

1994

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### Recommended Citation

Kyng, Morten (1994) "COLLECTIVE RESOURCES MEETS PURITANISM," *Scandinavian Journal of Information Systems*: Vol. 6 : Iss. 1 , Article 5.

Available at: <http://aisel.aisnet.org/sjis/vol6/iss1/5>

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## COLLECTIVE RESOURCES MEETS PURITANISM

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*A note and an afterthought on the paper by Philip Kraft and Jørgen Bansler "The Collective Resource Approach: The Scandinavian Experience" presented at the Participatory Design Conference, Cambridge, MA, 6&7 Nov. 1992*

### **Introduction**

I received the aforementioned paper from Jørgen Bansler in late October 1992, too late to comment on it before it was presented at the PD conference. However, I read the paper in January 1993 and it turned out that the paper was marked by several flaws, e.g. of the kind where a claim is made with reference to a paper that says the opposite of what is claimed (for an example see the section on misrepresentation below). The sum of these flaws is a misrepresentation of the whole Collective Resource Approach (CRA). And when all misrepresentations, errors, etc. are stripped away it turns out that the paper presents no valid evidence in support of the claims made in the abstract or the conclusion.

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In short Kraft and Bansler represent CRA as some overoptimistic boy scout-like approach. An approach so simple minded and naive that it is bound to fail—in Scandinavia, the U.S. and elsewhere, just as Kraft and Bansler conclude. This naive picture is, however, thoroughly contradicted by the ‘CRA literature’ referenced by Kraft and Bansler themselves—as well as by CRA practice. The picture is so far removed from reality that this in several places makes the paper an almost information-free exercise. For instance, most of the critique that Kraft and Bansler raise against CRA is already present in the ‘CRA literature’ that they reference—and over the last decade the discussions have moved on, the techniques improved, and in general CRA has developed and diversified—apparently without Kraft and Bansler paying much attention. As an example consider the following critique:

“Employees and unions at the local level seldom possess enough resources, particularly knowledge and time, to carry out the strategy successfully”. (From their section “4.1 CRA Implementation”).

Ehn and Kyng wrote in one of the referenced ‘CRA-papers’:

- “But there are basic obstacles as well. The most important one being the limited resources at the local unions’ disposal. The strategy is extremely resource-consuming from the trade union’s point of view, and even if it does its best the local union cannot really compete with management. Sandberg remarks that ‘in our type of society, it is seldom in the position to build up a knowledge base, or plans which compare to

those of management in quantity and quality—even if it has the advantage of being better able to involve employees and use their experience. This is true even if management is not always the well informed protagonist it is sometimes assumed to be’ “. (Bjerknes *et al.*, p. 42–43)

If the Kraft and Bansler paper only presents such simple-minded versions of the CRA discussions of the early and mid 1980’s and thus regresses current insight to that stage instead of adding to it—why bother? Well, participatory design is receiving increasing attention, the Scandinavian experiences are an important part of this picture, the Kraft and Bansler paper is ‘out there’, and it might—if ‘non-commented’—discourage people from learning (more) about CRA. For these reasons I decided to write a short note to point to the nature of the more serious misrepresentation flaws. I have, however, to warn the reader: documenting misrepresentation is a tedious job, and reading about it can be quite boring.

The following note is in no way a thorough discussion of the Kraft and Bansler paper. It focuses on the question of misrepresentation. Among the issues that I do not cover are:

*The lack of a notion of history* in the paper in general, and particularly in the treatment of CRA. CRA have developed over a period of more than twenty years, and during that period much has changed in society, including major union concerns and the type and number of computer systems. But Kraft and Bansler pay no attention to such issues. Thus e.g. the notion of first and second generation projects is not touched upon at all—although it is highly relevant for the devel-

opment of those CRA issues that Kraft and Bansler address (this notion was introduced in the above quoted paper by Ehn & Kyng). For example, most of their critique is directed towards aspects raised in the first generation projects. These projects, from the 1970s, focused on issues of control and planning and the role of mainframe systems in this. On the other hand the Utopia project and other second generation projects were more concerned with the design of alternatives and the potentials of work stations.

*The lack of documentation of major points*, and the numerous misleading statements, some of which may be due to their ‘method of investigation’, a method that they don’t describe in the paper, but which at the PD conference was explained as consisting of brief interviews with top trade unionists. As an example consider the following paragraph: “It is also interesting to note that while CRA researchers and local unionists were originally successful in getting large grants from the main organizations (and governments), the main organizations drastically curtailed funding when it became apparent that they were subsidizing creative challenges to their long-standing industrial relations system”. (From their section “4.2.2. Structural Barriers”). The reality is that people involved in the early CRA projects (such as NJMF, DEMOS, DUE and UTOPIA) decided *not even to try to get union funding*. We found that enough public funding (a lot of which was provided by union members through taxes) was available to finance these projects and we successfully applied for public funding. Thus it is simply nonsense to say that “CRA researchers and local unionists were originally successful in getting

large grants from the main organizations”—and of course thereby their whole paragraph loses its meaning.

*The neglect of the fact that CRA is nothing like a ‘method’* that have been applied in several projects without changes. What we did was that we developed our ideas on CRA based on the different projects such as DEMOS, DUE and UTOPIA. And they did develop. As already mentioned in the first ‘explicit CRA paper’ we distinguished between first and second generation projects, and the AT project mentioned at the end of my afterthought below could be in a third generation of projects. And—related to this simplistic and erroneous view of CRA:

*The simple notion of ‘success’ and ‘impact’*. It seems that Kraft and Bansler (as well as the sources they quote in support of their view) consider CRA to be something like an algorithm that you either apply in full or don’t use at all. Thus in the quote above the text talks about “Employees and unions at the local level seldom possess enough resources, particularly knowledge and time, to carry out the strategy successfully”. And their basic criterion for the lack of success of CRA seems to be that :”On the whole the strategy has not been widely accepted by either employers *or* the national unions”. (From their section “4. Idea versus Reality”). First, I would have worried had CRA been widely accepted by employers. Secondly, I can’t think of any sane person (with the possible exception of Kraft and Bansler) who would consider the question of whether or not CRA ‘On the whole ... has been widely accepted by ...the national unions’ as important for its success. (Positive examples on ‘CRA

impact' is given at the end of my contribution.)

(A sociologically/psychologically inclined line of comment could even look at the lack of attempts to discuss drafts of the paper with people in the CRA area :-))

So much for the introduction, below follows my note on misrepresentation. However—as a friend of mine pointed out when I wrote the note below in late January 1993—it isn't really about the *conclusions* drawn by Kraft and Bansler. And—he told me—I ought to say at least something about that too. Since I agreed with him, but didn't have the time 'to say at least something about the conclusions' I did nothing with the note until August 1993 when I finally had time to look at it again. What I have chosen to do is to keep my original note on misrepresentation from January 1993, and then add an afterthought on the conclusions of Kraft and Bansler, i.e. on the prospects of CRA.

### **A Note on Misrepresentation of 'CRA Literature' on the Practice of CRA— Two examples out of many**

Below I present two typical quotes from Kraft and Bansler: the first is the 'Boy Scout picture' and the second is the 'Universal demand'.

In the first example, the 'Boy Scout picture', Kraft and Bansler describe how 'CRA literature' presents CRA. They say that:

"The U.S. visits [by 'CRA people'] were followed by optimistic and enthusiastic reports -- some by Scandinavians, some by

Americans [Note 2]—describing the concrete changes being implemented in Scandinavian auto factories, hydroelectric stations, woodworking shops and newspaper compositing rooms (see e.g., [Howard 1985, Sandberg 1979, UTOPIA 1985]). The reports all described more or less the same events: trade unionists, aided by academics and funded by the Scandinavian governments, had begun the process of inserting workers into the design and thus the management of their own work and work places. ... Creative and persistent trade unionists and their academic allies have been able ... to achieve what negotiations and decades of social democratic legislation had not: substantive worker involvement in the design and management of their own work" (from their section "1. Introduction").

Now let us consider how optimistic the cited CRA papers are, particularly with respect to "concrete changes being implemented" and "the process of inserting workers into the design and thus the management of their own work and work places". Surely there must be reports about rapidly growing numbers of factories soon to be taken over by the workers?

One of the books mentioned in note 2 is (Bjerknes *et al.* 1987). In that book Ehn and Kyng write (Ehn & Kyng I):

"But although growing, the extent and impact of these activities did not meet the initial expectations. It seemed that one could

only influence the introduction of the technology, the training, and the organization of work to a certain degree. From a union perspective, important aspects like opportunity to further develop skill and increase influence on work organization were limited. Societal constraints, especially concerning power and resources, had been underestimated, and in addition the existing technology constituted significant limits to the feasibility of finding alternative local solutions which were desirable from a trade union perspective". (p. 32).

And in the same book some of the people involved in the Utopia project say:

"Another positive result is that the project has shown that the latest technology may be designed and put into use to improve, not decrease, the skills of the graphic workers. But will it happen? Will the Scandinavian newspaper owners exploit the possibilities for a constructive discussion on technology, organization, and training? How it will work out largely depends upon whether the graphic workers and journalists succeed in overcoming their professional clash of interests, and together develop a common strategy". (p. 260)

Maybe not quite as "optimistic and enthusiastic" about "concrete changes being implemented" as one would expect based on Kraft and Bansler.

Another work mentioned in note 2 is (Ehn 1989). The following is Pelle Ehn's

concluding remark on the Utopia project (Ehn I):

"Finally a note on the design process in the Utopia project. It was really utopian. The preconditions for such a design process are not present in corporate business as we know it today. Resources for skilled workers, trade union people, computer and social scientists to work together over a long period of time designing tools in the interests of the end users do not generally exist as yet, not even in Scandinavia. Utopia was not only a challenge to design, but also to a more democratic working life". (p. 58).

And finally let's look at the aforementioned reference (UTOPIA 1985) from the Kraft and Bansler paper. In this report nothing much is said about implemented changes—it focuses on possibilities and constraints. The few examples on 'implemented changes' that *are* mentioned are not about CRA (!). What the report says about CRA is illustrated by the following:

"Another positive result is that the project has discovered that the newest technology may be designed and put into use to improve, not decrease, the skills of the graphic workers. But will it happen? Will the TIPS system, for instance, really become such a tool, or are there opposing forces strong enough to twist the system in another direction? The risk is imminent, especially because of Liber/TIPS' interest in

and adaptation to the North American market". (p 5).

So much for the relation between the 'Boy Scout picture' from Kraft and Bansler and their CRA sources. In the second example, the 'Universal demand', the Kraft and Bansler paper says that:

"In other words, the Collective Resource Approach encourages workers and their unions to take the initiative from management rather than reacting to management's proposals and demands. In order to do so, workers and local unions must learn about the design and use of new technologies, their likely impacts on jobs and working conditions, as well as possible alternatives [Ehn 1988, Ehn & Kyng 1987]". (From their section "3.1 The CRA").

And later in the same section Kraft and Bansler write:

"The ability to present alternatives is considered [by CRA] a necessary precondition for exercising influence".

Apparently workers and their unions don't have to think twice. It is a hell of a big job they are facing, but they should just go ahead. This seems to be the CRA message according to Kraft and Bansler. The two cited works "[Ehn 1988, Ehn & Kyng 1987]" are the aforementioned book by P. Ehn and the aforementioned paper by Ehn & Kyng from (Bjerknes *et al.* 1987)

If one rereads the quotation from Pelle Ehn given above (Ehn I) I don't

think that the reader gets quite the message conveyed by Kraft and Bansler in their Universal demand.

With respect to the Ehn and Kyng paper, (cf. Ehn & Kyng I above), I'll present a few additional quotations:

"Another aspect of the limited resources has to do with priority. Design of new technology and work organization is a new and certainly very important issue for local unions, but there are other issues which are just as important and even more crucial to their ultimate democratic objectives, e.g. daily contact with the members, broad studies, etc. A central question for a local union is thus how important the change in technology and work organization is for the members, and whether it should participate and do its own investigation or not. Given the limited resources, the trade union investigatory working groups in most cases have to desist from full participation in the design process. A realistic approach might be a 'shadow investigation' covering aspects of specific interest to the union such as changes in qualifications, work organization, work environment and employment. A complementary way might be to require supplementary investigations from the company design group specifically addressing these issues". (p. 43).

and:

"But because of the limited resources at the unions' disposal,

and the associated problems with internal union democracy, still other strategies for designing technology and work may be recommended. One such strategy that some unions have been practising is a modification of the traditional strategy of wage negotiations.

Rather than doing its own investigations concerning a specific project, the union can emphasize the development of fundamental union principles, e.g. the right of existing workers to operate the new technology, and the right to qualified training and education. Once such basic principles have been established through negotiations, then perhaps the actual design can be carried out by participation in management's project groups. An essential prerequisite for these negotiations is then a long-term union activity formulating the fundamental principles, e.g. the development of local union action programs. Furthermore these long-term activities should be carried out in such a way that strong mobilization of the members can occur around the fundamental principles in times of concrete negotiations. Another prerequisite for the strategy is that management really has the resources, competence, and will to carry out the investigatory work spelled out in negotiations, e.g. on the consequences on qualifications and required complementary education". (p. 44).

This finishes my exemplification of the 'Universal demand' and its relation to CRA discussions on local union strategies—a relation that hardly exists! The image Kraft and Bansler create with the Universal demand and the Boy Scout picture has the off-beat and pleasing kitsch quality of a Jeff Koons poster. While having nothing to do with any CRA literature, it has the major merit of being the demolishable root of the equally fictitious notion of "success", "impact", etc.

One is tempted to say that the discussion resulting from the 'Puritanistic Research Approach' of Kraft and Bansler is more like the ones carried out *prior* to the projects of CRA—that is in the seventies. None of the experiences gained in actually doing the projects is really reflected in their paper. And, although recent developments are mentioned, none of the discussions that contributed to evolve CRA into our current approach are reflected in their paper—despite the fact that this is what the cited literature is all about!

#### **A Note on Misrepresentation of 'Non-CRA' Material— Two examples out of many**

For the benefit of the particularly patient and interested reader I include two more examples on misrepresentation—this time of issues relating not specifically to CRA. The not-so-patient reader may skip this section.

The first example is from the Kraft and Bansler section '4.2.1. The Scandinavian Tradition of Consensus.' Here it is said that : "The trade unions are bound to an ideology of consensus and co-oper-



ation which goes back to the end of last century.”

In fact the graphic workers’ unions in Scandinavia, i.e. the unions that participated in the UTOPIA project, have a somewhat different ‘ideological history’, as described in the above mentioned Graffiti no. 7. E.g. the Swedish Typographers’ union were in the period from the end of last century till 1910 involved in a series of severe conflicts over technology with the employers’ organisations. Among the demands raised—and accepted by the employers—were ‘One man—one press’. Thus part of the approach in the UTOPIA project was exactly to try to learn from, but not to mimic, these experiences which goes back to the end of last century.

The second example is from the Kraft and Bansler section ‘2. The Structure of Scandinavian Industrial Relations.’ Here it is said that :

“Although in the last 15 years Scandinavia has experienced a wave of consolidation and even concentration of ownership, by American standards the Scandinavian economies are small-scaled. To use Denmark as an example, of the 6,932 Danish firms in the manufacturing sector in 1985, half employed fewer than 20 people. Only five percent employed 200 or more people and one and a half percent employed as many as 500 people. The single largest industrial enterprise in the country employs 8000 people. By comparison, U.S. manufacturing firms with fewer than 20 employees accounted for only eight percent of the manufactur-

ing work force in 1982 [Note 4].”

The problem with this paragraph is that it invites the reader to compare numbers that are incomparable! First we are told that with respect to *firms* in the Danish manufacturing sector “half employed fewer than 20 people” and then that “By comparison, U.S. manufacturing firms with fewer than 20 employees accounted for only eight percent of the manufacturing work force”. But from this we cannot deduce the number of U.S. *firms* that employed fewer than 20 people—it could be half as in Denmark! (All that we *can* deduce is that it is definitely bigger than the eight percent that Kraft and Bansler allude to).

#### **An Afterthought on the Prospects of CRA**

What about the conclusions of Kraft and Bansler then? Even if they are undocumented they might still contain some truth! What was the impact of CRA in Scandinavia? What is happening within ‘CRA’? And (how) is one to ‘transfer Scandinavian CRA to the U.S.’? These and similar questions are what some might expect answers to. The ‘problem’, however, is that there are no simple answers—except in papers like that of Kraft and Bansler.

To take the last question first: Any CRA-like or PD approach with ambitions like those of the Scandinavian CRA projects of 1971-1980 or those of 1981-1984 cannot be ‘transferred’, but should be carefully developed based on a deep understanding of current possibilities and limitations, (e.g. in the U.S. if that is where they are happening) and just as

carefully modified based on the experiences from doing them, etc.

And then there is the question of what the current goals and ambitions are or could be—in the U.S., in Scandinavia and elsewhere? They can't really be simple extrapolations of the old ones. At least that was not the case with our 'Design at Work' book (Greenbaum & Kyng 1991) and it's not the case with our current CRA based work. (Maybe that's really what Kraft and Bansler don't like? :-))

Thus I can't 'answer' the question of transfer. I think, however, but can't elaborate here, that CRA based/inspired work may also in the future support trends towards increased worker influence on technology. I do not see much evidence supporting the grim picture painted by Kraft and Bansler of the omnipotent capitalist who has total control of the work force—as they describe it in section 5.2 of their paper—take a look out there! One way of interpreting their paper (the only one?) is in fact that they wanted to make CRA fit their basically deterministic view of societal and economic development.

In my view exactly the problems they describe that managers have with “a badly trained and unresponsive work force ill-equipped to compete in the global market” (section 5.2) creates new possibilities, possibilities that are *not* under the complete control of management. But probably also possibilities that, in an American setting, have to be tackled in ways much more independent of trade unions than the (early) Scandinavian CRA work indicates—and that is exactly one of the ideas behind the developments presented in the aforementioned book 'Design at Work'. Let me explain: A ba-

sic concern of CRA is to increase worker influence on technology. The two major instruments are: 1) action oriented and trade union based strategies and 2) cooperative design. Kraft and Bansler—as well as early CRA work—focus on the first, whereas 'Design at Work' develops the latter—without much explicit reference to trade unions. One of the things we hoped to achieve in this way was exactly to make the work more accessible to 'non-Scandinavians.'

But some framework is of course implicit—in our case a trade union influenced 'CRA framework'. Thus the techniques presented in 'Design at Work' are well suited for Trade Union projects, for projects based on designer/end-user cooperation, etc., but probably not for projects intended to be under strict managerial control. Who knows—some system developers might get more influence from end-users/workers than their managers subscribed for—even in the U.S.? In fact this kind of 'positive technique bias' is analogous to the 'negative technique bias' from traditional system development methods and techniques, which created so much trouble for workers and designers in the very first Trade Union projects.

Let me then say a few words about the impact of the early CRA work that Kraft and Bansler discuss. In Scandinavia we never expected CRA in itself to result in major changes in the industrial relations. What we did expect, however, was to support certain trends, existing and emerging, towards increased local worker activities related to technology. And viewed this way CRA has impacted at least hundreds of Scandinavian workplaces and education as well as technology agreements.

To give a few ‘quantitative’ examples (the CRA literature is full of ‘qualitative’ examples and time and space limitations don’t allow me to elaborate):

- in the period 1975 to 1988 approximately 200 one-week courses with some 4000 participants, shop stewards and other interested workers, were held in Denmark based on CRA work. The participants came from hundreds of different workplaces and worker influence on technology was increased at many of those workplaces as well as at other workplaces with whom the participants had contact.
- during the UTOPIA project (1980-1984) several Nordic seminars were held with some 50 to 100 participants, from the trade unions of the graphic workers, the clerical workers and the journalists. One of the functions of these seminars was to make the ongoing work accessible to those groups, and so they did, including the so-called ‘Work Organizational Building Set’, which by the end of the project were used by the local unions at—at least—five different Swedish newspapers.
- at the end of the UTOPIA project the Nordic Graphic Workers’ Union decided to publish the final report in all the four Nordic languages as well as English, and to print enough copies, 70.000, to provide all members with one.

And finally from a university point of view:

- since 1975 at least several hundred students at Scandinavian universities have studied system development

with a curriculum heavily influenced by CRA.

I’ll end with some remarks about the impact of current CRA-based work and a few words about ongoing work in Århus. In the ‘early days’ a few prototypical projects, such as the Norwegian NJMF and the UTOPIA project, covered most of the issues considered by people working with CRA. But now CRA-based work extends over such a wide range of issues that looking at major empirical projects only no longer gives an adequate overview. It is outside the scope of this afterthought to present any kind of overview of the impact or results of CRA. However, I will indicate some of the issues that should be covered by people attempting to do this:

- Action oriented empirical work (involving non-researchers): the major themes of this work include a local, action oriented strategy for worker influence on technology and ‘cooperative design for democracy and skill.’
- Theoretical and practical scientific work: this work has to a large extent been ‘driven’ by the empirical work, or at least taken its focus there. Thus two major themes are: conditions for democratic changes in working life and cooperative design.
- Other activities influenced by the above work: e.g. education at universities, trade schools, and within the unions, as well as numerous activities, local and centralized, aimed at influencing the introduction and use of technology. And finally ‘who’s doing what’, i.e.:
- ‘Actors’: these come from unions

and research institutions, and depending on the point of view taken, different aspects are most 'visible.'

In Århus we have over the last few years been engaged in two CRA related projects. In the AT project at the local branch of National Labour Inspection Service in Aarhus, we cooperate with both workers and managers on the design of new computer applications to support organizational development. From a union—as well as a research—point of view this gives new experiences with worker influence based on local cooperation in design supplemented with negotiations. From a research point of view the project is interesting because it is (contrary to the impression given by Kraft and Bansler) the first case of using CRA techniques for cooperative design from 'beginning to end', and the first project that involves all groups in the organization—thus some have labelled it our first 'third generation' project.

In the second project, called DeVise, we are concerned with the development of computer-based tools for cooperative design. This project is directly inspired by the difficulties encountered in previous cooperative design projects, such as UTOPIA, where existing computer-based tools, e.g. fourth generation languages, put severe constraints on worker/end-user participation. External partners in the DeVise project include publicly and privately owned companies as well as trade unions.

Last but not least—thanks to Olav Bertelsen, Susanne Bødker, Andrew Clement, Jonathan Grudin, Kaj Grøn-bæk, Preben Mogensen and Ole V. Vil-lumsen for comments on earlier ver-sions.

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