

Understanding YouTube in a CSCW context

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1.0 Introduction

We examine the aspects of YouTube that carries its ability to act as a tool for CSCW even though its intention as a service initially is simply to enable people to store and share videos. Although we could have chosen to analyse a tool developed to support the sharing and co-production of documents, such as Google Docs, Dropbox or Wikis, we feel that there is a need for the field to look closer at the hidden potential of tools and services that are not developed for this kind of use and to analyze how CSCW theory can be applied to examining computer software that exist on the fringes of traditional CSCW applications. As YouTube is one of the fastest growing web-services for user-generated content today we find the lack of literature on this globalized phenomenon surprising, which is why we have taken this opportunity to pull it out of the shadows and into a new context - CSCW.

As a research field “CSCW and groupware emerged in the 1980s from shared interests among product developers and researchers in diverse fields. Today it must overcome the difficulties of multidisciplinary interaction” (Grudin, 1994, p. 19). Although the study of *Computer Supported Cooperative Work* has been mainly concerned with how computers can enhance traditional cooperative work, the opportunities offered by modern technology and the recent wave of user-generated social network sites on the World Wide Web challenges the notions of work in the traditional sense. This report intends to shed light on how one can understand these new media platforms through the analytical frameworks of CSCW.

We will focus on the social media website “YouTube” as a collaborative work space, and observe its potential as a CSCW-tool. Furthermore, we will take a closer look at the analysis of a non-human artifact as an actor in a network and discuss whether the online video-sharing website YouTube can be defined as a CSCW-tool and be an actor in a network. This will be the practical part of our report. We will also revisit some of the concepts we have been through in the syllabus of the course of this term, and reflect upon YouTube in the context of CSCW, such as common artifacts described by Mike Robinson (1993). This will serve as a theoretical perspective of the report. Through using the analytical framework of Actor-Network Theory (ANT) and the concept of Common artifacts (Robinson 1993) we hope to not only determine YouTube's function in the field of CSCW, but also to reflect on our own perspective and stance in the field and what concepts we find important to consider.

This report is structured as follows. We will first briefly present the field of CSCW and cooperative work, and through this attempt to define the terms and highlight the complex nature of this field. We will then clarify the main aspects of the ANT that we use to analyse the social media presented next, YouTube. In our discussion of YouTube in a CSCW context we start by analysing it through our “ANT goggles”, then by using the concept of Common Artifacts. We end the report with a conclusion of our discussion about YouTube as a CSCW-tool.

2.0 CSCW

In order for us to give a meaningful discussion about the application YouTube in terms of CSCW there are a number of definitions that needs explaining. Due to the multidisciplinary nature of CSCW it has been faced with challenges of having participants from different areas who use the same terms in different ways. In what follows we will therefore present what other researchers have defined as “cooperative work” based on the paper by Schmidt & Bannon (1992), and give an explanation as to how we perceive cooperative work and how we will use the term further in the report.

CSCW can refer both to single instances of work being done cooperatively, assisted by computers, as well as the study of this phenomenon as a whole. In their paper “Taking CSCW Seriously: Supporting Articulation Work”, Schmidt & Bannon (1992) argues that the academic field of CSCW “[...] should be conceived of as an endeavor to understand the nature and requirements of cooperative work with the objective of designing computer-based technologies for cooperative work arrangements.” (Schmidt & Bannon, 1992, p. 5). This definition, however, omits the crucial definition of the term “work”. It seems likely that the authors were mainly concerned with the use of computers to support cooperation in real, physical workplaces. This sentiment is a reoccurring theme throughout much of CSCW literature. Christian Heath and Paul Luff (1991) describes “the details of communicative and collaborative work in a real-world environment which incorporates technology similar to that being developed in the field of CSCW” (Heath & Luff, 1991, p. 66), and Grudin (1994), Perin (1991) and Bowers (1994), among others, focus on the introduction of technology into existing workplaces. This is essential knowledge for understanding the

complexity of CSCW which is why we dedicate the following section to a deeper definition of cooperative work.

2.1 Cooperative Work

Researchers of CSCW have not restricted themselves to one focus in this field. On the contrary, due to the wide range of disciplines that CSCW concerns, studies have dealt with, for example: how groups and organizations use applications developed for individual user; ways in software initially developed to support group work affects individuals and how they adapt; and computer systems in need of individuals, groups and projects in order to support the goal of an organization (Grudin, 1994, p.21). From all the research within CSCW a range of theories have been used and concepts developed. CSCW is therefore considered an umbrella term for different people and disciplines. This is also the reason why it is problematic to assign one single definition to the CSCW and its terms as different views and focuses affect the meanings we give things. Additionally, we need to be able to address computer support for cooperative work in so many different occurrences. For examples of the different definitions of the term “cooperative work”, we have in the following referred to the work by Schmidt and Bannon (1992).

Schmidt and Bannon (1992) stresses the importance of restraining oneself from delimiting “cooperative work” by assigning it one specific definition and excluding the many forms of the term which in turn reveals new problematic aspects of defining it. Cooperative work comes, according to Schmidt and Bannon, in a rich diversity of forms¹. Firstly, in most studies cooperative work is simply defined as group work. However, it becomes problematic whether “group” is teams, projects, meetings, etc. or “a relatively closed and fixed aggregation of people sharing the same goal and engaged in continual and direct communication” (Schmidt and Bannon, 1992, p. 9). On the other hand, “cooperative work should be taken as a general and neutral designation of multiple persons working together to produce a product or service” (Schmidt and Bannon, 1992, p. 9). Surely, the meaning of “cooperation” is diverse in relation to its context. However, in the context of CSCW, we choose to view cooperative works emerging relations as results to the introduction of modern technologies. A third form of cooperative work they present in their paper constitutes

¹ We will only give a very brief summary of the different forms of cooperative work here. For a more detailed description of the different definitions in question please refer to Schmidt and Bannon (1992).

cooperative work by interdependence in work. Here they take away the need for specific interactions such as frequent communication, comradely feelings, status, group identity etc. Thus, people can cooperate without direct communication or interaction, and without even knowing each other (Schmidt and Bannon, 1992).

As an article written in 1992, one would not expect Schmidt and Bannon to have foreseen the impact and scope of the Internet and the implications and possibilities has imposed on work and cooperation. As such, their definitions of cooperative work has not taken into account the possibilities and realities that have emerged in the field of informatics over the last two decades. We wish to argue for a slightly broader definition of the term “work” within the context of CSCW that includes work in a less traditional and product-focused sense, as well as work that is not just supported, but rather enabled by computers and networks.

2.2 Work as production of services and products

The second definition of by Schmidt & Bannon of CW as being dependent on the production of products and services implies that work is defined by its output rather than input. Furthermore, it seems to emphasise the commercial nature of work. Monetary value is obviously not adequate to define the output of work, as it fails to incorporate obvious candidates like charity work and non-profit organizations.

The definition of cooperative work as something that produces a product or a service also begs the question of how to consider the massive collaborative undertaking that is the online, user-generated encyclopedia “Wikipedia”, or the interdependency of players in a Massive Multiplayer Online game (MMO) to complete specific tasks within the game. Both of these examples share many traits with traditional CW, but differentiate themselves in key areas. While an online encyclopedia like Wikipedia could easily be defined as a “service”, the distinction between service producer and service provider is eradicated. Furthermore, the service in itself is not a commercial endeavour, instead relying on donations and gifts to keep the website running (Wikimedia, 2010). Interestingly, while Wikipedia is part of the non-profit Wikimedia Foundation, commercial actors have used articles from Wikipedia for profit. One such example is the Norwegian SMS-service “Adam”, which sold parts of Wikipedia articles on demand. (Mobilen.no, 2009)

The act of completing in-game tasks in an MMO that requires cooperation between players might not produce a specific product or service, but adheres closely to other defining elements of CSCW such as interdependency and specific roles for the involved users as described in Schmidt and Bannon's (1992) third definition of cooperative work. Gaining in-game rewards in such games may even indirectly result in monetary gain for the user, as digital items and rewards are sold on online auction sites like eBay for real money. Furthermore, the exchange of real money for in-game currency is commonplace, although usually a violation of the game rules and generally frowned upon (Blizzard, n.d.). For all intents and purposes, such persistent online games have a working in-game currency that has an exchange value with real money, and could be subject to inflation or deflation (Brown & Bell 2004, p. 1). In theory, this enables people to use MMOs as a source of income - or, if you will - their place of work. This blend of entertainment and work, user-generated content on a professional platform and commercial interests in non-profit cooperative work dilutes the clear definition of the term cooperative work.

For the purpose of this paper we define CW as the cooperation between two or more individuals either working towards a common goal, or working in an interdependent relationship. Goal in the form of a design idea for an application, idea generation, or communicating a solution to a problem. Applying this very generalized definition of cooperative work to YouTube can be problematic because of the many different uses of YouTube by new and/or experienced users. For this reason, we want to make an attempt at using ANT as a central theory to determine YouTube's contribution within the use of CSCW.

3.0 Actor-Network Theory

There are several theories and concepts available to aid researchers in conceptualizing CSCW. Although we chose the Actor-Network theory as our central theory in understanding YouTube in a CSCW context, there are other theories central in CSCW literature used to understand and design for cooperative work, namely *Strauss' theory of work* (Gasser 1986) and *Activity Theory* (Bardram, 1998; Engeström, 2001). "According to the Activity Theory, human work and being (activity) is always mediated by artifacts such as tools and language" (Bødker, Greenbaum & Kyng, 1991). That is, it is the *objective* of the activity that distinguishes activities from each other. And as we apply the theory in to understanding cooperative work,

we find ourselves focusing on the collaborative activity with a shared objective. This objective is distributed among several actors whom each according to the shared objective performs one or more actions (Bardram, 1998).

Strauss' theory on work (Gasser, 1986) with its empirical focus and sociological roots could result in some interesting perspectives. Particularly *Production Lattice*² could be used to understand the structure and coordination that makes up YouTube. Unlike ANT, however, we feel that Strauss' theory and the concept of Production Lattice places too little emphasis on the non-human actors in the network and is generally too focused on structures and interdependencies between human actors. The result is that the theory lends itself better to understanding traditional workplaces where computers or technology is being used, rather than computer *enabled* or *-dependent* work like YouTube. Gasser (1986) have demonstrated this by using the Strauss theory in trying to understand how users of technology adapt and are affected by the technology. By using the theory he explains how different processes of adaption emerge when introducing technology in to the work situation and the production lattice.

With the similarities of using technical medium such as the camera, we find Aanestad's (2003) aim for the analysis of the camera as an actor similar to our own. As we wish to examine YouTube's contribution in a CSCW context, we have found inspiration in Aanestad's work to use the Actor-Network Theory. Out of the three central theories we have presented, we feel that ANT is best suited to understanding YouTube in a CSCW context. The non-existing boundaries between human and non-human actors in the network, as well as the process of translation and alignment lend themselves well to understanding the complex, fluid and interdependent network of actors that makes up YouTube. We will give a brief introduction to the ANT in the following.

With the work of Bruno Latour, Michael Callon and John Law the Actor-Network Theory (ANT) emerged in the 1980s as a conceptual framework for exploring collective socio-technical processes (Ritzer, 2005). However, it was Bruno Latour who took the focus further to include technology and information technology. "The theory is concerned with

² The production lattice can be used as a tool to visualize a complex structure of intersecting task chains, and see how they fit together.

investigating the social and the technical together” (Walsham 1997, p.1). It erases distinctions between humans and non-humans, and by linking the terms *actor* and *network* they try to avoid creating a distinction between agency and structure (Aanestad, 2003; Ritzer, 1997). Aanestad (2003) express that it is for this reason that she was motivated to apply this perspective to her study. The main concept of the ANT is *translation*. This is an important aspect of the ANT and is one fundamental reason for why it seems logic to analyze our experiences with YouTube in relation to this particular theory. The following quote by Aanestad (2003) takes Latours concept of translation and explains it in a simplified manner, appropriate for the limited space we have for this report:

(...) ANT claims that the actors in the actor-network theory have different and possibly incompatible interests, and that stability (or order, agreement, success, goal achievement) is obtained when the network is *aligned*. The alignment of the networks occurs through a process where actors’ interests are *translated* (i.e. reformulated, modified, or changed) into more generally agreeable expressions, so that several actors may support the resulting translation (Aanestad, 2003, p. 7).

These translations can be addressed through a medium to communicate what actions are to be made. The medium can be in the shape of an artifact, a rule, a procedure, or a standard. Furthermore, actors are enrolled and cooperate towards a common goal if they support the given translation (Aanestad, 2003).

In her paper “The Camera as an Actor: Design-in-Use of Telemedicine Infrastructure in Surgery” Aanestad (2003) describes how the introduction of technology into a operating room changed the pre-established work situation, as well as the technology itself was changed in the process. While Aanestad’s goal was to investigate the technology’s contribution in the cooperative work, our purpose is to explore the parallels between the YouTube and the camera, and how concepts in ANT can be used to explain YouTubes usefulness in cooperative work.

We will put on our ANT goggles to analyze YouTube, and in the light of the work by Aanestad argue whether it would be appropriate to consider YouTube as a tool in CSCW or not. We believe that looking at YouTube from an ANT perspective will provide an interesting take on the subject that is well suited to understand the cooperative aspect of YouTube, as

well as the technological affordance that enables the service. In the following we introduce the online video-sharing site YouTube which will be the center of our attention in our analysis and discussion. What is interesting to us is answering *if* YouTube can be considered an actor in a CSCW network, and if so, *when* is this an appropriate designation.

4.0 YouTube

Part of the so-called “Web 2.0” revolution in the last few years, was video sharing sites where users could upload and share short videos. The report will here on discuss the role these sites can play in CSCW. Specifically, we will focus on YouTube, as the largest and most widely recognized example of video-sharing sites for user-generated content.

It has now been a little more than six years since the founders of YouTube registered a domain name and began to work on the site in February 2005. In April the first video was uploaded, and by the time YouTube was officially launched in December the same year, already 8 million videos were being watched daily. In May 2010 the number of views exceeded 2 billion on a daily basis (YouTube, n.d., a; YouTube, n.d., b). There is no doubt that YouTube as a source of entertainment have surpassed more than the founders first expected when developing the service, and certainly the use of it is not limited to one single purpose.

YouTube provides a forum for people to connect, inform and inspire others across the globe and acts as a distribution platform for original-content creators and advertisers, large and small (Youtube, n.d., a).

This articulation of what kind of service YouTube is providing is taken from YouTube’s own website, and highlights two characteristics relevant for our analysis in terms of CSCW. First, it is a forum for people to connect, inform and inspire others across the globe. One very central point in CSCW is communication, and how a group of people can communicate through a computer system regardless of their different locations. This knowledge is a fundamental starting point for us to analyze YouTube in the context of CSCW, as communication is a key aspect of making CSCW networks work (Robinson 1993). And second, YouTube *acts* as a platform for the distribution of user generated content of both

advertisers and other content creators. This is interesting to us as we wish to analyse YouTube from an Actor-Network theory perspective, and see whether YouTube can be accounted as a CSCW-tool or not.

As a social media site, YouTube is not exactly a tool used for traditional work, nor does it require cooperation on behalf of the users, however, we will in the remainder of this report argue that the basic structure of this social media site have similarities with several concepts found in the field of CSCW.

5.0 YouTube in CSCW

This section is dedicated to our discussion of YouTube as a CSCW-tool. We will first use the Actor-Network theory to understand YouTube as an actor in the network of users and videos, and how it enables the cooperative work that occurs. In the light of the analysis made by Aanestad (2003), we wish to discuss what function YouTube may have as an actor in this particular CSCW network. Additionally, we feel that YouTube in the context of CSCW embody concepts that are relevant in a discussion of it as a tool. Therefore, YouTube will also be discussed in a matter of being a common artifact in order to shed light upon relevant concepts of the CSCW field.

5.1 YouTube in an Actor-Network

Aanestad (2003) speaks of the camera as an actor, however, we feel there is a need for a distinction between the camera as an actor and the video as a separate actor. The former is, in one sense, a tool that enables users to record video, the latter is the product made by the camera. Similarly, YouTube is a platform for hosting and distributing videos online, existing separately from the tools used for making videos and the videos themselves.

In Actor-Network Theory, researchers are primarily concerned with the relations between actors, rather than their inherent features (Aanestad 2003, p. 6-7). This makes ANT a relevant tool for understanding YouTube within the field of CSCW since YouTube works in a symbiotic relationship with the actors that make up the network. Much like fellow Web 2.0 giants Wikipedia and Facebook, YouTube is dependent on users who generate content and the technology that enables the users working together to create an ever-expanding service. As a result, the distinction between humans and non-human actors in the network is ultimately less

relevant than the interplay of the actors involved. YouTube as a service could not exist without either of the two broad categories that is combined - the users who create, upload, view and comment on videos, and the technology, hardware and software that enables the service.

While this is a departure from classical CSCW scenarios, where computer systems or solutions are introduced to an existing place of work, the tools employed in CSCW studies are still relevant to understanding YouTube. In the light of our proposed disregard of classical, Marxist understanding of work as a production of goods and services (see chapter 2.1), YouTube still employs many of the central characteristics of CSCW.

Actor-networks are not only defined by the harmonious interplay of actors, but also by the inherent power struggles and differing or incompatible interests between actors. (Aanestad 2003, p. 6-7) Stability within the network is only achieved through *Translation*, i.e. the alignment of the motives and intentions of the actors in the network (see chapter 3.0). The users of YouTube are, as previously discussed, a vital part of the network as content-generators for the service. They generate viewable videos, comments, votes and hits, and make up the actors in the network that provide *content* to the supplied *framework*. The interests and motivation of the users may vary from person to person, although the service they are using are partly dictating their options. YouTube has a set of rules to be followed, most notably on video length, (offensive) content and copyrighted material (YouTube, n.d., c), but allows the users to upload videos without prior consent from the site administrators. As a result, the goals and intentions of the individual users are not set, but guided by the developer-set inscription. As a relatively liberal set of rules and guidelines, YouTube affords diversity in its use and content. Some might use YouTube to store and share their home-made videos with either their friends or the whole world, others as a platform for communication or debate, and commercial actors, like movie production companies and record labels, can use YouTube as part of their marketing for their products. Amidst the varying content providers on YouTube are the users who do not upload videos themselves, but may still generate YouTube content in terms of video comments, votes on comments and videos, or - at least - adding “hits” to videos, increasing their popularity.

The non-human actors of the YouTube network include the servers, interface, hardware and software that together make up the *platform* that is YouTube. Each of these actors work together in tandem to enable the users in their goals and to create a service that is coherent and in alignment with the goals and intentions of the various actors. The motives of these actors can be seen in the light of the motives of YouTube as an organization - an actor in its own right.

YouTube is a commercial enterprise owned by Google and makes most of its income on ad revenue (GigaOm, 2011). As such, the opportunities and options afforded to the users through YouTube are very much intertwined with the commercial interests of Google. This affects the balance between the *ideal* service and the cost-effective model, such as saving bandwidth and storage capacity by placing a cap on video length. One could also argue that the restriction on publishing copyrighted material is at least partly driven by economic concerns, to avoid lawsuits and to nurture the relationships with professional content providers and copyright owners.

The ideal service would be one where all actors' interests are *aligned* through the process of *translation* - i.e. changed or reformulated to an agreeable expression (Aanestad, 2003, p. 7). As it stands, YouTube is seemingly fairly successful in the alignment of the goals of the actors in the network, although the inscription necessitates that human actors wanting to upload or view material that does not fit with the rules, such as offensive or copyrighted material, are at odds with the network. Resources spent on finding and removing such material from YouTube (Google, 2011) suggests that there is a somewhat notable discrepancy between the interests of certain individual actors and the network as a whole. Seemingly, however, most actors are in agreement on the expression, and the translation process of the network is evidently effective, especially given the vast amount of human actors in the YouTube network.

5.2 YouTube as a Common Artifact

In what follows we will shed light upon some of the concepts that are relevant in a discussion of CSCW-tools. These concepts constitutes how YouTube can be seen as a tool to support cooperation on computers, and we have found the concept of Common Artifacts to accommodate a number of the dimensions that needs to be acknowledged in a CSCW

application. Mike Robinson (1993) highlights how the concept of “common artifacts” can be a better starting point for analysis and design of information systems. Common artifacts are, according to Robinson, “a label for a set of work dimensions that need to be reflected in CSCW applications” (Robertson 1993, p. 13). Although the users of the common artifacts in the examples by Robinson (1993) are not distributed as the users of YouTube it may still support the four dimensions of common artifacts. We can recognize particular artifacts as common artifacts if they occupy the dimensions of *predictability*, *peripheral awareness*, *double level language and overview*. In our discussion of YouTube as an actor in a network, we have come across some of these particular characteristics of work. We will give a brief outline here of the four dimensions found in YouTube as a common artifact.

The first characteristics of common artifacts presented by Robinson (1993) is predictability. The fact that an artifact is predictable, gives it the characteristics of being a simple tool for getting the work done. “Predictability (function, dependability, appropriate interface) is a crucial part of CSCW application design” (Robinson 1993, p. 5). In YouTube this predictability is found in its functions and interface. As competent users of the service, we expect to be able to watch, upload and rate videos, and post comments if we wish to, and search for certain videos. In this network of users and videos enabled by YouTube, the work tasks we wish to complete (in relation to a cooperation with others), whether it is to upload a new video, watch or comment, are simply done by using the functions and interface of YouTube. The service is also dependent on the network of users, and therefore we can expect other users to be on “the other end of the line”. This raises the awareness of other users being present, which leads us to the second dimension of common artifacts: peripheral awareness.

According to Robinson peripheral awareness needs to be supported in order for coordination of cooperation to be possible. From our own experience with using YouTube we have discovered how it supports peripheral awareness by allowing us to see who posted the videos or comments. The coordination happens by making visible the user who is responsible for uploading the video. Comments on the video are therefore indirectly comments to the user who uploaded it. And comments are made by other users with a visible username. Also, YouTube allows the users to see how many views videos get, and by this it provides users of the site to see “at a glance” what other people are doing or watching (Aanestad, 2003).

The double level language is the third dimension presented by Robinson. With this concept he refers to the exchange of words both implicitly and explicitly. “‘Double Level Language’ is a phrase intended to catch the idea that implicit, often indirect communication (through artifacts) and explicit communication (speech, ad hoc notes) are not alternatives, but complementary and mutually supportive” (Robinson 1993, p. 9-10). In YouTube this is evident both in the double level language of videos that may contain graphic communication with or without both speech and movement, and in YouTube itself with its different functionalities and ways to express oneself. Being able to post a comment on a video or simply clicking on the “like” or “dislike” function enables every user to express themselves both implicitly and explicitly. Robinson also brings the achievement of mutual learning and coordination to the table to express this dimension, which have been a very central issue in the CSCW field through the discussions of articulation work (Robinson, 1993).

The fourth and final dimension that Robinson writes about is common artifacts’ ability to give “an overview of the work-world *which would not otherwise be available*” (Robinson, 1993, p. 11). When first entering the site we are introduced to a number of popular and recommended videos. Videos which have reached a high number of views, or comments. This gives us an overview of what other users have been watching and spent time on. Also, when navigating to a video to watch, it is possible to spot “at-a-glance” the status of the current video, by seeing the amount of views, likes and dislikes, and also the positive or negative comments it has received from previous viewers. This raises the awareness that others have been in this particular webpage, and added to the content, but also an overview of what type of feedback this video have received.

The most important point to take on this is the multidimensionality of such an artifact, in our case YouTube. “Taken together, under the generic label of common artifact, they provide a design space to support cooperative work in all its fluid transitions - yet without to prescribe or anticipate activity and task sequences” (Robinson 1993, p. 12). As such, the multidimensionality that we have presented in this final discussion, shows how YouTube can be accounted for as a Common Artifact, as it is supporting the varying levels of interaction and tasks. Most importantly, with the perspective on YouTube as a common artifact, we are provided with a tool to see how the website supports the unanticipated goals in such a design space supporting cooperative work and mutual understanding.

7.0 Conclusion

We have now presented our definitions of the term CSCW and what cooperative work means to us. Then we briefly present the Actor-Network Theory and the central concepts that will be used for our analysis of YouTube. As we have explained in the following section, YouTube is not a tool made for cooperative work, however, we have discussed the similarities it has with traditional CSCW-tools, which makes it somewhat a system with the potential to be used for the unexpected context. This factor lead us to also pull the concept of common artifacts in our conception of YouTube and discovered that YouTube also holds the four dimensions of common artifacts. This is the reason why we have chosen to focus on YouTube in this partly theoretical and practical report. The practical part has been based on our own experiences of using YouTube and the limited theory we can find about the site. However, the report has been mainly theoretically grounded in the work by researchers such as Schmidt and Bannon (1992), Aanestad (2003), Robinson (1993), and Grudin (1994) for both historical perspectives, and concepts for understanding CSCW.

While there is not one single definition to ascribe cooperation work, we have for the purpose of this report, as discussed, defined cooperative work as cooperation between two or more individuals toward a common goal, or working in an interdependent relationship. The goal being in the form of a design, an idea or a communication solution to a problem.

Problematizing the traditional definition of work as seen in much of CSCW litterature is necessary to accommodate for the modern breed of services that is not just *computer supported*, but rather *computer enabled*.

While some may conclude that YouTube, cameras, Lotus Notes, Facebook, Twitter, and other such technical inventions may or may not be considered CSCW-tools, we propose that expanding the CSCW scope to accommodate for such objects and tools enhances our understanding of both the object in question and the field of CSCW as a whole. In our case, we have seen how the values and goals of YouTube as a video-sharing site emerged through both an independent and interdependent relationship between actors in the network, but also as a common artifact. YouTube might not be a classical example of CSCW-tool, but it shares many traits with traditional CSCW-tools when seen through the CSCW concepts. We feel that using the CSCW framework to analyze and understand YouTube is natural and fruitful given

the modern “Web 2.0” template of vast numbers of unpaid human actors working with professional, commercial and technological actors to provide a service.

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