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The Epistemization of Economic Transactions

Introduction: The Knowledge Society and Economic Processes

There is a widespread consensus today that contemporary western societies are in one sense or another ruled by knowledge and expertise. The proliferation of concepts such as that of a 'technological society' (e.g. Berger et al., 1974), an 'information society' (e.g. Lyotard, 1984; Beniger, 1986), a 'risk society' or 'experimental society' (Beck, 1992) and, most generally, a 'knowledge society' (Bell, 1973; Drucker, 1993; Stehr, 1994), embodies this understanding. Yet the apparent convergences between various authors on the relevance of linking knowledge and society also hide the lack of a genuinely sociological model of knowledge processes in society. The best developed theories are socioeconomic impact theories; one of the underlying assumptions is that new technologies play a leading role in waves of successive industrial revolutions, for example in the transition to an industrial society and in the contemporary transition to an information era. Older accounts had in mind an industrial economy where knowledge resided in machinery and technological production; in these writings, the impact of technology on social relations tended to be construed in a negative way. Berger et al.'s work *The Homeless Mind* (1974: 27ff.) can serve as an example of these views. The book sums up much of the discussion up to then in associating technological production with a particular cognitive style that rests on an understanding of reality in terms of isolated and controllable

components, means-end separation, abstraction implicit in work processes, and so on. When this sort of consciousness is carried into everyday life, Berger et al. argue, it leads to a divided identity and anonymous social relations, to individualization and alienation. For these and similar authors, alienation is the price of the technologically induced economic growth that characterizes modernization.

More recent accounts have tended to look upon knowledge as being exercised by knowledge workers (scientists and other experts) or perhaps as residing in scientific theories; the transformations linked to a knowledge economy have been seen in a neutral or positive way. One major source of this line of reasoning is Daniel Bell, who, writing at the same time as Berger et al., but representing a new assessment of social developments still considered valid today, projected an economy that is based on an 'intellectual technology' (Bell, 1976: xiii). Bell predicted a major change in the social framework of western societies based upon knowledge, and called this the transition to a postindustrial society. The argument Bell pursued dates back to the work of Richta and his group in the 1960s (Bell, 1973: 107; 1976: xiv) and is echoed and extended today, among others, by Peter Drucker (1993) and Nico Stehr (1994). In a nutshell, these authors link the way the economy is transformed in a postindustrial society to knowledge taking over the role capital and labour had played in industrial society. The two large dimensions elaborated in Bell's book are the centrality of theoretical knowledge as a source of industrial innovation and the expansion of the service sector as against a manufacturing economy (Bell, 1976: xix). These changes imply others: for example, the increasing role of science-based industries and changes in occupational distribution leading to a pre-eminence of the professional and technical class.

Bell did not discuss the implications of the increasing dominance of expert work along the lines that had interested Berger et al. Thinking of experts as a class and pursuing a macrosocial line of reasoning, Bell supplied rich statistics (updated by Stehr, 1994) on R&D expenditures, proportions of scientists and engineers, and so forth, and argued in terms of major institutional sectors. Though ostensibly concerned with changes in the social structure, what Bell mostly did is model the transition to a postindustrial society after the industrial transformation as being by and large an economic transformation. He literally means - by what he calls 'social structure' - a techno-economic order (Bell, 1976: xxi). Berger et al.'s lead concept had also been an economic one, that of technological production.

From a sociological perspective, then, the knowledge society argument is in its core a knowledge economy argument, though Bell and later authors (e.g. Drucker, 1993; Stehr, 1994) do address occupational consequences, issues of structural adaptation of major institutional sectors, questions of technocracy and so on. Before setting up a different target, we should

institution that produces systemic or holistic knowledge made available to all market participants.

There are other accounts of economic knowledge, most notably that of Machlup, who criticized efficient market assumptions as far too general to even have empirically testable counterparts'. Machlup also developed an account of a whole variety of functions and effects of information in grounding economic transactions (Machlup, 1984). In addition, Machlup analysed the special rules which apply to information when it is not considered as implicated in economic transactions, but as a tradable commodity which can be acquired at some specified resource costs.

Machlup's treatment of knowledge as a commodity makes explicit its being regarded as a product, a research result, or, to put it in epistemic terms, as a (more or less valid) representation of the world. Most other accounts of knowledge in relation to the economy or society share this understanding; they are based on exteriorized perspectives on knowledge, looking upon knowledge from the outside and not explicating the notion of knowledge in empirically based ways. For example, one may learn much about the 'acquisition', 'transfer', 'storing', 'dissemination', 'retention', 'management', 'institutionalization', 'trading' and so on of knowledge products, but nothing about the constitution and unfolding of the product itself, which is treated as an unspecified 'it' - as an unproblematic resource, commodity, or piece of information. An interiorized theory of knowledge, in contrast, would be one that brings into focus knowledge itself, breaking open and specifying the processes that make up the 'it'.

The Epistemization of Economic Transactions

We want to maintain that an exclusively exteriorized viewpoint on knowledge *is* no longer theoretically adequate, given the phenomenon that institutional processes of creating and validating expert knowledge have been implemented and are manifest in many economic and social domains. What we are confronted with today in areas of economic and social activities is the 'epistemic embeddedness' of these activities. By this we mean a situation where the reality to which these activities are oriented is no longer simply the 'natural reality out there' as interpreted within the frame of reference of personal experience and social conventions. Rather, it is a reality purposefully assembled and unfolded by professional knowledge workers and whole technological systems which provide the frames of reference and the means for experience and transactions to take place. According to this view, understanding knowledge societies in terms of a technologically propelled economic dynamic must be supplemented by an empirically based understanding of how economic transactions are themselves penetrated and transformed by

epistemic practices. The 'epistemization of economic transactions' refers to a situation where these transactions rely on and are interstitched with multiple analysis processes and systems in a variety of ways. To obtain a glimpse of these analysis processes one merely needs to read the *Wall Street Journal*, the *Financial Times* or the business section of a major daily newspaper such as the *New York Times*. One will find economic reality mapped by 'analysts', 'strategists', 'economists', 'specialists' and other professionals who work at banks, investments firms, economic data providers. The epistemic work we have in mind is not the work of university economists developing fundamental insights at a distance from market events. Rather, it is work *inscribed in and constitutive of* economic objects as relevant to the practical activities of economic agents.

In this article, we want to illustrate one such system that is dedicated to the analysis of countries as epistemically rendered economic objects. The data were obtained through participant observation and interviews conducted from 1995 onwards in several major European banks (mainly German and French), in connection with a research project on 'Knowledge Processes and the Sociality of Financial Markets'. The data presented here are the result of participant observation in the Department of Eastern European Development of one of the largest German banks. The department discussed here had several functions, prominently among them conducting and providing studies of Eastern European 'countries' into which the bank expanded after the fall of the Berlin Wall. These studies were meant to provide knowledge for and support of the investment decisions of the management committee, as well as those of the bank's CEO. The name of the department implied on the one hand that the bank was supporting the economic development in Eastern Europe; but it also meant, even more importantly, that it was expanding the bank's own investments and subsidiaries in Eastern Europe and that it was identifying new possibilities for further expansion. Consequently, the department was seen as being of strategic importance and was reporting directly to the office of the CEO. It was not the only one in the company dealing with foreign countries. Other relevant units were the Economics Department, a retail banking department focusing on the banking industries in various countries, an Overseas Department dealing with countries outside Europe, and the London-based, investment-bank subsidiary of the German bank, which at the time of our study was rapidly expanding. Although all these provided data and commentaries used in country analyses, the department observed coordinated the flows of knowledge relevant with respect to activities in Eastern Europe. It (1) issued an in-house monthly newsletter containing short news on these countries, (2) prepared from its own archives custom-made files for the bank's managers when they went on 'fact-finding trips' to these countries, (3) moderated and coordinated the bank's Eastern European activities when problems or conflicts arose, (4) managed relevant

in-house conflicts between various branches and subsidiaries, (5) managed 'events' in Eastern Europe, such as the official opening of new branches and subsidiaries, or presentations at hearings conducted by Eastern European central banks in order to get licences, and (6) conducted country analyses. This last activity was considered by the department's staff to be key for their position in the bank, and they systematically objected to our observations about it running at times at a slower pace or in the background. Once the investment decisions were adopted on the basis of such studies, the department was becoming responsible for managing the mundane preparations of the investment, as well as the relationships to other in-house departments and subsidiaries. Hence, although these studies were done sometimes at a slower pace, they nonetheless dominated the department's activities (and were considered by its members as by far the most challenging activity).

Country analyses came out in two varieties. The first were one- to two-page long 'country reports', updated twice a year, and kept on file for anyone who needed the information. The second were 60- to 80-page long 'country studies', which took months and longer to complete. They were also kept on file, and did not seem to be updated according to a fixed schedule. In fact, rather than being updated, they were accumulated in a sediment-like way. Older studies were not thrown away, destroyed, or taken out of circulation. Rather, parts and bits of them were used in new studies, which were added to the old ones, forming files which could take several shelves. The temporal order of the files corresponded to the temporal order of the department's activities. Bits and parts of various documents, as well as single documents or clusters of them, could be moved back and forth in a country file according to the things the department was just working on. Moreover, they could be taken out and used to build new, ad hoc documents, to produce new texts, or to manage interdepartmental conflicts. Conversely, newly produced texts could be integrated into country files. Thus, when the CEO of the bank went on a 'fact-finding trip' to a Baltic country, a document was assembled for this purpose, presenting the economic facts of the said country, as well as the bank's direct and indirect engagement (which basically meant that the facts were already found as a preparation of the trip). For this purpose, several documents were taken out from various slots of the respective country file. Starting from them, the member of the department who was in charge produced a new document about the bank's engagement (participations, long- and short-term credits to western firms investing there) in the country to be visited, and inserted it at the front of the trip-related new file. Afterwards, these documents were put back together in the file, and not in their original slots. Thus, country files represented the department's key resource for managing daily activities and tasks; but they also mirrored its temporal order, which was not necessarily a chronological one.

A Specular Epistemology

Before turning to the construction of countries as economic objects, we want to sketch in more general terms some features of the particular epistemic approach (which we call a 'specular epistemology'³) found in the present context, while comparing these features with those prominent in laboratory sciences as studied by one of the authors of this article (Knorr Cetina, 1994, 1996, 1999). The features are:

1. observation and surveillance at a distance;
2. the use of impure and heterogeneous data;
3. the reflexive self-inclusion of the observing agent;
4. the dominance of temporal orderings (time structuration);
5. perspectival validation.

The first feature refers to strategies of observation at a distance, aimed at keeping track of the state and development of economic objects (markets, companies, countries and so on). Analysts and other observers in relevant economic contexts continually watch particular segments of economic reality; to a significant degree, it is their job to keep track of the respective entities and any contextually relevant events, and to provide the information collected to other agents. 'Watching', 'observation' and 'surveillance' can mean different things here, among them actually visiting a place (for example, a country or a company) and developing a view on it in situ. Such observations, however, are rare and reserved for particular occasions. Also, one cannot observe a country or a national economy in situ. Since these units are themselves dispersed, multilayered, complex entities, any would-be participant observer on the terrain is still limited to very partial views and subject to misleading or even false impressions. Observation, in the present case, is mostly accomplished from well beyond the boundaries of the observed object. Analysts draw on documents and statistics issued by the observed units and their subdivisions, on other government and trans governmental agencies' analyses and reports (e.g. OECD reports), on commercial information providers' public and intranet materials, on the ideas they get when meeting someone or encountering something connected with the observed entity, on items about them included in the daily news. This form of information gathering involves the focusing of awareness on a fixed target and the pursuit of the target with one's attention and gaze fixed on all its details and developments. It also involves circumspection and a wide angle lens: the point is not only to see what a particular unit is doing but to also notice the behaviour of others related and similar to it, and to register any economic or non-economic events which might have a bearing on the future state and well-being of the unit. Some of these occurrences require active searches, others simply a readiness to respond. An observational system needs a

surprise trigger, or to borrow a notion of Alfred Schutz, a sort of 'Vide awakens' of the observer which allows events of interest to swim into view.

Such a set of epistemic policies implies the Rousseauian ideal of a fully transparent society, and fully transparent agents within it. In fact, the ideal has become an explicit goal in some cases; for example, company analysts may profess it to be their desire to get companies to become 'transparent' in all relevant (managerial, accounting, strategic planning and so on) respects. We choose the notion 'specular epistemology' to capture the observational optics of this approach through which the object becomes construed as a shared 'sight'³ rendered transparent through a variety of tools. We also choose it to contrast the present case with that of the *intervening epistemology* of most natural sciences (see Knorr Cetina, 1996,1999). Many empirical natural sciences, even when they are not experimental sciences (for example, astronomy), are based on what Hacking (1983) called 'intervening', on the manipulation and material processing of epistemic things. These sciences manipulate materials in the laboratory in indefinite ways, sometimes based upon laboratory protocols, while aiming to extract from laboratory 'reactions' specific, knowledge-generative effects. Objectivity, in these cases, is not based on the stand-offish attitude of the social sciences, which suggests that only a 'blind', non-interfering strategy that lets experimental subjects do as they would in a 'natural' environment leads to representationally valid results. The specular epistemology described here is also not based on this attitude, but it is nonetheless non-intervening in the immediate process of research.

The second feature mentioned earlier is that of the use of 'impure' and heterogeneous data. This also contrasts with the procedure of many natural sciences in which the laboratory itself is the main information source. For example, in molecular biology, nearly all graphs, pictures and numbers that qualify as data result from internally processed materials, which are mostly also laboratory products (specially bred mice and other animals, chemicals, cells, plasmids, and so forth). Moreover, one takes extreme precautions against contaminants and pollutants in practically all steps of laboratory work, setting up barriers against the unwanted interference of the very class of agents (viruses, bacteria, fungi, yeasts, for example) one is at the same time studying in research. In areas of high energy physics, physicists spend much of their time 'fighting' a continuous 'struggle' against an overwhelming 'background' of unwanted signals which were the objects of study of 'last year's' or 'last decade's' work - a striking phenomenon that indicates a similar split of internal objects and their activities into welcome and unwelcome ones to that in molecular biology. In contrast, the specular epistemology with which we are dealing in this article shows few of those qualms. One appears hospitable and receptive towards all sources of information, provided the source produces no outright lies (there are sanctions against someone planting false information). Sources are heterogeneous in nature, as implied before:

the targeted units themselves, such as companies or countries (that is, the relevant statistical, financial and other subunits within these entities), provide their own financial and economic indicators and account figures. To these are added an exploding number of commercial market data providers delivering real-time price quotes, market news, technical trend analyses, P/E ratios, price histories, interpretative commentary, and more. A significant source of 'news' are the daily financial and other papers and to some degree weekly magazines; as are particular news channels on television and radio, such as Bloomberg News Radio and Television, whose slogan 'Less News On Crime'⁵ in the USA and whose windows-divided television screen are oriented towards an economically interested audience. One example of a 'foreign' (to the bank's usual business) activity that had served as a source of information was the detailed restoration of a historical building leased to serve as the bank's future subsidiary headquarters in a state of the CIS (we shall call it here country X). The bank engaged in the restoration although new office room at western standards was widely available. The restoration was a very time- and money-consuming enterprise and did not appear economically rational. The building was not fit to accommodate a trading room; hence a special floor had to be added, without changing the building's exterior. The building's site was not very visible and, above all, not in the city's business district. Architects and special workers were flown in from Austria. The opening of the subsidiary was, as we were told, delayed by more than a year because of this costly restoration. This meant not only that the money invested in the building had to be recuperated from future profits, but also that potential business was lost because of the long delay. Nonetheless, the members of the department, as well as the management, saw the restoration as a great achievement and a bargain. The architectural restoration plans were integrated in the country file and a book about the restoration was published as part of the bank's opening ceremonial. What the bank achieved by this costly and time-consuming effort was to acquire deep knowledge of the local authorities. It not only established relationships to them and gained their good will, but also acquired knowledge about how 'to handle' relationships with these authorities, how to talk to them, and how to respond to what one guessed as these authorities' expectations. Moreover, the restoration was seen as a process through which the subsidiary went native (although in fact it did almost all its business with western corporations). Partly because of the knowledge gained, the subsidiary was perceived as successful, although at the time of our observations it had just opened.

The information obtained from these sources is as manifold as the sources themselves. Rumours, policy announcements and political events (for example, election results, strikes), are as much part of the package as are, sometimes, regional weather conditions (which affect the harvest) or natural disasters; and there is a wide variety of economic information, ranging from

the regular routine announcements of economic indicators to news about central bank activities, banking law and tax changes, mergers and takeovers, and much more. Not only that the heterogeneity of the information being gathered is significant in itself; what is even more significant is that various kinds of information are combined together and related to the market in visual displays or charts. Such charts serve as a representational instrument for framing economic topics in broader social and political processes.

One might mention here that at the time of our observations, a strict hierarchy of who got to see what information source first had been established in the department. For example, the newspaper perceived as the most important (the *Financial Times*) was read first, starting with the head of the department and ending with the trainee, always in that order. Each reader had to acknowledge having read (or at least seen) the source, by putting his or her initials on the front page. When one of us unknowingly broke the order, he or she was admonished by the department's secretary, who rerouted the newspapers according to the established order.

We do not wish to suggest that the 'impurity' and heterogeneity of these data indicate less than proper procedure, impure science, or something of this sort. We understand the readiness to draw on 'any' data rather as an active and successful strategy of broadening one's sensory system to cope with sprawling, heterogeneous, partial and multiperspectival as well as multicultural ('global') economic and political activities and institutions. The strategy also suggests that the models which indicate which factors influence what economic behaviour are open ended, as are the possible ways in which economic practice may thwart attempts to narrow down the models.

The third feature in the list indicates that economic observers tend to be, as persons or via the institution which they represent, participants in the reality observed. What we have in mind is not some general relevance of the knowledge acquired to the understanding of the world around us, which is something potentially of interest to anyone, but rather actors having a stake (through their own investments or the activities of the institution for which they work) in the immediate objects about which they gather information. This form of reflexive self-inclusion is not prominent in the natural sciences, though it may at times occur (in molecular biology, the situation may obtain when a scientist tries to identify the genetic basis for a medical condition she or he has). An interesting subcase of this occurs when financial institutions use and display their 'included' status by advising clients to act as they do. For example, a bank may suggest that clients commit themselves to the same trade or investment the bank commits itself to in proprietary trading (in trading for its own accounts). The strategy is thought to breed trust by shifting the bank's position from that of a broker or mediator to that of a market-participant 'in the same boat' as the client.

The fourth feature warrants a properly detailed analysis in its own right

perhaps as places of tourist interest. From a general economic perspective such as that presented in the media, countries appear to be circumscribed by a set of (changing) macro-indicators: for example, Germany may be defined in terms of high exports, low inflation, high industrial productivity, high income and GDP and so on. For the department mentioned earlier, a country was represented by a computer file called, for example, 'The [country Y] Study' and a cardboard file of papers which was partly identical with the computer file, and partly was meant to support the building of this latter. In the beginning, the files had a number of empty chapter slots and titles which remained identical across different country studies. These included slots for a table of contents, a section on the banking laws of the country being studied, one on the interbank market, on the economic competition in the country, a further section on economic projects conducted there, one on strategy and action plans, and one for a profit and loss statement. Mapping the country, then, meant assembling information on these topics. Although this order was rather rigid, the importance and difficulty ascribed to each section by members of the department varied greatly. Some parts were seen as being 'really difficult' and requiring a great deal of 'craftmanship', others as being easier, and still others as being relatively unproblematic. Correspondingly, the sequential order maintained in building up the file was not identical with the sequence of sections in the file. One began with the most difficult sections, which were done by the most experienced or able persons. These sections also required more time to produce. When we were there, the department had just concluded two studies on countries from southeast Europe and was conducting a new one on a country of the CIS (we shall call it here country Y).

One began by compiling the banking laws which were important since they included the rules under which foreign firms could operate in the respective country. One also compiled regulations of the reserve bank, through which the structure of ownership, capital requirements, risk deposits, formulae for risk deposit computation and so forth were mandated. In contrast to the banking laws, these regulations were not already available in the department, and had to be procured by the bank's representative in the country's capital. This was not perceived as a difficult task in the department, but seen as fit for a lesser' specialist. Both the department's head and its members joked often about the representative's ability to obtain the regulations, implying that the respective person did not have the expertise and abilities for more difficult tasks. During several briefings, the department head showed herself annoyed by the fact that the regulations were not forthcoming, complaining that: "Well, Mr X [the representative] cannot even do that!" She also repeatedly referred to him as lacking perspective, an overall view, and as 'delivering only bits and pieces'. For her, and for the other members of the department, 'having perspective' and 'seeing the whole'

meant in the first place producing knowledge about the interbank market, the money market and the foreign exchange market.

As it became clear later, these were core elements in mapping the country. These particular markets were important because they allowed the bank which wanted to expand into the country to finance the expansion locally, with the help of interbank loans and other financial instruments (like repurchase agreements and certificates of deposit). In other words, expansion did not mean importing most of the capital needed for the expansion to the respective country, but rather finding most of the money on the spot. In addition to the task of getting knowledge about how to find money locally, an important task was obtaining knowledge about how to get it out of the place. After a trip to a CIS country where the bank had a subsidiary, the department's head set up a briefing and announced that the subsidiary's trading floor was doing well. An important strategy, she explained, consisted in 'turning the money*'. This basically meant exploiting the different exchange rates between Eastern European currencies on different local markets, and transferring (cum exchanging) the money between these countries, until it was 'turned' into D-marks at a profit and could be transferred back to the subsidiary. Since the strategy proved successful, and the department was just doing a new study, one decided to include in the study the question whether the method could be applied in the new country.

The second market element of interest was the competition, meaning competing foreign banks catering to foreign firms already in the country, or intending to expand there. The banks we looked at were not interested, at the point of our study, in replacing local retail banks and in taking over their local business. Rather, they saw themselves as service providers for incoming western companies in need of financial products and services. As a consequence, local banks and their clients appeared to be rather conspicuously ignored in the respective country studies; the 'country*' was constituted by its foreign-dominated business sectors, and by the foreign companies and banks operating there. One could project a division of labour according to which foreign banks, in building on their expertise, would become the sole business partners of foreign companies, while local banks catered to the needs of the locals and (if at all) provided indigenous capital for business ventures. Financial products were at the centre of the attention devoted to competing banks. The intention was to find out what products were already provided, at what price, in order to learn what goods to offer and where to insert new, monopolistic products.

Construing the economic reality of a country also meant making a profit/loss calculation, and including in it such costs as real estate prices, personnel costs and other expenses related to setting up branch offices.

Figure 1 gives a figurative rendering of the country as a multilayered concentric construct in which economic products and their enveloping markets

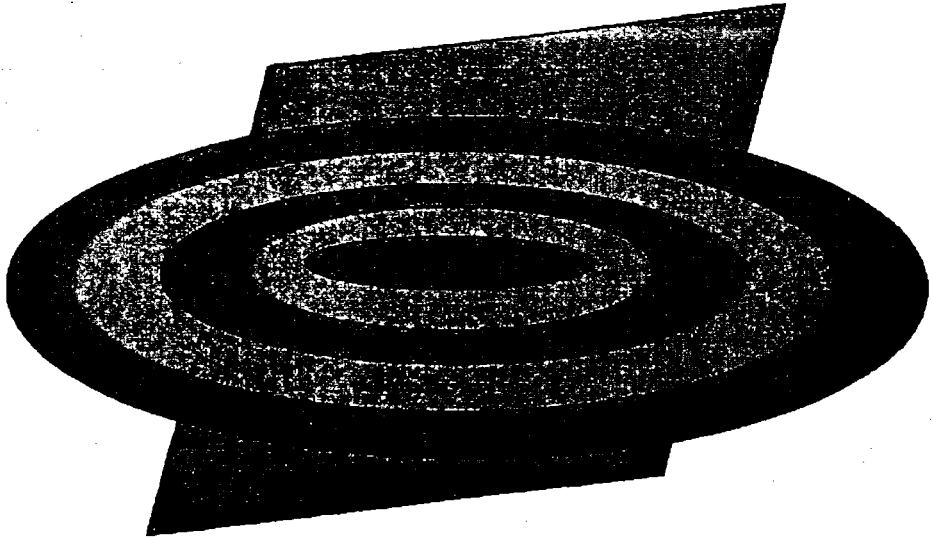


Figure 1 'Countries' as an Object of Financial Analysis and as an Epistemic Platform for Economic Action

reside in the core and legal regulations provide the relevant context. The concentric structure corresponds to the sequence of data collecting, and to the amount of time spend by the department's members in each circle. Projected profit and loss calculations were made when the most important elements of the study had already been done; they added something like an external horizon of future prospects to the concentric structure. Mostly, however, the members of the department took over and adapted previous estimates of profits and losses. These came from older studies, or from studies which had been successful, in the sense of having led to a positive investment decision. These profit and loss calculations are the most direct example of reflexive self-inclusion, in the sense that the bank included itself in its projection of the country, but also in that newer studies were tinkered from bits and pieces of older ones. One more example: during several briefings, the department head insisted that the profit and loss estimate for the planned subsidiary in country Y should be done after that done for country X, because 'they [the countries] resemble one another'⁵. But country X was the place were the bank had undertaken the costly restoration, and it was more than unlikely that the bank would spend another US\$12 million in country Y on a similar project. Reconsidering, the department's head said the profit and loss estimate should be modelled rather after one done five years earlier for another subsidiary, because the countries "resembled each other" too. Finally, she decided that the person in charge should produce a mix of the two, because the bank's activities would be in the future very similar to those in the other two countries.

The concentric structure of a country as an economic construct also corresponds to a sequence of sequentially more difficult data collections and of progressive uncertainty and risk. It is important to stress once more that the specular approach in the case observed was routine in the way the goals were specified and preformatted as to-be-filled file slots. Yet filling the slots was far from routine, and difficulties and problems became more complex as one moved from the outside in. When the department head prepared a checklist to be answered in regard to the core elements of the study, she began with: 'Is there an interbank market for US\$ and xx [local currency]? Roubles? Which are the rates? Which time spans? What sort of role does the reserve bank play? Does it offer refinancing? Which are the market players?'⁵ She continued with: 'Are there treasury bills? Are there plans for emitting treasury bills? Is there a market for securities? Which foreign currencies are traded in?' Questions about banking laws and regulations came only after those about clearing and corresponding banks, and just before the final question 'general situation of the market'. Needless to say, these questions were not to be answered by a yes or a no: a detailed and concrete description was required.

The difficulties started with the attempt to map the interbank market of country Y, and intensified as one considered financial products at the heart of the market. In the first case, difficulties largely had to do with a lack of standardization in the understanding of the referent between the western bank conducting the study and the local information sources. These latter, among other things, used different names to refer to what turned out to be the same interbank market, not making it clear whether one or several institutions were involved. Moreover, there were clearly different understandings about what the 'interbank market*' is. When a first report on that market was faxed in from the capital of country Y, it was called 'Three Interbank markets of [local currency name] in country Y' and had four parts, of about equal length. The first was 'the white market', then came 'the grey market', 'the black market' and 'outside markets of [local currency name]'. Each was given a percentage estimate of the total market, as well as a volume estimate. The working of each market was also described. When one of us noticed that the percentages added up to about 140 percent, a member of the department replied: 'We cannot change them, we have no better figures. We have to take this, they have no value, of course, but... We can write "gross estimate" on the top.' Nonetheless, changes were introduced several times during draft preparations. First, the description of the black market (which was not only statistical, but also procedural) was reduced, so that only one sentence acknowledging its existence remained in the final draft. The description of the grey market encountered the same treatment, although it survived for a longer period in various drafts. Contradictory statements were eliminated step by step. Having noticed that several descriptions coming from the representative office at the same time confirmed and denied the existence of

secondary markets for securities, the members of the department tried to tinker a coherent description by asking for additional reports and, when these were not forthcoming, they simply eliminated the contradictory passages. In addition, the final draft was edited so as to fit descriptions of interbank markets from previous studies.

Finally, with respect to financial core products, problems of the previous sort were compounded by the further difficulty of translating and comparing differently constituted entities offered by different banks, and of naming, defining and pricing goods which the bank conducting the study had not previously offered. It appeared that the bank had different price lists for the same products: some prices were national prices, others were in use Europe-wide, and still others were used by the subsidiaries in Eastern Europe. One simple example was a product called 'clean collection*' (meaning a charge for the collection of a cheque covered by sufficient money on the account). This was offered by a competing western bank, and the bank investigated here neither recognized the product (it collected no charges for these services) nor knew how to price it. The bank nonetheless decided to include it in its price list in order to match the competition.

Concluding Remarks

We have outlined in broad strokes some aspects of a hitherto scarcely regarded epistemic culture, that of analysts in banks observing economic reality and mapping this reality for economic institutions. We have called the epistemology involved 'specular', emphasizing the tracking of economic reality through distantiated observations and its construction as a 'sight' (or spectacle) for all concerned. What results from the construction may not serve as the basis for immediate decision making. In fact, studies of countries for which no expansion plans existed were also conducted in the case investigated. Sometimes, such plans were abandoned or postponed, without this necessarily stopping the studies being done. Plans could be periodically revived, which also meant reactivating older studies and starting new ones. Sometimes, studies were designed to support expansion plans, while the latter changed several times during the conduct of research. Doing or not doing a study, and deciding about it were seen as an important prerogative of the management. While we were in the department, a conflict developed between members of the board, regarding whether to conduct new studies and where. The department's head 'confidentially'¹ complained several times that a former CEO was exceeding his authority and competence by insisting on a new study about a country from Central Asia, and by undertaking a 'fact-finding trip'. Her complaints were not about whether it made sense economically to investigate such new opportunities, but about the former CEO

having previously agreed to supervise only studies in the making, and abstaining from initiating new ones. Deciding about such studies was seen as an important resource in internal conflicts and as a preliminary step to investment decisions. As epistemic resources and activities, country studies were less than marginal in internal power struggles. With their own time structures and rhythms, they also modelled to a certain extent these decisions' temporal structures. Like studies, the decisions could then be revised, deferred, maintained, actualized.

On a more general level, country studies map for economic institutions the reality in which these institutions move. Whether the recommendations they contain are acted upon or not is secondary to the definitional function the studies perform. This is the function of articulating, for the bank, the (geopolitical, economic and so on) features of the terrain which is the bank's (potential) activity space. Moreover, banks undertake through such studies the work of articulating their position in the finances capes they help to generate at the same time. It should be added here that these articulations are not only contained in the computer files and paper reports mentioned before, but are embodied in and represented by the leaders of the units that perform the research and represent it in board meetings and management discussions. Conversely, such epistemic objects as countries define department heads as social and institutional subjects. In our case, the head of the department participated actively in the study, even if she did not write it herself. She constantly monitored its unfolding and established the lines along which the study ran. She represented it in the meetings of the board, to which she constantly brought pieces and parts of previous studies. At the same time, other management staff told us informally that people were perceived by management with respect to the expertise they embodied, the studies they did, and their engagement in such studies: that is, they were perceived as the 'Czech Republic woman' or the 'Balkan man', regions which they also proudly defended.

Countries, of course, can also be visited as tourists, and they are known to us as geographic, cultural, linguistic and other entities. The studies mentioned before always display a lack, the lack of everyday knowledge dimensions. Managers, for example, have the possibility of resorting to these dimensions to get a contrasting view of the reality concerned, or to supplement a study report by their own 'inside' glosses. Thus, the definitional work of experts' reality mapping remains partial and open to contestation.

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