

INFORMATION AND COMMUNICATION TECHNOLOGY APPLICATIONS AND THE MEDIATIZATION OF SOCIAL INCLUSION

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Ambient Assisted Living (AAL) has become a topic of growing importance. On the basis of the internet as a wide spread standard interaction media, numerous applications using information and communications technology (ICT) have been developed for AAL. From a sociological perspective these developments can be considered as attempts targeting at social inclusion. How these technologies should be installed: is the highest technical level the optimum, or is an adaptation to the present level of personal abilities of understanding and behaviour to be preferred?

Keywords: Ambient Assisted Living (AAL), challenged person, ICT applications, mediatization, nudging, social behaviour, social inclusion, social and technological change.

Many applications using information and communications technology (ICT) have been developed for Ambient Assisted Living since the internet has become a standard interaction tool. The sociological method of approach to the technical change associated with the use of information and communications technology (ICT) for inclusion makes possible to record and evaluate the social effects of this process.

In this approach, a few selected sociological concepts will be pointed out, with the help of which hardware and software developments of the information and communications technology for the support of disabled people can be observed as a social concern. In short, it is about ICT applications and the mediatization of social inclusion of people with a disability or 'with special challenges'.

Digitisation made possible to have a multitude and variety of technical devices that are difficult to overlook, enabling people to communicate over any distance practically anywhere and at any time. The people who use these devices are referred to as "users", indicating the hierarchy established by the "providers" of the technology behind them. In addition to human-to-human communication, which is conveyed by devices and programs (hardware and software) of information and communication technology (ICT), data exchange between machines is rapidly increasing.

Considering the part of technical change that affects people's communication, this is a form of social change which is understood and analysed as a process of mediatization. There are already several approaches to the description and analysis of mediatization, but it seems appropriate to take a definition of use oriented towards human application as starting point.

„User-oriented approaches, on the other hand, tend to regard media change today as the emergence of a mediated communications network rather than the emergence of individual media, which today is no longer seen as a virtual network of face-to-face communication, but rather as being inextricably intertwined with the forms of face-to-face communication. Accordingly, people are increasingly turning this network into their living space, while on the other hand it permeates people as social beings in their actions. New or changing media are created here by new needs and wishes, by new expectations and creative ways of using and communicating with people.”(Translation E.F. from Krotz, F. u. a. 2014: p. 13)¹

This definition leads directly to the consideration of the technical influence and design of the living space of humans and justifies the investigation of the hard- and software applications which were created with the objective of social inclusion by communication science and social science research. Particularly sociology, which has the observation of social change as a central topic, is methodically well prepared to take into account the intended results as well as the unintended side effects.

The fundamental question can be raised, whether media-supported communication, i.e. also counselling or behavioral guidance by means of the technical possibilities of the Internet, is social action. Beforehand, it could be that Internet based communication is a just technical and social environment, but not a social activity.

Heiner Meulemann explains: "The 'environment' of our actions is not only raw nature, but also human-crafted nature. The 'environment' of action continues to be other people and the cultural objects created by man - from road signs to books. One can certainly argue that every environment of action is social because it has been worked on and given meanings by people:"(Meulemann 2013: p. 38)²

People - whether with or without 'special challenges' - on the one hand are exposed to the environment in terms of the natural and cultural landscape, so they have to find their way around it, use it or at least adapt. In addition to this physical environment, which can also be described by geographical terms such as natural and cultural landscape, there is also a "social environment" (see Meulemann 2013: p. 39). There the openings and obstacles to one's own action result from previous actions of other people. The use of these possibilities in terms of opportunities, structures of opportunity, degrees of freedom for one's own actions as well as restrictions through norms, sanctions or technical obstacles are of central importance for the quality of life in self-determination, thus for one's own social action.

Through the mediatization of communication, human action is extended by new facets. In addition to the distinction between 'pro-social' action (e.g. assistance for others) and 'anti-social' action (interfering with the actions of others through exploitation, deception and even criminal behaviour), there are now two further variants: 'sociable' action in the presence of others, which sociologists traditionally have in mind as social action, and 'solitary action', i.e. a behaviour that is based on the anticipated reactions of others (Cf. on this and further information: Meulemann 2013: p. 39)

In addition to these two variants of social action, there are two other distinctions. Human action can be characterised by 'likeness', which is the case when one wants to perform similar actions in the same place with other similar actions, and when this requires a common will and joint actions, such as celebrations with friends or protest rallies. On the other hand, it is about 'complementarity', if the effects of one's own actions only result from the reactions of people who are currently absent and will only become aware of the actions in the future. This includes the development of products and services, such as hardware and software applications, which are only consumed or used after they have been created.

Applying these conceptual distinctions to the development of ICT applications for mediated social inclusion leads to the description: It can be understood as a prosocial, solitary act in the absence of others aimed at complementarity.

Social inclusion, which is mediated by ICT applications on the Internet, is prosocial because it takes place in the interest of others, it is lonely because others are absent and it is aimed at complementarity, because the ICT applications are envisaged do not take actions instead of the advisor, but are intended to guide, empower or encourage him/her to act in a way, which is complementary to the accompanying information given and assists him/her to perform the desired action.

The adequate, intentional social inclusion leaves people with 'special challenges' (Wikipedia, among others) the freedom to accept or reject the hints and help, but it is oriented towards the possibilities for action of these people as a basic condition and is thus a form of social action. This is intentionally tied to the broad definition of social action given by Meulemann:

“Social behaviour is action that is geared to the possibilities for action of others. Orientation to the possibilities for action of others is therefore the fundamental condition with which we have excluded the narrower area of social behaviour from the total realm of action, of voting among alternatives in general. Social action, like any action, is purposeful or intentional. Intentionality defines behaviour at all, and orientation towards other people's alternative actions limits social behaviour. "(Meulemann 2013: p. 47) ³

New media, and ICT applications in particular, are changing the opportunity structures for behaviour at social, political and cultural levels. It is not technology that changes, but people who assign new functions to the technical options and use them. This is where the technical design possibilities for inclusion have their fundament.

Through the speed of transmission, the ability to store and duplicate information, mediatization enables both individualized and standardized communication from one person to another, from one person to many people and from many people to many, regardless of spatial proximity and temporal coherence or simultaneousness. This makes it easier to build up and maintain social contacts and maintain them as relationships with others. In this way,

mediated communication can contribute to the formation and preservation of personal social capital, which is an important aspect of social inclusion.

We follow Pierre Bourdieu's definition: "Social capital is the totality of current and potential resources associated with the possession of a permanent network of more or less institutionalized relationships of mutual recognition or appreciation; or, in other words, these are resources based on belonging to a group. (...) The extent of the social capital that individuals possess therefore depends on the extent of the network of relationships that they can actually mobilize, as well as on the extent of the (economic, cultural or symbolic) capital that those possess, with whom they have a relationship."(Bourdieu 2015: p. 63f.)⁴

Mediatized communication is particularly suitable for establishing and expanding so-called "weak ties". Mark Granovetter formulated a theory in 1973 about the strength of such weak ties, in which he explains that the "strong" ties within families and friends are more likely to be understood as closed networks in which people's propensity to act in small groups prevails. On the other hand, the "weak ties" provide connectivity across a network, with the "weak ties" even bridging the holes of the network. Therefore, unlike their name, the "weak ties" can develop great strength and allow connections to diverse networks. (Cf. Granovetter 1973; Cf. Lindgren 2017:281)

Applications of information and communications technology (ICT applications) are in many aspects able to provide people with 'special challenges' with the support that mitigates many disability variants in their respective limitations and reduces the negative consequences of them. Therefore the implementation of ICT applications is a social concern that deserves a great deal of support and requires social and political support.

At the same time, we should not close our eyes to the immanent characteristics of technical systems. These are particularly inexpensive in production - possibly also in application - if they are produced uniformly in large numbers. There are so-called effects that make mass production cheaper - an important social achievement for consumers as well as an economic advantage for producers and suppliers. However, there are also synergetic effects which, despite an increasing diversity of products, enable cost advantages to be achieved by using common resources.

It should be considered that inclusion will lose its character as social activity as well as social behaviour, if there are no ways left for individual decisions. As soon as a participation in ICT applications for inclusion cannot be modified or rejected, even the best intentions change their character to coercion.

On a middle position between voluntariness and coercion stands the so-called "nudging" (Thaler and Sunstein 2008). The "nudges" are any aspects of the choice architecture, to softly push people to act in a certain, predictable way, whereby this influence is regarded by the inventors as being free of force, for example in the way of a motivating, attractive alternative to the otherwise normally practised behaviour.

However, there is also criticism of the nudge approach, which is based on irrational individuals, who do not accept behavioural variants as diversity and ultimately do not respect the autonomy of individuals. One of the questions is to what extent 'nudging' can be justified as a guide to a certain behaviour.

To what degree does the information and communication technology developed for inclusion still allow individualism? To what extent is homogeneity and uniformity of behaviour promoted or enforced?

This leads to a series of considerations which should not be ignored in the development of ICT applications if their justification is not only to remain at the level of technically feasible aid instruments, but also to take into account social responsibility for self-determined behaviour.

How far should inclusion go? How much consistency is necessary using ICT applications to make them effective?

Where do the objectives come from which determine the design and development of the ICT applications? It is conceivable that there are and will be different objectives in this area as well, which may change over time. Take another example from another area: Passenger cars in Germany have been manufactured and sold for decades with a very high proportion of manual transmissions, while the vast majority of private cars in practically all other countries have been supplied with automatic transmissions for a long time. Who wants to judge from

which point of view what is better, what is worse? Who is in a position to force or urge others to change their preferences?

Should modern IT technology be aimed at the best, perfect and most distant goal, and should it be directed towards it in a single step, or should technology and its users be led in several steps towards this goal? The latter could mean that it will be easier for people (especially for those 'with special challenges') to reach this goal, while a disruptive, large leap directly to the technically (currently!) feasible ultimate goal may require substantial, difficult conversion and learning processes that will result in a large number of frustrating experiences.

For example, a discussion is already underway in the area of 'big-button mobile phones': How far are the manufacturers of such devices going to ignore the needs of their target group? The starting point for the manufacturers concerned is the consideration that easy-to-use devices should be created for people with hand and finger restrictions on fine motor skills, as well as for people who have limited cognitive comprehension and difficulties to recall technical information and processes, who are hard of hearing or have difficulty reading information from electronic displays. However, the 'accessibility' or quality to be user-friendly which is actually envisaged is often far from being achieved. The intentional renunciation by manufacturers of many technically possible functions - also in favour of a particularly low sales price - allows clear gaps to what is feasible in ICT today. The author of a recent test summarized that he was shocked how badly the providers (of some big-key mobile phones) are adapting to their target group (cf. Pakalski 2017).

It is in no way possible to decide once and for all in which direction ICT applications for social inclusion should develop. At times, design thinking is praised as a particularly suitable method of targeting new products and services to new users. But what does it look like in detail: is there an average user who was constructed as a majority dummy from data, or is there a range of user groups of members with varying dimensions, characteristics and behavioural dispositions? Which variations are accepted at which development, production and application costs? Should following the technology instructions be voluntary? Should it be sanctioned positively or even be enforced? What happens in the case of uncooperative behaviour?

Even prevailing doctrines change. Consider the consumption of milk and butter, which for decades had been regarded as rather unhealthy, whereas research into the effects of cholesterol has recently given the all-clear (cf. Woltz 2017; cf. Janssen 2017).

So far, we have been very supportive of living in a society where diversity and different lifestyles can be equally performed. How far can this be maintained if ICT applications are used extensively for inclusion?

Will there be a new edition of the discussion on 'structural violence' (cf. Galtung 1982)? What about the more subtle but potentially far-reaching ICT applications for inclusion? Which different lifestyles can be considered? Where does diversity end, where does the need for inclusion of people from further afield begin, through the use of technology without alternatives? How many of the concepts of life described as different sexes are to be addressed differently and individually?

We face ICT applications that offer enormous opportunities for inclusion. However, in interaction with people, technology becomes a communicative challenge that raises questions. Not only technical solutions must be found, but also socially acceptable answers.

Notes

1. Original source: „Nutzerorientierte Ansätze dagegen betrachten den Medienwandel heute überwiegend nicht mehr als Aufkommen von Einzelmedien, sondern als Entstehen eines mediatisierten Kommunikationsnetzes, das heute nicht mehr als virtuelles der face-to-face-Kommunikation gegenübergestellt, sondern als mit den Formen von face-to-face-Kommunikation unentwerrbar verschränkt begriffen wird. Dementsprechend machen die Menschen dieses Netz zunehmend auch zu ihrem Lebensraum, während es umgekehrt die Menschen als soziale Wesen in ihrem Handeln durchdringt. Neue oder sich wandelnde Medien kommen hier durch neue Bedarfe und Bedürfnisse, durch neue Erwartungen und kreative Nutzungsweisen und Kommunikationsformen der Menschen zustande.“ (Krotz, F. u.a. 2014: S. 13)

2. Original source: „Umwelt' des Handelns ist nicht nur rohe, sondern von Menschen bearbeitete Natur. 'Umwelt' des Handelns sind weiterhin andere Menschen und die von Menschen geschaffenen Kulturgegenstände – von Verkehrszeichen bis zu Büchern. Man kann durchaus argumentieren, dass jede Umwelt des Handelns sozial ist, weil sie von Menschen bearbeitet und mit Bedeutungen versehen worden ist.“ (Meulemann 2013: S. 38)
3. Original source: „Soziales Handeln ist Handeln, das auf die Handlungsmöglichkeiten Anderer eingestellt ist. Die Orientierung an den Handlungsmöglichkeiten des Anderen ist also die grundlegende Bedingung, mit der wir aus dem Bereich des Handelns, des Wählens unter Alternativen überhaupt, den engeren Bereich des sozialen Handelns ausgegrenzt haben. Soziales Handeln ist wie jedes Handeln zielgerichtet oder intentional. Intentionalität definiert Handeln überhaupt, die Orientierung an Handlungsalternativen Anderer grenzt darin soziales Handeln ein.“ (Meulemann 2013: S. 47)
4. Original source: „Das Sozialkapital ist die Gesamtheit der aktuellen und potentiellen Ressourcen, die mit dem Besitz eines dauerhaften Netzes von mehr oder weniger institutionalisierten Beziehungen gegenseitigen Kennens oder Anerkennens verbunden sind; oder, anders ausgedrückt, es handelt sich dabei um Ressourcen, die auf der Zugehörigkeit zu einer Gruppe beruhen. (...) Der Umfang des Sozialkapitals, das der Einzelne besitzt, hängt demnach sowohl von der Ausdehnung des Netzes von Beziehungen ab, der er tatsächlich mobilisieren kann, als auch von dem Umfang des (ökonomischen, kulturellen oder symbolischen) Kapitals, das diejenigen besitzen, mit denen er in Beziehung steht.“ (Bourdieu 2015: S. 63f.)

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