

compensated, this also means that TV 2 did not use all of the funding to fulfill this task. Not necessary that TV 2 got too much money. That which is erroneous is the balance between the expenses to perform the programming and the state aid, and the extent of the expenses is partly determined by TV 2 itself. Had TV 2 used the overcompensated amount on programming, the Commission had not opened a case; and when the Commission did not require documentation for the necessity of the aid, the conditions for the use of 86(2) are reduced to the match between the actual expenses and the revenue. It is not possible to determine whether the necessary and actual expenses match, and this allows for TV 2's transfer of funding to capital.

The case on recapitalization involves the same problem. When the Commission fails to examine the necessity, it never realizes that a commercial loan could pre-

sent the solution. And the calculation of the injection of capital was incorrect, because it was not restricted to that which was necessary, but instead led to the optimal capital structure as proposed by the Danish government.

The long-term consequences will partly depend on the Court's decisions. If the Commission loses just one of the cases, TV 2 will be in trouble. The problems appear to be at their worst in the cases on recapitalization, which will be difficult for the Commission to win. However, the other cases also contain financial threats. If the cases are lost, TV 2 will have to repay the illegal state aid and possibly also compensation to Viasat and SBS. Will TV 2 be able to do so at that time? The immediate conclusion is that the decision to privatize TV 2 has been an obstruction to save TV 2 from the problems created by the state aid cases. And the state aid cases obstruct the privatization of TV 2. *Catch 22!*

## NOTES

<sup>1</sup> First 07.02.1985 compensation by C-240/83 ADBHU; 27.02.1997 aid by T-106/95 FFSA; 25.03.1998 possible confirmed aid by C-174/97P FFSA; 10.05.2000 aid by T-46/97 SIC; 22.06.2000 aid by C-332/98 CELF; 22.11.2001 compensation by C-53/00 Ferring; 24.07.2003 compensation by C-280/00 Altmark.

<sup>2</sup> Mortensen 2006 is a review of the Commission's handling of the complaints against public service broadcasting from 1992 to 2005.

<sup>3</sup> Koenig and Haratsch 2004 refer to this procedure as "the rebirth of Article 86(2)." And they are not sure how the Court will react to it. A decision may come in one of the six pending cases connected to TV 2. If the Commission had stopped here in the procedure and followed the logic in the Ferring-case, it should immediately have declared the overcompensated amount for unlawful (cf. Ferring Judgment, 29), since it was not notified.

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# Virtual Capital? Internet Competence and Political Participation in Denmark

This article demonstrates that competence in using the Internet is a new form of capital that has become more important in explaining variations in political participation and political efficacy than for example education. What is the significance of this finding for the class structure in advanced societies, and what does this mean for the future of politics and political systems?

This article will argue, firstly, that virtual capital, i.e. competence in using information technology, in particular the Internet, represents a new form of capital or personal resource distinct from existing forms of capital such as economic, educational or organizational capital. Secondly, it will explore whether and how possession of this type of capital translates into online and offline political participation as well as political efficacy on an individual basis. Thirdly, the article will demonstrate that for persons with a high level of virtual capital (super-users), educational differences in terms of political participation evaporate.

The arguments will be based on data from a Danish nationwide representative survey conducted as part of the MODINET research project in late 2003/early 2004. This survey focused on media use and media habits particularly targeting ICT's, political and civic engagement, participation and attitudes. The sample size was 2509 persons from 15 to 79 years, and the response rate was 65 percent.

## On the concept of capital

In the last three decades, the concept of capital has become increasingly diluted, or at least assumed meanings unintended or unimagined by the 'founding fathers' of the concept. Marx, who must surely be counted as among this number, narrowly spoke about the means of production and their monetary equivalents as capital

(Marx 1976). In the social and humanistic sciences, however, especially the works of Bourdieu (Bourdieu 1984, 1986, Bourdieu & Wacquant 2001) and Putnam (1993) have taken the thinking about capital in new directions. As Bourdieu sees capital as a resource that can be used to obtain power and dominate 'the game' within a certain social field, there are in principle as many kinds of capital as there are (important) social fields; however, the most important forms of capital are 'economic', 'cultural' and 'social capital'. Moreover, confusion grew with the advent of Putnam's book *Making Democracy Work*, as we were here introduced to another understanding of social capital referring to interpersonal trust based on norms of reciprocity and the extent of social networks (Putnam 1993). More recently, political scientists have begun to speak of 'political capital'; and finally, Tobiasen (2004) and Kim (2006) have begun speaking about 'virtual capital' as a new type of resource, the possession of which is supposed to have positive effects for, among other things, political participation and political efficacy (see also Norris 2001).

In order to make sense of all of these uses and misuses of the concept of capital, we must take a slight detour back to the concept of capital in the Marxist tradition. Thus, Marx considered capital to be a type of resource on the basis of which it was possible to extract surplus value. Furthermore, in *Das Kapital*, he analy-

zed how the means of production (factories, etc.) and their monetary equivalents functioned as capital. This gave rise to his ideas about society as divided in two classes: the capitalists (those who possessed capital) and the workers or proletariat (the unpropertied). On the basis of his formulation of the law of the tendency of the rate of profit to fall and the ensuing acceleration of capitalist competition, he prognosticated the necessity of the growth of the working class.

"Virtual capital or Internet competence has been operationalized in different ways in different studies."

As we all know, however, this did not happen. Instead, we witnessed – especially in the second half of the last century – a growth in the middle class(es) and a decline in the relative size of the working class. This led to numerous different attempts from sociologists, political scientists and others to reformulate Marx's class theory in order to accommodate the new situation. One of the more interesting reformulations was carried out by American sociologist Eric Olin Wright in collaboration with economist John Roemer.

What Roemer showed, using a combination of general equilibrium theory and game theory, was that the extraction of surplus value could take place not only on the basis of the possession of the means of production, but also on the basis of the possession of organizational resources (i.e. position in an organization) and educational resources (Roemer 1982a, 1982b). This was interesting on the grounds that it meant that classes could now be seen as developing along three dimensions instead of just one. On the basis of Roemer's work, Olin Wright then developed a detailed class typology for 'advanced capitalism', as well as for socialist and communist states (Olin Wright 1985).

In my view, the use of the concept of capital is therefore best reserved for the 'traditional' forms of capital: economic, organizational and educational.<sup>1</sup> If it was possible to demonstrate that one could extract surplus value on the basis of the possession of virtual capital, this would also be a form of capital, at least in the Marxist sense. And the distribution of this form of capital would have class-structuring effects that render class structure four-

dimensional. While this is what is really implied – but never quite spelled out – in the discussion about the 'digital divide' (Norris op.cit.), it has yet to be demonstrated that virtual capital has such a class-structuring effect.

Sticking to this logic, I will avoid using the concept of virtual capital in the following; rather, I will refer to 'Internet competence' or the like. Nevertheless, I will continue using the concept of virtual capital, thereby playing with the notion that Internet competence might be a genuinely new form of capital and that it might have class-structuring effects. I shall return to this discussion at the end of the article.

### **Operationalizing the dependent and independent variables**

In order to verify/falsify the first hypothesis (virtual capital as a distinct type of capital), it becomes necessary to operationalize the traditional concept of capital. Economic capital should ideally be operationalized as a dichotomous variable (owners vs. non-owners). However, as the number of owners in our survey is very small, it has been difficult to use such a variable in our analyses. Household income has been used as a (poor) proxy. Organizational capital has been operationalized as managerial versus non-managerial positions,<sup>2</sup> and educational capital has been operationalized as the highest level of formal school education.

Virtual capital or Internet competence has been operationalized in different ways in different studies. An ordinary way of operationalizing the concept is by asking respondents about the number of hours they spend using the Internet (daily or weekly). However, there are reasons for doubting the validity of this measure, as most computer users are probably not aware about when they are on the Internet and when they are not; and if they are, they are probably not able to be very precise about what percentage of their computer time is spent on the Net. Moreover, spending many hours a week on the Internet might not say very much about competence, as the use may be very monotonous (see also Kim 2006:36). Another frequently used measure is self-declared competence, where respondents are asked how competent they feel they are using the Internet. This measure is somewhat more reliable (Elvebakk 2004), and a variable combining the hours spent on the Internet and self-declared competence has also been used in earlier studies (Hoff 2004).

However, a better way of judging the competence of Internet users might be to examine how versatile their use of the Internet is. Thus, knowing and using many features of the Internet appears to be a good way to define a 'competent user'. Such a definition of Internet competence is also supported by the literature on learning ICT skills. Thus, for example, Selinger (2001) points out the fact that becoming acquainted with different software applications renders the technology 'transparent' (making the user able to concentrate on content, not syntax), and that the optimal way of acquiring ICT skills is in a context; i.e. learning by using ICT in real world situations. This view is supported by Brown et al. (1989), who talks about the value of 'situated cognition'. Learning in this manner also provides the learner with a sense of 'ownership' to the work he/she is doing, which augments the person's self-confidence in using ICT tools (Selinger op.cit:147).

Thus, measuring Internet competence/virtual capital as an index measuring the versatility of use has therefore been constructed. The index is constructed on the basis of a mapping of 29 different uses of the Internet covering: receiving and sending e-mails, listening to/watching webradio/web-tv, downloading or filling out forms from public authorities, playing/downloading games, Net-banking, dating services, etc.<sup>3</sup>

In order to analyze the relationship between virtual capital and political participation online and offline and political efficacy, conventional measures of these activities are used. However, an index for political participation is constructed, collapsing six forms of participation (contacted a politician, signed a petition, boycotted certain products, supported an organization/movement with money, participated in a political meeting, member of political group (not party)).<sup>4</sup> Concerning political efficacy, an index is also constructed using three measures of efficacy: knowledge about how to proceed if wanting to influence political decisions on the local, national and EU levels).

**Analysis**

In order to analyze the question about whether virtual capital is a new form of capital or personal resource distinct from existing forms of capital, or whether it is merely another way of spelling education, as some would claim, correlation analyses between the different forms

of capital have been carried out. The correlations between virtual capital and the traditional forms of capital are all statistically significant (except one); however, these correlations are not very strong (Pearsons r ranging from .066 to .258).

In order to further investigate the extent to which the different types of capital are independent of one another, a factor analysis has also been conducted. The results are shown in Table 1.

**TABLE 1:** Factor analysis. Factor loadings. (Factors with an Eigenvalue > 1, Varimax rotation).

	<b>Factor 1 ("new capital")</b>	<b>Factor 2 ("old capital")</b>
<b>Economic capital</b>		.497
<b>Virtual capital</b>	.475	.110
<b>Organizational capital</b>	.404	.481
<b>Educational capital (school)</b>	.543	

In order for the different types of capital to be genuinely independent of each other, the factor analysis should have come out showing four factors. As expected, however, this did not happen. Instead, the factor analysis produced two factors, labeled 'new capital' and 'old capital', respectively. While virtual capital and educational capital clearly belong to the new capital factor with high factor loadings here, economic capital clearly belongs to the old capital factor. Organizational capital has high factors loadings (correlations) with both the new capital as well as the old capital factor. However, as the correlation is somewhat higher concerning the old capital factor, it appears most reasonable to perceive it as belonging to this factor.

This result is quite interesting, as we appear to be dealing with two groups of capital: a group of old capital, which could be seen as connected with the modes of production in Industrial Society (thus old capital); and a group of new capital connected more with modes of pro-

duction in the Information Society (thus new capital) (Castells 1996). The result also reveals that virtual capital and educational capital are not easily separated; a question dealt with in greater detail below. The question of whether the possession of virtual capital has any significance for on- and offline political participation and political efficacy is investigated in Tables 2 to 4.

**TABLE 2:** Relation between virtual capital and political participation. Percentages

	Political participation				Total %
	1	2	3	4	
Virtual capital 1	39	22	24	15	100
2	26	24	31	19	100
3	28	22	30	19	99
4	22	21	33	24	100
5	16	18	32	34	100
N= Sign..000	277	227	319	235	-

The virtual capital variable has been constructed as a variable with five values; 1 indicating a very high level of competence (very versatile Internet use) and 5 indicating a low level of competence, each value comprising roughly 1/5 of the Internet users. The political participation variable has been constructed as a variable with four values; 1 indicating a high level of participation and 4 a low level.

"Virtual capital and offline political participation are clearly correlated in a statistically significant manner."

As can be read from the table, 39 percent of the highly competent Internet users also have a high level of political participation, while this goes for only 16 percent of those with a low level of Internet competence. In

the other end of the table, the pattern is reversed. While 34 percent of those with a low level of Internet competence are not participating very much in politics offline, the same is true for only 15 percent of the highly competent Internet users. Thus, virtual capital and offline political participation are clearly correlated in a statistically significant manner.

The same pattern is found if we consider political efficacy (Table 3). Here, 44 percent of the highly competent Internet users find themselves to be very politically efficacious, while the same is true for only 15 percent of those with a low level of Internet competence. The pattern is also repeated in the other end of the table: while only 7 percent of highly competent Internet users do not find themselves very politically efficacious, the same goes for 27 percent of the not very competent Internet users. These relations are also highly statistically significant.

**TABLE 3:** Relation between virtual capital and political efficacy. Percentages.

	Political efficacy				Total %
	1	2	3	4	
Virtual capital 1	44	35	14	7	100
2	37	34	16	14	101
3	28	38	22	12	100
4	24	34	24	18	100
5	15	27	30	27	99
N= Sign..000	310	358	226	166	1060

Examining the relationship between virtual capital and online political participation, we also find – less surprisingly – that a high level of virtual capital is correlated with high levels of online political participation. Thus, while 37 percent of those with a very high level of Internet competence have followed debates or chats about politics on the Internet and 14 percent have attempted to participate themselves within the last 12

months, the same is true for only 2 percent (followed debates) and 1 percent (participated) of those with a very low level of Internet competence.

Cross-tabulations between virtual capital and other aspects of political participation, such as political activity ("Do you think of yourself as politically active?"), membership in a political party, and attitudes towards the Internet on political processes have also been run. These tabulations produce results similar to the tables above, showing that significantly more persons with high levels of virtual capital see themselves as politically active; are members of political parties; and have positive attitudes towards the effects of the Internet on political processes than people with low levels of virtual capital.

Now the relations found in the above tables might not be produced by the effect of virtual capital alone. It is likely that, for example, education or age might be background or intermediary variables producing some or most of the effects seen in the tables; control for these variables has therefore been carried out. These controls reveal that the observed relations hold true, even though a few of them are vulnerable to the effect of education, in particular. In order to sort out the question of the relative importance of education and virtual capital, respectively, different multiple regression analyses have therefore been carried out.

Table 4 shows a multiple regression analysis in which the three traditional forms of capital plus virtual capital have been entered as the independent variables,

**TABLE 4:** The effects of economic, organizational, educational and virtual capital on political participation and political efficacy. Multiple regression analysis.

	Political participation		Political efficacy	
	Beta	Sign.	Beta	Sign.
Virtual capital	.144	.000	.202	.000
Educational capital	.107	.001	.097	.002
Economic capital	-.018	.563	.013	.682
Organizational capital	.054	.104	.134	.000
<b>R Square</b>	.049		.099	
<b>F=</b>	12.848		27.346	
<b>Sign.=</b>	.000		.000	

and where political participation and political efficacy are the dependent variables.

As can be seen from the table, the explanatory value of the total regression model is low (R2 are only 5-10 percent). What is more interesting, however, is that virtual capital clearly emerges as the variable with the greatest explanatory power (beta's are .144 and .202, respectively) when it comes to explaining variations in political participation and political efficacy. Education has a weaker explanatory power, and organizational capital has some explanatory power when it comes to political efficacy. We have also attempted to run the regression analysis entering only virtual capital, educational capital and age as independent variables. Once again, virtual capital has the greatest explanatory power (beta's are .166 and .244).

"The possession of virtual capital appears to neutralize the effect of education on political participation."

Overall, the results of the multiple regression analyses must be said to strengthen the conclusions made above concerning the correlations between virtual capital and political participation and political efficacy, as well as to confirm that virtual capital is a resource in its own right; independent of other types of resources such as educational, organizational or economic capital.

In order to further validate the results found here, some additional tests have been carried out. Firstly, up until now, we have only dealt with persons who are Internet users. If it can be shown that non-Internet users are also participating politically to a high degree or see themselves as having a great degree of political efficacy, this will invalidate the notion that virtual capital represents a resource of special importance for political participation. For these reasons, we have run all of the cross-tabulations mentioned above for non-users only. The results of these cross-tabulations consistently indicate that non-users have low levels of political participation and political efficacy matching the levels found among the group of Internet users with the very lowest levels of Internet competence (virtual capital = 4 or 5).

Secondly, in order to further investigate the question about whether virtual capital is really more impor-



tant for political participation and political efficacy than education, we have tried to narrowly examine the group of super users defined as respondents who we consider to be very competent Internet users (who score 1 or 2 on the virtual capital index). If we can show that education matters significantly within this group, it will mean that even though one has acquired a great amount of virtual capital, education will remain the most significant predictor of political participation and political efficacy. For this reason, a variable has been constructed combining virtual capital (values 1 and 2) with education (school education, three levels). Cross-tabulations have then been run between this variable <viredu> and political participation, political efficacy and the other aspects of political participation mentioned above (political activity, membership of political party and attitudes towards the effects of the Internet on political processes). An example of these cross-tabulations is shown below (Table 5).

**TABLE 5:** Relation between combined variable for education and internet use <Viredu> and political participation (index). Percentages.

Viredu:	Political participation				N=
	1	2	3	4	
Super +12	33	21	27	19	195
Super +10	25	26	28	22	101
Super +7-9	26	19	31	24	42
N= Pears. .77 Gamma.395	100	75	94	69	338

As the table indicates, there are minor differences in political participation, indicating that super-users with a low level of formal school education (super + 7-9) might be slightly less prone to participate politically than super-users with a high level of school education (super +12). As is clear from both the Pearsons chi2-test and the Gamma test, however, the correlations in the table are not statistically significant.

This pattern repeats itself in the other cross-tabulations run. Only when it comes to political efficacy do we

find a difference between super-users with a high level of school education and super-users with a low level of school education, indicating that super-users with a higher education find themselves slightly more politically efficacious than super-users with a low school education. However, this difference is only just significant at the .05 level (chi2=.037).

◀ "The Internet enlarges what Merton and others have referred to as the 'opportunity structure' for the individual."

These results lead to the conclusion that in the case of the super-users, the possession of virtual capital appears to neutralize the effect of education on political participation (and political efficacy). One of the reasons for this surprising result might be that the group of super-users is a very unique group, consisting predominantly of highly educated persons. If this is the case, differences in education in this group will not weigh heavily when carrying out the cross-tabulations and statistics. That there might be some truth to this point can be seen from the fact that persons with little schooling constitute only 12 percent of all super-users (42 of 338 persons). This can be compared to their share of all Internet users, which is 22 percent, and their share of the whole sample, which is 32 percent. Conversely, persons with the highest level of school education constitute 58 percent of the super-users, 43 percent of all Internet users, and only 36 percent of the entire sample. The group of super-users also sticks out in terms of age. Thus, 58 percent of all super-users are below 40 years of age, while this is only true for 45 percent of all Internet users and 39 percent of the entire sample. At the other end of the age spectrum, we find that 42 percent of the super-users are over 40 years old, while this goes for 55 percent of all Internet users and 61 percent of the whole sample. Thus, we can conclude that the group of super-users is somewhat younger and better educated than the group of Internet users as such, and considerably younger and better educated than the adult population at large (our sample).

That which is of interest here, however, is that the group of super-users is a group that has acquired a high level of Internet competence, and, for that group, diffe-

rences in formal schooling do not appear to be of importance for political participation and political efficacy. Furthermore, as an increasing number of persons become competent Internet users, this trend can be prognosticated to become stronger.

As a final test of whether educational or virtual capital matters most for political participation and political efficacy among super-users, we have run a number of multiple regression analyses entering education (dummy variables), virtual capital and their interaction coefficients as independent variables and our different measures for political participation and political efficacy as dependent variables. The results of these analyses are not easily interpreted. Thus, the explanatory value of the regression models are generally low ( $r^2$  between .018 and .031), and most of the correlations found are not significant at the desired level. However, in so far as we find some statistically significant correlations, they consistently show that virtual capital or the interaction effect between virtual capital and education are best at explaining variation in political participation as well as political efficacy (beta's ranging between .318 and .654).

### Conclusion and perspectives

There are three conclusions to be drawn on the basis of the analysis carried out in the above. First, it has been demonstrated that virtual capital or competence in using the Internet represents a resource in its own right, rather independent of other types of resources such as economic, organizational and educational capital. Secondly, it has been demonstrated that there is a good and consistent correlation between virtual capital and different forms of political participation and political efficacy; i.e. persons with a high level of virtual capital are more prone to participate politically and to see themselves as more politically efficacious than persons with a low level or without any virtual capital. Thirdly, it has been shown that for super-users (persons with a high level of Internet competence), the possession of virtual capital appears to neutralize the effect of education on political participation and political efficacy. In trying to investigate this question further, we found that also for super-users it is virtual capital or the interaction effect between virtual capital and education – more than education in itself – which are the crucial variables in explaining political participation and political efficacy.

Having found these interesting correlations, however, there are a number of fundamental questions concerning these relationships that we must ask ourselves. The two most important are probably: 1) why do these correlations exist, or what is the logic that makes super-users participate more politically than other groups? 2) What are the further implications of these relationships? Do they mean anything to the future of politics and the political system?



"The class does not perceive itself as a class."

Concerning the first question, an objection to the manner in which the correlations found have been presented is that the causality could run the other way; i.e. persons who are politically active and feel politically efficacious are possibly also likely to display more versatile Internet use than others. However, whereas this objection cannot be totally dismissed – as it is likely that persons who are politically active will use the Internet more than others for political purposes – we do not find it likely that being politically active should necessarily translate into a very versatile Internet use in general. Why, for example, should a politically active person be more likely to use the Internet for searching for information on professional or job-related issues, playing/downloading games, music, films, do Internet banking, etc. than others? Or formulated another way; only 3-5 of the 29 different Internet uses being part of the virtual capital index can be said to be somehow (and not necessarily) related to politics. They therefore constitute only a small part of the index and cannot in themselves explain why politically active persons should be more versatile Internet users than others. Thus, we will maintain that the causality runs from virtual capital to political participation and political efficacy.

But why? There would appear to be two answers when attempting to answer this question; answers that can be seen as complementary and which are both related to the character of the Internet as a medium. The first answer, which has its offspring in the literature on the social consequences of Internet use (see especially Katz & Rice 2002, also Castells 2001), points out the fact that the



Internet enlarges what Merton (1957) and others have referred to as the 'opportunity structure' for the individual, and which others prefer to call social capital.

Similar to what happened when technologies such as the telephone and the automobile were introduced, the Internet gives individuals who use it better opportunities than others to activate resources of different kinds and to create new knowledge. Thus, the opportunity structure offered by the Internet renders it easier to find out how to participate in different activities, to find a group sharing one's viewpoints and to actually participate (Katz & Rice op.cit:329). Internet use is therefore very likely to result in increased levels of social participation in general, as well as political participation in particular.<sup>5</sup> Even though Katz & Rice do not find indications of such increased participation among Internet users in the USA (see note 5), they write that: "Although the Internet has not lead to any political revolutions, it has supported and encouraged them."

Another answer to the question of causality is essentially an extension and strengthening of the first argument. Thus, we might see Internet users, and maybe in particular that which we refer to as the super-users, as a part of or the 'creative class'. Richard Florida (2002), who has coined this concept, perceives this class (as he sees all classes) as defined by its economic function, which is to perform creative work i.e. to create new meaningful forms within and between a huge array of disciplines and work fields. For this class, and this is our addition to his theory, which lives from creating new ideas, new technology and/or new content within a variety of fields (all kinds of science, engineering, architecture, design, writing, performing arts, etc.), and for whom the use of creativity is central to its work within business, education, the health sector, entertainment, etc., the Internet has come to play an increasing role as an enormous reservoir for finding, combining and exchanging information in new ways, thereby potentially speeding up the knowledge creation process and enabling more creative problem solving.<sup>6</sup> This Internet-added value for knowledge and creativity is probably the actual content of that which we have referred to as virtual capital in the above.

Much in line with Castells (1996, 2001), Florida further sees creativity/knowledge as the fundamental source of economic growth in the Information Society (Hansen & Hoff (eds.) 2006), as well as the source of the

appearance of this new class. This is also the reason why we called the capital factor found in the beginning of this article, and to which virtual capital as well as educational capital was highly correlated, new capital.

Florida proceeds to analyse the circumference of this class in the USA, finding that it constitutes roughly 30 percent of the US workforce, making it the second largest class, second only to the service class; but more important in terms of its economic contribution and potential (Florida 2002, Chapter 4). However, even though this class possesses the power, talent and size to play a huge role in politically modelling society, it does not appear to play such a role, i.e. the class does not perceive itself as a class. Thus, even though Florida demonstrates that members of the creative class are very socially active concerning matters that are important to them, e.g. personal development and environmental questions, the class does not appear to be particularly interested in politics. However, that which we see in this article might represent a shift in this situation. A change that might be unique to Denmark, but also a change that could be an indication of a political awakening of this class; a change that Marx would have called a transformation from a class 'für sich' to a class 'an sich' (Marx & Engels 1976).<sup>7</sup>

Summing up in terms of the causality question, our argument would thus be that virtual capital is a vital ingredient in the knowledge/creativity nexus, which is at the root of the economy of the Information Society as well as the shaping of a new, dominant creative class. This creative class, which posses a large amount of virtual capital, is also a very socially active class, activity that spills-over into political participation and political efficacy, as this class is increasingly trying to influence politics.

## NOTES

<sup>1</sup> 'Traditional' is placed in quotation marks here, because these types of capital are only so considered in the neo-Marxist tradition. In (non-Marxist) classical economics, capital (i.e. tools, buildings and vehicles) is only one of four factors of production; the others being land, labor and entrepreneurship. Various modern economics theories also refer to financial capital, natural capital, infrastructural capital and human capital as forms of capital (see [http://en.wikipedia.org/wiki/Economic\\_capital](http://en.wikipedia.org/wiki/Economic_capital)); however, I have chosen to stick to the neo-Marxist definition here, not out of any special predilection for Marxist theory, but because it has demonstrated that surplus value can be extracted on the basis of the possession of economic, organizational and educational capital, which then lays out a grid for the class structure. As I want to discuss the possible class-structuring effects of virtual capital, it seems pertinent to link to this understanding of capital.

<sup>2</sup> The occupational variable in our survey has 15 values. Two of these values are regarded as implying managerial tasks (self-employed and (higher) salaried employees and civil servants). All other occupations are regarded as non-managerial.

The complete list includes the following uses (Within the last month, have you used the Internet for any of the following?): 1) sending and receiving e-mails, 2) IP-telephoning, 3) videoconferencing, 4) participating in discussion- or chat-groups, 5) other communication, 6) searching for information on goods and services, 7) searching for information on professional or job-related issues, 8) use related to travel or overnight stays, 9) listening to web-radio/watching web-TV, 10) playing/downloading games, music, films, 11) reading/downloading newspapers or journals, 12) searching for addresses or phone-numbers, 13) searching for information on financial issues, currency, etc., 14) used general news services, 15) used dating- or contact-services, 16) used Internet-banking, 17) used other financial services (e.g. buying or selling stocks), 18) buying or reserving goods or services (incl. auctions), 19) selling goods or services, 20) finding information on the websites of public authorities, 21) downloading forms from public authorities, 22) sending in forms to public authorities, 23) finding information about institutions, e.g. day-care or schools, 24) communicating with institutions, e.g. day-care or schools, 25) finding information on the websites of organizations or associations, 26) communicating with organizations or associations via e-mail, 27) formal educational activities (school, university, etc.), 28) supplementary educational activities (courses, etc.), 29) other courses especially related to occupational possibilities (compulsory courses for unemployed persons, etc.).

<sup>3</sup> Voting has not been included in the index, even though it is an extremely important form of political participation. However, as almost everyone votes in national elections in Denmark, voting is hardly an issue that is well suited to discriminate between different groups on the basis of e.g. education or income. For this reason, voting has not been included in the index.

<sup>4</sup> While Katz & Rice (2002) find such increased levels of general social participation for Internet users in their study of the US, they do not find any differences in political participation between Internet and non-Internet users (*ibid*:325). However, in her study of the relationship between different Internet uses and political interest and (protest) participation in South Korea, Kim (2006) finds a clear correlation between e-deliberation and political interest. Thus, empirical findings obviously differ from country to country and do not exclude that such correlations exist in Denmark.

<sup>5</sup> Katz & Rice (*op.cit.*:352) expresses it in this way: "The same processes that draw people onto the Internet and into social relationships can, in many cases, create new intellectual and artistic terrain for themselves and others to enjoy." This observation is interesting as it might indicate that not only is the Internet important for creativity and knowledge of "the creative class", but it might also play an important role in constituting the class.

<sup>6</sup> While we are somewhat hesitant to see super-users as a new class, super-users certainly differ significantly from the adult population at large, not only in terms of education, age and gender, but also in terms of employment profile, income and political profile. Thus, whereas 79 percent of all super-users are either salaried employees or students, this goes for only 52 percent of the entire adult population. And whereas the median household income for super-users is 5-600.000 Dkr. annually, it is 4-500.000 Dkr. for the adult population at large. Politically, it is interesting to note that super-users are neither more left nor right-leaning than the general population, but are much less inclined to vote for working class parties at the right as well as the left end of the political spectrum (Social Democracy and Danish People's Party) than the population at large. The parties that especially seem to attract super-users include the Danish Social Liberal Party (a liberal-left centre party), Venstre (a liberal-right party) and Enhedslisten (small leftwing party).

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# MODINET: Challenges and Achievements

The article reviews the achievements of MODINET by commenting on the Center's publications, approaches and methods. Dividing the publications into three broad themes - democracy studies, journalism studies and studies of interfaces - the article discusses the Center's findings and results against an international research agenda.

MODINET - the Center for Media and Democracy - was established in 2002 and financed by the Danish Research Council in the period 1 April 2002 until 1 September 2005.<sup>1</sup> The center, or perhaps research program, set out to analyze media and democracy in the digital era. This article represents an attempt at reviewing and commenting on MODINET's research and results. The task is not an easy one: the number of publications is huge, the variety of themes great, and the findings manifold and diverse. Nevertheless, three areas stand out in my reading: first, the studies of the implementation and usage of ICTs in local democracy and everyday life and the challenges that this represents for democratic governance; second, the studies of news and news production, spanning from ethnographic studies of newsrooms to the study of the reporting of war; third, the studies of the interface, the way in which culture and technology shape the interface, as well as the manner in which the technologies, in particular websites, contribute to reshaping and reconfiguring the political, the social and the cultural.

One of MODINET's main ambitions has been to seek an understanding of how contemporary democracy works in the context of digitization, globalization and the changing conditions that these driving forces create for citizens. In particular, MODINET theoretically and empirically probes the themes and concepts of gover-

nance, network society and the tensions between human agency, technology and social structure. These themes are pursued through a large number of projects with a range of different perspectives, methods and themes, resulting in the collection of huge quantities of data, qualitative as well as quantitative, and a proliferation of analyses. In terms of scale and scope alone, MODINET is a rather impressive formation and the number of research questions posed, themes addressed, perspectives employed and the amount of data collected and analyzed bear witness to an equally ambitious objective in terms of research and knowledge production. In this review, the objective is to assess MODINET's contributions by examining the following aspects: first, what are the most important findings of MODINET and to what extent are they relevant for the international research community? Second, what, if any, are the weaknesses of the research undertaken under the MODINET umbrella? The following will seek answers to these questions by assessing a number of publications published within the MODINET framework.

## **ICTs and challenges for democratic governance**

Under this heading, projects regarding the use of ICTs in local democracy, in organizations, by citizens, in planning processes and the like are subsumed. A group of 'local democracy projects' are made up by studies of