productivity paradox”. He only besides mentions a possible, but not evidently shown, quality increase of products and innovation as well as the chance for better decision making.