

Editorial

The *CSCW Journal* Turns 20

The first issue of the *Computer Supported Cooperative Work: An International Journal* appeared in September 1992¹—and here we are, 20 years later, closing the Journal's 21st volume!

This calls for celebration, and even more so since it roughly coincides with the 'silver jubilee' of the first CSCW conference in 1986. To celebrate both milestones for CSCW, a special issue is in preparation in which a number of distinguished CSCW scholars will take stock of what has (and what has not) been achieved so far on different fronts of CSCW research. (The 'jubilee' issue is in production and will be published early 2013).

However, as far as the *CSCW Journal* is concerned, it is appropriate on this occasion to reflect on the Journal's editorial policy as it was expounded in the 'Editorial' of the first issue, written by John Bowers on behalf of the rest of the 'editorial collective', which comprised John Bowers, Liam Bannon, Mike Robinson, Tom Rodden, Kjeld Schmidt, Susan Leigh Star, and Randy Trigg.²

Recognizing that the new field's key problems and conceptualizations were still the object of discussion and contention, the 'Editorial' declared the Journal's commitment to avoid a premature definition of CSCW:

'We feel that it is important that this journal does not side a priori with any particular definition of CSCW. For us, CSCW is defined through the actions of those who work in its name or in relation to those four letters. What CSCW is in detail is still an open question. The definition and redefinition of CSCW is an ongoing process and one which this journal is intended to reflect.'

'However', the 'Editorial' went on, the *CSCW Journal* was firmly committed to a research program focusing on the development of computing technologies for cooperative work practices, as opposed to unfettered technical experimenta-

¹ The official publication date is given as March 1992 but the first issue only went into production in August the same year, the unmistakable sign of a difficult birth.

² Saul Greenberg joined the 'editorial collective' as of volume 2 (1994).

tion, on one hand, and on the other, social science studies without a clear commitment to the development of technology:

‘However, we are insistent that contributions to this journal demonstrate that they are distinctively CSCW and belong here. There are many other journals which publish, say, (purely) sociological studies of work or (purely) computer science approaches to computing in the workplace. [...]

We want to encourage contributions which are mindful of the relations between social scientific studies of cooperative work and the computing support requirements of cooperative work. In many respects, we want to encourage hybridism in each contribution! For example, we would urge social scientists who have made a study of a workgroup to spell out clearly what the implications of their findings are for design of appropriate computer support. Equally, we would urge a computer scientist reporting on a technological innovation in, say, meeting room support to spell out clearly how this work is motivated by studies of meetings or what new studies of meetings it suggests.

We do not mean to be excessively strict here but we do feel that it is important that an apartheid between the social and computer science aspects of CSCW should be avoided. A CSCW journal not committed to such a policy is in danger of becoming a repository for weak computer science alongside weak social science. That would be a disservice all round.’ (Bowers, et al. 1992, pp. 1–2).

This basically sums up the program the *CSCW Journal* has been pursuing over the past 20 years and is still pursuing today.

The first issue of the *CSCW Journal* also featured a couple of programmatic articles authored or co-authored by members of the editorial collective in which the same general research program was formulated and elaborated in different ways (Rodden et al. 1992; Schmidt and Bannon 1992). The article by Schmidt and Bannon thus argued that CSCW should be conceived of ‘an endeavor to understand the nature and requirements of cooperative work with the objective of designing computer-based technologies for cooperative work arrangements’. Noting that CSCW, as a field of research that ‘involves a large number of established disciplines, research areas, and communities’, ‘is an arena of discordant views, incommensurate perspectives, and incompatible agendas’, they stressed, in line with the program outlined in the Editorial, that CSCW, ‘as a research area devoted to exploring and meeting the support requirements of cooperative work arrangements’, ‘is basically a *design oriented research area*. This is the common ground. Enter, and you must change’ (Schmidt and Bannon 1992, p. 11).

The reason for putting such strong emphasis on the technological orientation of CSCW was the insight that extant computational technologies fell short in the face of actual cooperative work practices.

This insight was the result of an arduous process that had unfolded over the preceding decade. The set of research problems that we now consider defining of CSCW were not handed down on tablets from some committee but were identified and articulated in the 1980s within and among a variety of research areas, such as Office Automation, Office Information Systems, Distributed AI, Distributed Systems, Computer-Mediated Communication, Human-Computer Interaction, Systems Development, Participatory Design, and so forth. CSCW formed as researchers from these and other areas began to sense that important problems they were trying to tackle within their individual areas might somehow be related to problems that were being investigated, under different names, in other areas, and as they then began to consider, examine, and negotiate these perceived commonalities or connections. It was a protracted and often bewildering process of reciprocal exploration and mapping.

It was also a process that played out over a wide range of events and publications: Of very early initiatives, one should of course mention the small workshop held in 1984 under the name ‘Computer Supported Cooperative Work’, organized by Irene Greif and Paul Cashman (Bannon 1993). Bringing together researchers such as Doug Engelbart, Clarence ‘Skip’ Ellis, Tom Malone, and Randy Trigg, this small workshop anticipated and can perhaps be said to have served as a catalyst for later the formation of the North American CSCW community. Also early, and eventually highly influential, was the large European COST 11ter ‘Teleinformatics’ framework launched in 1984 and running until 1989 and involving about 200 researchers, in particular the teams investigating ‘Advanced messaging in groups’ and ‘Man–machine interface for telematics systems’ (Speth 1988; CEC DGXIII 1989; Pankoke-Babatz 1989a). —Another influential line of early CSCW research was conducted under the label of Office Information Systems and was reported at several conferences in the 1980s (cf., in particular, Hewitt and Zdonik 1986). More importantly, the ACM’s *Transactions on Office Information Systems* in the late 1980s published research we would now without hesitation consider of the CSCW strain (e.g., Malone 1983; Suchman 1983; Gasser 1986; Gerson and Star 1986; Greif and Sarin 1987; Malone et al. 1987; Stefik et al. 1987; Flores et al. 1988; Holt 1988). Of other early developments, we should mention that a significant line of early CSCW work was undertaken in the context of hypertext research (e.g., Smith and Halasz 1987), and that a few contributions also found their way into the *CHI Proceedings* (e.g., Malone 1985). —In a different part of the woods, the research in the Participatory Design tradition also contributed to the development of CSCW, especially by virtue of the preeminence the tradition granted to the perspective of practitioners, a stance that also became the hallmark of CSCW; these contributions were already visible in the ‘working conference’ on ‘Develop-

ment and Use of Systems and Tools', held in Aarhus, Denmark, in 1985 (Bjerknes et al. 1987) and were conspicuous in the later volume entitled *Design at Work* (Greenbaum and Kyng 1991). — Finally, of course, as the movement gathered momentum, the acronym 'CSCW' became the flag under which the diverse but hesitantly converging camps rallied: the first ACM CSCW conference, sponsored by ACM SIGCHI (in collaboration with SIGOIS), was held in Austin, Texas, in 1986 (Krasner and Greif 1986), followed by the 2nd CSCW conference in Portland, Oregon, in 1988 (Greif and Suchman 1988) and by the first European CSCW conference in London in 1989 (Wilson et al. 1989; Bowers and Benford 1991).

That is, CSCW was not the result of some authoritative edict but rather congealed as researchers in an array of research areas realized that they were facing intransigent problems that were related to problems faced by researchers in other areas and that these problems required a completely new approach to technology development:

First of all, the computerization of 'office procedures' (at the time, often simply called 'office automation') had turned out to be a flawed research program. Experimental systems were found inordinately rigid (e.g., Kreifelts et al. 1991), and from in-depth workplace studies the realization emerged that this conception did not take into account the 'situated' character of working according to prescribed procedures (e.g., Suchman 1983; Suchman and Wynn 1984; Gerson and Star 1986; Suchman 1987). This experience indicated that ethnographic and other forms of in-depth studies of coordinative practices were required if technological progress were to be made.

Similarly, multiuser database systems (such as, e.g., airline reservation systems), while enabling cooperative work in the first place by providing shared digital representations, did not provide any kind of support for the necessary mutual alignment among actors ('mutual awareness'). In fact, they were carefully designed to 'mask out' the existence of other users: 'Hence sharing is transparent with each user unaware of the activity of others. This clearly contradicts the needs of CSCW' (Rodden and Blair 1991, p. 59). In consequence, it was pointed out, the 'assumed model of use' underlying these technologies had to be reconsidered: 'Many of these assumptions are challenged by the needs of cooperative applications which highlight a significant role for computer science research within CSCW and suggests that CSCW will have far reaching consequences for computing' (Rodden et al. 1992, pp. 41f.). This programmatic statement, itself 'informed by' early ethnographic studies (e.g., Harper et al. 1989; Heath and Luff 1991), again indicated the need for further focused studies of coordinative practices.

On the other hand, the Groupware model, that is, the family of technologies that offer support of 'informal' coordinative practices by means of message and file exchange ('email', 'instant messaging', 'computer conferencing'), had also been found fundamentally inadequate for ordinary cooperative work. In the words of Irene Greif: 'The unstructured body of messages is suitable for the free-flowing

text of natural language, but does not let us set the computer to work on our problems'. Hence, when applied to some ordinary work task, 'the model breaks down':

'Designers who draw pictures, software developers who jointly write code, financial analysts who collaborate on a budget—they all need coordination capabilities as an integral part of their work tools. That means coordination support within the CAD engineer's graphics package, within the programmer's source-code editor, within the budget writer's spreadsheet program. It means support for managing versions of objects, be they pictures, programs, or spreadsheets. It means ways to distribute parts of the object for work by contributing group members, ways to track the status of those distributed parts, ways to pull completed objects back together again. The limit of electronic mail and computer conferencing is that they have such features for managing messages only. CSCW widens the technology's scope of application to all the objects we deal with.' (Greif 1988, pp. 7f.).

At the same time, almost identical conclusions had been reached by the early European CSCW research community, then still working in the European COST 11ter research framework under the banner of 'computer-mediated communication' or 'teleinformatics' (cf., e.g., Bowers et al. 1988, p. 195; Smith 1988; Pankoke-Babatz 1989a). The European researchers had come to realize that the development of the computational models and architectures required to overcome the limitations of the Groupware model would have to be grounded in a 'fundamental understanding of Group Communication processes', which in turn would need contributions from 'sociology, anthropology, economics and political science' (Pankoke-Babatz 1989b, pp. 14, 21). Greif had reached remarkably similar conclusions: 'Methodologies for testing individual user interfaces don't apply as well to group support systems. As a result, CSCW is looking more to anthropology to find methodologies for studying groups at work in their natural settings' (Greif 1988, p. 10).

The initiative to launch the *CSCW Journal* was motivated by these insights.

In practical terms, the idea of launching such a journal initially developed among members of the European CSCW community that congealed in the late 1980s and early 1990s, as researchers from the different European CSCW-related communities began to join forces. The two first European CSCW conferences in 1989 and in 1991 were the visible signs of that process.

Now, in September 1990, a small number of individuals (Bannon, Bowers, Robinson, and Schmidt), who were involved in organizing the first European CSCW conferences, and who also happened to be working closely together within 'Working Group 4' of the COST-14 Action on 'Cooperation Technology', were contacted by Kluwer Academic Publishers and invited to submit a proposal for a journal devoted to this new area. The idea was received enthusiastically, for the following reasons. It was evident that CSCW, as an international and

interdisciplinary research area committed to the development of new kinds of computing technologies and a new technological research paradigm in which in-depth workplace studies were critical, would need some form of institutional framework and especially a specialized journal. However, although ACM by then had sponsored three CSCW conferences, it showed no signs of intending to establish an organization, independent of CHI, for the fledging CSCW community, nor was it taking initiatives to launch a journal dedicated to CSCW. At the same time it was becoming clear that existing scholarly journals were reluctant to publish research specifically addressing CSCW issues. On that background, the circle of CSCW researchers in Europe and North America who were involved in these discussions saw an independent scholarly publication channel devoted to CSCW as urgently necessary. Hence Kluwer's proposal was happily accepted.

From then on, in the rest of 1990 and in 1991, the plans for a CSCW journal were debated and developed within a widening circle of individuals (which by then included Leigh Star and Charlie Grantham). The journal's name was registered and the contract was signed in March 1991. In the following months, an Editorial Advisory Board was formed and editorial plans fleshed out, step by step as members of the 'collective' had occasion to meet: at various workshops in Brussels and Berlin under the aegis of the COST-14 action 'Cooperation Technology' and at the first Oksnøen Symposium in Norway in June 1991. By July 1992, the loose circle planning the journal had become the 'editorial collective' listed in the first issue. In the next couple of years, as the Journal unsteadily began to take shape, the editorial board was widened to include Saul Greenberg and in 1994 reformed with Kjeld Schmidt as 'coordinating editor'.³

In sum, then, what impelled the founders to engage in what at times seemed a foolhardy adventure, was the recognition that the received paradigms of collaborative technology (from 'office automation' to 'computer-mediated communication') had all ended in paralysis or reached a wall as far as cooperative work practices were concerned and that a new approach was required for which a systematic attention to actual cooperative work practices was crucial. The *CSCW Journal* was launched to promote this very vision. It was this vision that was reflected in the policy statement of the editorial in the first issue in 1992. In view of the fundamental inadequacies of existent computational technologies in the face of the requirements of actual cooperative work practices, reports on technical experiments would be deemed of little interest if the reported research did not visibly relate to the nature of work practices in natural settings and could not be seen to offer potential solutions to issues that had been identified. Likewise, also in view of the fundamental inadequacy of existing computational technologies, social science

³ In 1996, the journal *Collaborative Computing* (that had been launched in 1994, published by Chapman & Hall) merged with the *CSCW Journal*. To reflect this, the title of the Journal was amended to read *Computer Supported Cooperative Work (CSCW): The International Journal of Collaborative Computing*. (Starting 2012, the phrase 'and work practices' has been appended to the subtitle in order to stress the Journal's commitment to practice-oriented computing technologies).

contributions that simply provided studies of work, or reported on ‘use patterns’, or prognosticated on social or organizational ‘impact’ of specific systems or technologies were seen as inconsequential and would not be of interest for the Journal, since it would be unlikely that they could inform the development of technology.

The technological challenge is essentially the same as it was 20 years ago. Of course, in the two decades that have elapsed, many things have changed, often dramatically. Billions of people now have access to the Internet and the World Wide Web and to the services built on top of these infrastructures, and network services are rapidly becoming available from handheld devices such as smartphones brimming with sundry sensor technologies. At the same time, coordination technologies such as ERP systems and document management systems have become of critical importance to the global economy. The collaboration technologies that were in their infancy when the *CSCW Journal* was launched are now a massive reality. However, the underlying ‘model of use’ still ‘breaks down’ in the face of actual cooperative work practices, and the *CSCW Journal* therefore remains committed to the general editorial policy outlined in the first issue in 1992.

In view of later debates and controversies, a modest qualification is required, however. It goes without saying that it does not make much sense to demand of each and every field study of a cooperative work setting that it concludes in a section on ‘implications for design’ (Dourish 2006). Nor would it make much sense to demand of each technical paper that it offers an evaluation of the use of an implementation of the system in question in actual cooperative work practices. What is required, however, is that each contribution in an accountable manner relates to insights already gained, to the body of empirical studies of cooperative work practices and their systematization, to existing conceptualizations, and so on. What is required, that is, is that contributions to the Journal have visible *implications for CSCW*: implications for the development of practice-oriented computing technologies.

I cannot end this editorial and hand over to production this closing issue of the 21st volume of the *CSCW Journal* without bringing to attention the many colleagues without whom the Journal would probably have floundered and failed.

That the Journal survived its bumpy start and eventually flourished is to a significant degree due to the support of the distinguished members of the initial Editorial Advisory Board: Bob Anderson, Susanne Bødker, Christine Borgman, Clarence ‘Skip’ Ellis, Yrjö Engeström, Eli Gerson, Nigel Gilbert, Saul Greenberg, Jonathan Grudin, Carl Hewitt, Ed Hutchins, Hiroshi Ishii, Sara Kiesler, John King, Rob Kling, Tom Malone, Marilyn Mantei, Giorgio De Michelis, Denis Newman, Don Norman, Agneta Olerup, Gary Olson, Wolfgang Prinz, Walt Scacchi, Mark Stefik, Lucy Suchman, and Terry Winograd.

Many of these colleagues served on the Advisory Board for many years, some even staying on until today. Their support is gratefully acknowledged, as is the

support and assistance the Journal has received from the many members of subsequent Advisory Boards: Mark Ackerman, Liam Bannon, Michel Beaudouin-Lafon, Geof Bowker, Tone Bratteteig, Monika Büscher, Peter Carstensen, Prasun Dewan, Paul Dourish, Keith Edwards, Tom Erickson, Antonietta Grasso, Beki Grinter, Kaj Grønæk, Carl Gutwin, Christine Halverson, Richard Harper, Christian Heath, Marina Jirotká, Philip Johnson, Simon Kaplan, Mark Klein, Tim Koschmann, Kari Kuutti, Charlotte Lee, Du Li, Paul Luff, Dave Martin, David McDonald, Keiichi Nakata, Bernard Pavard, Dave Randall, Toni Robertson, Tom Rodden, Yvonne Rogers, Mark Rouncefield, Pascal Salembier, Albrecht Schmidt, Carla Simone, Chengzheng Sun, Jonathan Trevor, Wil van der Aalst, Ina Wagner, Randall Whitaker, Jim Whitehead, Steve Whittaker, Brit Winthereik, and Volker Wulf.

Beyond this long list of colleagues who have generously lent their support to the Journal by serving on the Advisory Board—there are an untold number of colleagues who have put in the bread-and-butter work of producing first-rate scientific content: First, of course, the many authors (and guest editors too) who have submitted the results of their toil to the Journal; but also the multitude of unnamed reviewers who have put in hours and energy to assess manuscripts and give advice to authors and editors alike. Without their effort no scientific community would exist. The present Journal is no exception.

The Journal has been fortunate that a number of great CSCW scholars have been willing to undertake the hard and often frustrating work of making it all happen: ensuring that each manuscript is carefully reviewed by experts on the topic in question, instructing authors on how to improve their manuscript, and perhaps taking the manuscript through multiple cycles of reviews and revisions. The colleagues who have served as associate editors in the course of the Journal's existence are: Mark Ackerman, Liam Bannon, Steve Benford, John Bowers, Luigina Ciolfi, Prasun Dewan, Paul Dourish, Geraldine Fitzpatrick, Saul Greenberg, Claudia-Lavinia Ignat, Charlotte Lee, Gloria Mark, Wolfgang Prinz, Mike Robinson, Dave Randall, Tom Rodden, Karen Ruhleder, Susan Leigh Star, and Randy Trigg. In addition, Paul Luff and Luigina Ciolfi have served as book review editors. —The job of an associate editor is often a thankless one, but so much greater is my gratitude!

Finally, I would like to thank the many people at the offices of the publisher (formerly Kluwer Academic Publishers, later Springer) for the support they have extended to our enterprise, not least at times when the whole thing may not have come across as a profitable business venture: Alexander Schimmelpenninck, Simon Ross, Melanie Willow, Polly Margules, Dieke van Wijnen, Paul Roos, Robbert van Berckelaer, and Beverley Ford, as well as their co-workers. Without their encouragement and professional assistance, it is unlikely that we now would have been able to look back on 20 years of exciting research.

Kjeld Schmidt
Editor-in-Chief

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