Playing the Numbers Game: Dealing with Transparency

Completed Research Paper

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Abstract

This paper unpacks the performativity of transparency inside the organization. Organizational members often use digital technologies to make their actions visible to others in the organization. However, practices of visibility produce opaqueness as much as transparency. In our qualitative study in a telecommunications organization, organizational members sometimes made their actions transparent to their colleagues and managers, while at other times they played numbers games and made their actions opaque. We take a sociomaterial perspective and investigate how practices of visibility are performed by organizational members while using digital technologies. We consider the temporality of visibility making practices, to better understand how they emerge and how they produce transparency and opaqueness. We illustrate how transparency and opaqueness are produced interchangeably, as actors are oriented towards the past, present, or future. The study extends our understanding of information visibility inside organizations, by bringing to the foreground its sociomaterial and temporal nature.

Keywords: Performativity, sociomateriality, temporality, transparency, digital technology

Introduction

Whereas making something transparent presupposes that it makes it visible (Roberts 2009), making something visible does not necessarily mean making it transparent. It could also become opaque. Digital technologies have often been considered to be powerful in increasing transparency in organizations (Brivot and Gendron 2011), governance structures (Garsten and Montoya 2008) and in society (Hansen and Flyverbom 2015). As digital technologies increase visibility and monitoring of employees' actions and performance across all levels of hierarchy, several scholars have studied their disciplinary and regulatory power (Elmes, Strong, and Volkoff 2005; Zuboff 1988), as well as their use for coordination purposes (Kellogg, Orlikowski, and Yates 2006; Orlikowski 1992). However, most scholars, taking a technological deterministic perspective (Boudreau and Robey 2005; Orlikowski 2010), have overlooked how technology

may be enacted in ways that preserve the user's autonomy and provide a distorted view of the reality on the work floor to the supervisors. We still lack a comprehensive account of how employees perform practices of visibility while using the digital technologies that render their actions visible to other organizational members. We draw our focus on this aspect, aiming to answer the research question: *How is transparency enacted in practices of visibility performed through the use of digital technologies in the workplace?*

In this paper, we study transparency by focusing on the practices of making employees' actions visible to other organizational members (colleagues, managers, employees from other departments, etc.). Drawing upon work on transparency in similar contexts, such as rankings (Hansen and Flyverbom 2015) and reviews (Orlikowski and Scott 2014), this study follows a sociomaterial perspective (Orlikowski 2010), with the goal to untangle the performativity of transparency, as this is enacted through the use of information systems. We conceive of the performativity of transparency as the mechanism through which "the making visible starts changing that which is rendered transparent" (Roberts 2009 :958). We consider performativity as sociomaterial (Orlikowski and Scott 2014 :874), thus conceiving of reality as enacted through performance of sociomaterial practices. Following the call of Roberts (2009), we aim to further understand how the devices that make human actions visible are mutually constituted with the agency of humans whose actions become visible, through these very actions. Practices of visibility performed through the use of digital technologies can have a temporal orientation, as digital technologies enable monitoring performance in real time, evaluating past performance (via storing past data), as well as forecasting future performance (Hansen and Flyverbom 2015). Consequently, to understand the performativity of transparency –and thus why people often conceal more through digital technologies instead of making transparent (Cunha 2013; Hansen and Flyverbom 2015)– we need to also examine its temporality. We do so by following the chordal triad of agency approach developed by Emirbayer & Mische (1998). This approach suggests that agency has a temporal orientation. People perform a practice while oriented towards the present, past or future.

In order to unpack the performativity of transparency, we performed a qualitative study in a large telecommunications organization. Through interviews and observations with employees in the marketing and sales department, we got to develop a thorough understanding of how transparency and the lack thereof, i.e. opaqueness, emerge through the daily actions of account managers, while using a CRM system for managing their sales work. We analyzed the practices through which the account managers made their actions visible to their colleagues, managers and other organizational members, which sometimes produced transparency while at other times they produced opaqueness. The way they made their actions visible, while being oriented towards their past, present and future performance, was entangled with the material reality of the past, present and future constructed by CRM data. We found that the materiality of the CRM system triggers account managers not only to act transparent, but also to act opaque as they interact with the system, and reflect on their past, present and future. Our findings contribute to the recent discussions on how transparency is manufactured with the use of digital technologies (Hansen and Flyverbom 2015), by unpacking the performativity of transparency as such emerges over time.

The remainder of this paper is structured as follows: First, we draw on theories of transparency, digital technologies, sociomateriality and the chordal triad of agency to construct a performative perspective on transparency. Subsequently, we provide details on our research approach, the research setting and the research methods followed. In the analysis of the findings section, we unpack the performativity of transparency as this emerges in the practices of visibility performed by sales employees. In the discussion section, we try to extend our theorizing on the performativity of transparency across time, and discuss the contributions of the study and implications for research.

Towards a performative view of transparency

Visibility, transparency and opaqueness in the workplace through the use of digital technologies

Making something transparent means "casting light upon what would otherwise remain obscure or invisible" (Roberts, 2009: 957). Transparency within organizations can be defined as casting light upon the behaviors, activities, routines, output and performance that emerge at the lower hierarchical levels of

organizations (Bernstein 2012). The potential of transparency to counter opaqueness (Roberts 2009), by illuminating what would otherwise remain concealed, has strongly related the concept to notions of coordination (Metiu 2006; Tuertscher, Garud, and Kumaraswamy 2014), accountability (Hansen and Flyverbom 2015), regulation (Garsten and Montoya 2008) and surveillance (Knorr Cetina and Bruegger 2001). In this regard, organizational scholars have been concerned with the role of transparency in management of organizations (Bennis, Goleman, O'Toole, and Biederman 2008; Bernstein 2012; Hood and Heald 2006), and have considered it as a powerful form of governance (Fung, Graham, and Weil 2007). Several studies illustrate the efforts of managers to increase visibility of employees' work inside their organizations, for example by redesigning the office spaces (Elsbach and Pratt 2007), introducing surveillance systems (Sewell and Wilkinson 1992), arranging peer scrutiny mechanisms (Sewell 1998), and adopting information and communication technologies for real-time monitoring of activities (Elmes et al. 2005; Leonardi, Treem, and Jackson 2010; Orlikowski 1991). Another well-known practice for increasing transparency consists in the development of performance measurement systems, such as the balanced scorecard (Kaplan and Norton 1996), target systems (Ball and Wilson 2000; Frey, Homberg, and Osterloh 2013), rankings (Hansen and Flyverbom 2015) and reviews (Scott and Orlikowski 2012).

The development of digital technologies during the last decades has had a vast impact on the development of practices that reinforce visibility in organizations. Data produced by digital technologies provide inscriptions (Latour and Woolgar 1986; Robson 1992) of employees' actions that take place on the work floor, while the data stored in information systems and infrastructures serve as historical apparatuses which capture events that took place in the past. Having the possibility to informate (Zuboff 1988), information systems have the potential to reveal the actions and performance of an employee to other organizational members and enable better coordination of collaborative activities amongst coworkers as well as performance evaluation and control by managers. Technologies such as enterprise systems (Elmes et al. 2005; Sia, Tang, Soh, and Boh 2002), knowledge management systems (Brivot and Gendron 2011) and enterprise social media (Leonardi et al. 2010) make organizational processes and employees' actions visible in both real time and for later investigation.

However, making something visible does not necessarily mean making something transparent. Making something visible could also entail disguising its appearance prior to making it visible so that its real form cannot be easily seen. In other words, making something visible could also be making something opaque (Roberts 2009). Thus, while several technologies have been developed with the intention to make information transparent, such as executive information systems (Walstrom and Wilson 1997), computer-based performance monitoring (Ball and Wilson 2000; George 1996), or management support systems (Clark, Jones, and Armstrong 2007), quite often the data that is fed into those technologies keeps employees' actions and performance opaque. Organizational members often play numbers games when interacting with those systems, e.g. by adding false data in their time-recording sheets or performance measurement systems (Roberts 2009).

Performativity of transparency

Notwithstanding the popular belief that transparency reinforces bureaucratic forms of organizing (Adler and Borys 1996), recent studies question the effectiveness of transparency in controlling and regulating activity (Hansen and Flyverbom 2015). For example, the studies by Collinson (1999) and Bernstein (2012) show that transparency may influence the performance of employees and thus may end up obscuring more than exposing when put into practice. Taking these into consideration, we suggest exploring further the tension between transparency and opaqueness by unpacking the performativity of transparency.

Performativity is an onto-epistemological lens developed in gender studies and post-humanism (Barad, 2003, 2007) and Actor-Network Theory (Latour 2005; Law 2004; Pickering 1995), which views reality as a dynamic, practical accomplishment, and suggests that the world is enacted in practice. Practices are performative, in the sense that they have productive consequences, and thus produce the world (Scott & Orlikowski, 2014). In the context of studying technology in organizations, performativity can be viewed from the perspective of "sociomateriality mattering" (Gond, Cabantous, Harding, and Learmonth 2015), which deals with how things constitute reality through actors' sociomaterial practices. Such a view suggests that actors, meanings, and roles are constituted within sociomaterial practices, i.e. they are "dynamically brought into being through the continuous flow of practice" (Gond et al., 2015: 9). In other

words, the notion of performativity entails that the enactments of sociomaterial practices reconfigure the world, thus the world is always in the making (Orlikowski and Scott 2014).

From a performativity perspective, the enactment of sociomaterial practices of making things transparent influences how we view the world, and thus how we further enact transparency. Roberts (2009: 958) addresses the performativity of transparency in light of the fact that transparency, apart from merely making something visible, can also have other unforeseen effects, "such that the making visible starts to change that which is rendered transparent". The performative effect of transparency explains why practices of visibility often produce opaqueness rather than transparency. For example, let's assume that employees store data about their actions in a system for the intention of coordinating the work amongst each other. As this information becomes transparent to other colleagues and to their managers, it could trigger the employees to store inaccurate data, to avoid showing potential failure to their managers, or to be more competitive against other colleagues.

In order to unpack the performativity of transparency of employees' actions to other organizational members, we take up a sociomaterial perspective (Orlikowski 2007, 2010; Orlikowski and Scott 2014). Such a view conceives of "the social and the material as constitutively entangled in everyday life" (Orlikowski, 2010: 125) and gives equal importance to both human and non-human actors. Approaching transparency as enacted in practices of visibility, manufactured in the entanglement of humans and materials (Hansen and Flyverbom 2015), can expand our understanding of how rankings are constructed (Orlikowski and Scott 2014; Pollock and D'Adderio 2012; Scott and Orlikowski 2014), how numbers take the role of "inscriptions" that help govern at a distance (Miller 2001; Roberts 2009; Robson 1992; Vollmer 2007; Vollmer, Mennicken, and Preda 2009), or how forecasts are produced and interpreted by managers and controllers (Faÿ, Introna, and Puyou 2010). Furthermore, taking a sociomaterial perspective (Orlikowski and Scott 2014) to study practices of visibility might help us better understand the tension between transparency and opaqueness, i.e. whereas transparency is aimed to shed light on employees' actions, it often ends up reinforcing their opaqueness. Such a tension has been highlighted for example in the way managers use performance data for impression management (Cunha 2013), in the problematic of imperfect numbers in performance measurement (Andon, Baxter, and Chua 2007; Dambrin and Robson 2011; Jordan and Messner 2012), in the strategic micro-practices of calculation followed by accountants and middle-managers (Fauré and Rouleau 2011), as well as other cases of fraud in accounting (Cooper, Dacin, and Palmer 2013; Neu, Everett, Rahaman, and Martinez 2013).

Temporal emergence of transparency

In their study of politics of transparency in the digital age, Hansen and Flyverbom (2014) examine how "disclosure devices", i.e. mediating technologies in manufacturing transparency, help provide not only a retrospective type of disclosure, e.g. by analyzing past data that represent traces of actions, but also an anticipatory one, which includes making predictions from analyzing real-time data. This distinction suggests that practices of visibility have a temporal orientation. As soon as the data that traces people's actions is stored in an information system, it can be used not only to control their actions in the present, but also to evaluate their past performance as well as to predict their performance in the future. Thus, in order to understand the performativity of transparency, we need to consider also the temporal orientations of visibility making practices.

In order to examine the temporality of visibility making practices, we follow the *chordal triad of agency* approach (Emirbayer and Mische 1998). This approach views human agency as a "temporally embedded social engagement, informed by the past (in its habitual aspect), but also oriented toward the future (as a capacity to imagine alternative possibilities) and toward the present (as a capacity to contextualize past habits and future projects within the contingencies of the moment)" (Emirbayer and Mische 1998 :963). Thus, when actors perform an action, they perform it while being oriented towards one main temporal orientation: they may be oriented towards the past and e.g. perform something as a habit, toward the future, because they imagine how this may look like, or toward the present while trying to deal with a practical issue in the moment. However, Emirbayer & Mische (1998) suggest that the agency behind social action can only be understood in its full complexity. They argue that at any given moment in time, actors are oriented toward the past, the future, and the present, but they may have one primary orientation toward one of these. This is why they speak of a "chordal triad": at any given moment an actor has one dominant temporal orientation toward one of the past, future, or present, while at the same time the actor

also has sub-dominant orientations toward the other two. Thus, Emirbayer and Mische (1998) analytically distinguish three elements of agency. As actions are performed along the chordal triad, each element has as a dominant temporal orientation, it is also influenced subdominantly by the other two orientations. The *iterational element* is oriented to the past via memory or the historical apparatus that serves as memory. The *projective element* entails imagining the future. The *practical-evaluated element* is structured in the present and concerns making practical judgments.

The temporal orientations of practices of visibility making (i.e. employees making their actions and performance visible to other organizational members) are not solely triggered by humans, but also by the digital technologies through which these practices are performed. For example, the visibility that digital technologies offer in real time enables transparency of present actions. The historicity produced by digital technologies enables transparency of actions that were performed in the past. The inclusion of algorithmic models for forecasting based on real-time and past data helps project activities into the future. These temporal dimensions of visibility making practices, intensify the material effects that human actions have through the technologies that render them transparent, and can thus influence their being rendered visible or opaque. In the following sections, we are going to investigate how the performativity of transparency emerges across the three temporal dimensions.

Research methodology

We performed a qualitative study following an inductive approach (Locke 2001) in TelCo, a large telecommunications organization. We conducted our study in the Marketing and Sales department of the business market division. We focused on two sales channels: in Sales Medium, where account managers work in pairs of internal and external account managers, who together serve a set of 250-300 small or medium-sized customers; and in Sales Large, where all account managers are responsible for a set of 15-20 large customers each, whom they visit often in order to maintain the relationship and work on projects. Account managers are responsible for managing the relationship with customers, maintaining the current contracts with them, and getting them interested in buying new portfolios. They have to generate leads that are later picked up by specialists, who are responsible for preparing the order and closing the deal. TelCo has a targets-based culture, aimed to reward employees with a yearly bonus for attaining high revenues from sales. Targets are not divided equally, but they are calculated based on the potential revenues of the customers. As all account managers aim for lower, easier accomplishable targets, the determination of the targets every year often involves contestation amongst account managers and sales managers, over who has higher and who has lower potential in generating future revenues, and thus should be assigned with a higher or lower target respectively.

We started by investigating broadly how work was performed by account managers in the sales department of a telecom organization. We directed our attention to the micro-activities that account managers followed in their everyday work. By focusing on their actions, we developed a thorough understanding of how various technologies are constituted in their practice. Not surprisingly, a CRM (Customer Relationship Management) system emerged as the most important tool for the account managers. The scope of the CRM system was to manage information about customers, sales opportunities, the status of orders and so forth, and to coordinate sales work across Marketing and Sales. Thus, the CRM system enabled visibility of the account managers' actions to the rest of the account managers, their team managers and higher management, as well as other stakeholders such as customer support and financial management employees. The reality that the CRM system represented was shaping and being shaped by the account managers' actions. By observing how account managers enacted the CRM system, we identified the actions through which they making their actions transparent and opaque to the organization. Our later analysis extracted the orientation of these actions to the present, past and future. By analyzing the relations between these temporally oriented actions, we got to construct a performative view of transparency, as such emerges through the practices of visibility that the account managers perform while using the CRM system.

Our study at TelCo lasted for 24 months, during which we got a rich understanding of how account managers worked in Sales Medium and Sales Large, and how they dealt with the transparency enabled by the CRM system in their organization. We collected data mainly via semi-structured interviews (Weiss 1995) and complemented it with ethnographic observations (Emerson, Fretz, and Linda 1995; Spradley 1980). As their work is relational, to get a better understanding of their context we also interviewed people

they collaborated with, namely sales managers, marketers and analysts. In total, we performed 77 semi-structured interviews recorded and transcribed verbatim (72.5 hours of recorded time), 21 observations (85 hours observing time) and 182 pages of single-spaced notes, and used 66 internal (presentations, figures, reports) and external (annual reports, press releases) documents.

We performed our analysis using a practice lens (Feldman and Orlikowski 2011; Nicolini 2012), trying to capture the routinized ways through which people act while intertwined with other human and material actors (Sandberg and Tsoukas 2011). We analyzed the data using guidelines from grounded theory approaches (Corbin and Strauss 1990). In order to further understand how the performativity of transparency emerges in time, we examined the second-order codes that represented actions of being transparent or opaque. For each action, we reflected on whether it was mainly oriented towards the past, present or future (Emirbayer and Mische 1998), and categorized it in one of the three respective categories. Then, we returned to the first-order codes and identified the elements of the past, present and future in each action. This analysis resulted in unpacking how the performativity of transparency emerges in time.

In our narrative, we try to "render the actual" (Smets and Jarzabkowski 2015; Van Maanen 2011 :232) by explaining the practices through the views of three exemplary account managers (Nick, Kate and Alex), that are composed by the full breadth and depth of the data we collected through our interviews and observations with the account managers at TelCo.

Case analysis

Understanding the account manager's DNA: Looking at the practice of an account manager

Before diving into the actions through which account managers at TelCo deal with transparency, we find it important to acquaint the reader with the account managers' practice, in order to better understand the ways through which their actions become transparent or opaque.

Our analysis highlighted two elements that constitute the core of the practice of the account manager: First of all, *(1) managing the relationship with the customers* is central to the practice of an account manager. This entails frequent contact with customers, either by phone or through visits. Account managers usually consider what is called "farming" as a necessary action: maintaining good relationships and planting seeds that will eventually flourish into business opportunities. For this, they develop and sustain a personal relationship with their contact persons (e.g. by going to soccer games together), which allows approaching them easily to build trust, stay updated on the developments of their businesses, and find new sales opportunities, which, through the good relation, can eventually turn to orders.

Second, account managers always (2) *strive to reach the sales targets* by the end of the year, which will ensure receiving their bonus. For this reason, it is important to stay alert to extend the current contracts, to maintain the revenues that are already taken into account for the revenue target. They often put pressure on the specialists to close deals by the end of the year, to reach the order intake target. Kate, an internal account manager in Sales Medium, regularly checks the CRM reports on revenues and orders to evaluate how far she and her external account manager are with reaching their target. If she sees that they are underperforming on one of the portfolio targets, she shifts to routines that will ensure quick wins, for example by arranging focus days during which she works only on a product-push basis.

"I think time pressure is always with the sales function. Not only for yourself, for your own target, but also for TelCo as an organization. So the numbers we have to reach, when we know it's going to be difficult, we have to adjust some with our strategy... So it's always about every quarter, but end of the year is the most important date." (Account manager in Sales Large)

Taking the above elements of the practice into consideration, we can now shed light on the everyday actions that an account manager follows: *(3) Contacting the customer* takes place either via visiting the contact person at the office or phone calls. *(4) Finding sales opportunities* involves being well aware of the business processes of the customers, getting to know their strategy and plans for the future, and understanding their needs. The account manager has to *(5) store sales opportunities in the CRM system*, assigning the status "suspect" to the customer, together with details about the portfolio the opportunity is

about and the story behind it, e.g. "expanding to a new location in June 2016". Also, it is important to estimate the value of the opportunity, and to add a date when the opportunity will be active, in order to contact the customer in time.

(6) Planning when to contact which customers and for which portfolios takes place on a regular basis. Developing an account plan at the start of the year helps keep in mind when the big deals are going to take place. Planning is also done on a weekly basis, to decide which customers to call or visit in the following days. Alex, an account manager from Sales Large for instance, arranges his plan based on two rules: one is making sure that he contacts the customers early enough before their contract ends, in order to increase the chances for renewal. He has several information systems in which he keeps track of customer contracts in different portfolios. The other rule is checking the sales opportunities he has stored in the CRM: he checks the Sales Opportunities pages on a regular basis, and ranks the opportunities on the date they are active: in this way he can see which opportunities are coming up, which have the highest value, and so forth.

"CRM is very important, because it's an overview of all our chances. Of course I know what has happened with my customers, but CRM makes us predictable. And in CRM we can sign the customers and with the different chances that are active at our customers, so we can say ok with this customer for the next few years we have this chance, that chance, this chance… So we can be predictable. I think that's the most important thing of the CRM." (Account manager in Sales Large)

(7) Generating leads is the main responsibility of all account managers. Kate explains how she typically generates the leads: when there is a sales opportunity, she contacts the customer and tries to get him interested in the portfolio. If the customer is interested in receiving an offer, she goes to the funnel of the customer in the CRM system (showing the customer's phase in the sales process), finds the opportunity, and changes the status of the customer from 'suspect' to 'lead'. She adds the name of the specialist who should pick up the lead. She also updates the expected value of the order, which she now knows better than in the suspect phase. The funnel has different percentages for calculating the potential revenue depending on the customer's phase customer: 20% for suspect, 40% for lead, 60% for prospect, 80% for hot prospect and 100% for customer. So after registering the lead, the forecast for her future orders will also increase in the system. After registering the lead, a mail is automatically sent to the specialist to check it. In this way, Kate starts *(8) collaborating with the specialist* for the related portfolio. The specialist will prepare the offer and present it to the customer. Although it is not her responsibility, Kate often stays involved in the process until the deal is closed, so that she can maintain the relationship with her customer, as well as make sure that the deal will be closed in time for reaching her targets.

(9) Doing administration is the least desirable activity for Nick, an external account manager, as it is to most account managers. It is however necessary most times. Sales opportunities and leads have to be stored and a good overview of the customers' funnel needs to be recorded, in order to plan the right time for contacting them about a portfolio and to coordinate with others. Although Nick's sales manager often tells him how important it is to keep this information updated on CRM, he often finds the system incapable of capturing the complexity of his customers (e.g. because they have multiple business units, they are stored with different identifiers). For this reason, Nick makes sure he also stores the information in his own Excel files.

(10) Preparing before contacting the customer is a common routine for all account managers. For example, before calling a customer, Kate, the internal account manager from Sales Medium, tries to get information about the company as quickly as possible: she looks at the website of the company and searches online to see if the customer was mentioned in the news recently. She will search for the customer in the CRM system and check his funnel information, what sales opportunities she has stored for the customer, while she will also look at the interactions tab to see what she had talked about with the customer and if the customer had been in contact with someone else from TelCo, e.g. for a customer service issue. She will also have a look at the figures in the CRM system to see what the customer pays to TelCo every month, what debts the customer has, and so forth. Also, she will look at the contracts that the customer has with TelCo. Taking into consideration all this information, she can then steer the discussion with the customer to introduce a portfolio in a natural way.

Evaluation of the account managers takes place in different ways: Every Friday, Nick, the external manager from Sales Medium, has a check-in/check-out meeting with the whole sales team, where he

presents the leads that he created that week, the status of his deals, and his forecast for next week. Next to those meetings, Nick has monthly individual meetings with Mike, his sales manager, who challenges him on the major business opportunities and provides Nick with direction when he is facing difficulties with a customer. Mike checks several monthly reports and figures that are produced from the data in the CRM system: order intake report, funnel report, all orders report, order mutation oversight, outdated funnels, denied orders, sales desk report about offers, oversight of the account overviews, oversight of the funnel, won/lost figures, white spots report, and others. Hence, when Nick meets with Mike, they also talk about his performance based on those CRM figures:

"Every opportunity, I set it on the CRM. And those opportunities, they give an image for my supervisors, and he can see what I 'm doing for the next months or the next years." (External account manager)

Transparency and opaqueness in making actions visible

When analyzing the account manager's practice in the first stages of our research, certain inconsistencies emerged that triggered our attention. Although the account managers emphasized the usefulness of the CRM system in planning and preparing for the conversation with their clients, they often mentioned that they would maintain their own administration, or that they frequently found inaccurate information in CRM, or that they were asked to fill in lists manually with customer information. For example, Alex, the account manager from Sales Large, mentioned:

So when you get the garbage in, you get also the garbage out (chuckles)... The management has chosen for a system, and for a management structure, which provides to get as much information in the system as you want. But also, they manage the account management with that system. We call it 'Excel managers'. So for the last years, many account managers have put in so many funnels, and at this moment, you get the garbage out. There are many funnels, and the amount of money that is in our pipeline is huge, but when you get it to reality, it's just a little bit... (Account manager in Sales Large)

These observations made us curious to explain how such inconsistencies emerged. By studying further how account managers were enacting the CRM system, we understood that the visibility of information to the whole organization and in real time offered by the system, usually enables the sharing of knowledge and coordination (e.g. planning which customers to call, preparing before calling, or collaborating with the specialist to transform a lead to order), but also it can often trigger the account managers to fill in false data. As Nick, the external account manager from Sales Medium, explains, filling in the correct or false data in the CRM system is consistent with different goals that matter to the account manager at the time:

"Yeah, but the thing is that it depends always on what the goal is. If the goal is gain less target, then it's a good thing to give less potential, so the target will be less as well. But if the goal is that we have to develop so many clients after a year, then it's good to give a lot of potential. It depends on which goal that list at that moment is, you know..." (External account manager)

Using the chordal triad of agency (Emirbayer and Mische 1998) as a sensitizing device, we examined the practices through which account managers made their actions visible to colleagues, managements and other stakeholders inside TelCo. Through the visibility making practices, depending on their temporal orientation towards acting in the present, reflecting on the past or projecting the future, account managers are sometimes transparent and at other times opaque. While each action emerges with one dominant temporal orientation, we also identified how it is simultaneously oriented subdominantly to the other two orientations, as "secondary tones" of the chordal composition (Emirbayer and Mische 1998 :979). We unpack the temporal dimensions of being transparent or opaque (while making actions visible to other organizational members) in the following paragraphs:

Being transparent in the present

Account managers act transparently in the present by showing their current performance to the rest of the organization. Data about contracts that were signed, revenues that came in, invoices, etc. are stored in the CRM system by account managers, specialists, or customer service employees and feed weekly reports such as revenue charts and status of the order intake. Such data is considered to be "hard data" i.e. it does not incur ambiguity, and thus makes the sales performance transparent in the organization. Every Monday, Nick and John, as an example of a pair of external and internal account managers in Sales

Medium, check the weekly figures in the CRM system to track how they are doing with their individual targets on revenue and order intake. Their sales manager also checks the figures and estimates how the team is performing. Reflecting on the figures from the stored data helps them project whether they will reach their targets by the end of the year. Hence, when they see that they are running low on one of the team targets, they look for ways to increase sales on a specific portfolio, e.g. by organizing a focus day.

"Well, we use CRM, so if there are any sales opportunities, I just put them in, and they can see it, every Monday morning they get a list with the companies, so they can see, and once every two or three weeks we have a meeting with the account team, [...] and we just talk it through..." (External account manager)

Being opaque in the present

The weekly funnel report brings all major business opportunities to the spotlight instantaneously: Account managers, specialists, sales managers and others can immediately see what is coming up and deserves attention. Nick doesn't really like that his big opportunities become visible in the CRM. Every time his sales manager notices these opportunities he starts putting pressure on him, by asking questions and giving him directions on how to proceed. In addition, every time this happens he starts receiving phone calls and e-mails from specialists, deal makers and other people, who want to get involved in the offer (looking after their bonus), while he wants to involve the people who he thinks fit with the customer and the specific deal. As he projects all this pressure, Nick prefers "staying under the radar": when he submits the opportunity in the CRM system, he sets a lower value, so that it doesn't attract attention in the funnel report. As long as the customer's status is "suspect" or "lead" in the funnel, Nick is the only person who can edit this opportunity; in this way he can hide his big potential, but he can also go back to the opportunity and change it to the higher, original value, when the offer starts being prepared. This editability of the opportunities is a feature that distinguishes the materiality of this opaqueness practice, from how it could be performed on paper or by e-mailing Excel files, instead of using the CRM system.

"If you put such an amount, you're always in the spotlight. The deal is in the spotlight, so managers see it, specialists, other people see it, and people want to get something of it, you know... If they have an opening or door to get to this deal as well, either with you or without you, it doesn't matter, yeah... Then they try it, you know?" (External account manager)

"Window dressing means that I have a lead, and that's a lead for one million, but when I'm going to say it's one million, the whole organization is in my back, so when I say he's 100,000 then nothing, no one will ask about it." (Account manager in Sales Large)

The weekly and monthly figures in the CRM system make it very easy for sales management to check how account managers are performing. Nick is always stressed about his white spots. TelCo has the rule that account managers should have a lead for every portfolio with their customers. The white spots list indicates when there is no lead stored in CRM system for one portfolio. Every time he appears to have white spots in the report, his sales manager starts asking him questions during their monthly meetings. Anticipating that in case he has white spots he will have to explain why he had no lead for that portfolio with that customer, he chooses to store a fake lead in CRM: even if he adds a value of one euro, the algorithm that checks the white spots will consider it as a true lead so he'll be out of the white spots list.

"Well, sometimes you know that in this certain customer there is just no opportunity for that. And if you leave it blank you get a white spot, and you can put no opportunity, but then you have to make sure that there really is no opportunity, and... So sometimes you just put in a lead for one euro, for 2013, and then you're off the hook!" (Account manager in Sales Large)

Also, Nick sometimes acts opaque in the present by trying to make things look bright. Reflecting on how a figure on past CRM data can give a good impression to the management, he expects that management will be happy if they see a brighter situation in the figures than in reality. In this perspective, he adds untrue data in CRM, not only to influence his individual performance, but also because sales management may want to give an optimistic picture to higher management.

"Yeah, of course... Because, Excel lists and everything you have to fill in... sometimes you just hear that you have to make a little bit more pretty than it really is, just for head management." (External account manager)

Due to these opaqueness practices, the CRM system contains also inaccurate data, which decreases the efficiency in planning and coordinating the deals. Thus, maintaining a shadow administration in Excel or hand-written notes becomes handy to keep up with the customers, but also enables hiding information from others, who would see it in the CRM system.

"They are going to make their own list, which isn't in the system, so that the headquarters can find it. The salesman and the sales manager, they have their dialogue based on the real data, and they put some data in the CRM system, 'so that those jerks from the headquarters won't bother me with all kinds of questions and difficult processes'". (Manager of Sales Intelligence)

Acting upon past transparency

Data such as invoices can be thought of as "hard data", which could not have been intentionally distorted. Thus, figures based on such data always constitute a transparent lens on how account managers performed in the past. Also, such data remains in the CRM forever, haunting the account managers. To take the example of Kate, the internal account manager from Sales Medium; at the end of the year she is evaluated on her overall performance during that year. Management looks at the figures on her order intake and revenues; if she has reached her target, she gets her bonus. Kate often reflects on these figures as well to estimate her upcoming evaluation, or to estimate whether she needs to do more orders to ensure her revenue target.

"But your question was how they control it… They see by the way turnover, if it's going up or going down, if you get the orders in, and if you lose any, what story is there. That's how they control…" (Account manager in Sales Large)

Another way through which the account manager acts upon the transparency produced in the past is looking at the information that has been previously stored by others. While preparing, Kate reflects on the interactions that the customer had with customer service employees or with the account manager before her, and estimates what she will hear when she calls the customer.

"The CRM shows the funnel, and it shows what the account manager before me has put about the potential of the client, so we also used that to look which customer was interesting at that moment." (External account manager)

Acting upon past opaqueness

Considering the inaccurate leads and opportunities that account managers registered in the past and never updated, or manually entered data that was accidentally wrong, the CRM system includes also opaqueness produced in the past. It is possible that a figure calculated from past CRM data is not correct. This leaves room for casting doubt on past figures to negotiate in the present and influence the results in the near future. For example, if the figures from last year's orders show that Kate had a small deviation from her target, she can question the numbers to get her bonus.

"Well not all those reports, but the outcome of the total has a direct effect on the pay plan, so when you are going to say 'the figure isn't correct', then we have to clarify that. In all cases we have to do some manual handovers. Everybody makes mistakes. So in the dataset there are about 1.2 million records per month. Somebody makes a mistake, so there's always an inconsistency… And the sales person will always find that one. Because he knows what he has done with his customers, we only have the data. So he can see the difference in outcome. So he will challenge the quality of the data in total, therefore the total data isn't right and the discussion is happy." (Manager of Sales Intelligence)

Being transparent to influence the future

Storing the information about the customer such as interactions and sales opportunities enables building a sketch of the customer in the CRM system, which is and will be visible to many stakeholders. Alex, the account manager from Sales Large, finds it easy to look at the information stored from the previous account manager when he gets a new client. Projecting that he will change his customers set in a couple of years' time, he wants to ensure that the account manager after him will serve the customer well. Storing information about his customers in CRM ensures retaining knowledge of the customer for the future.

"They know the customer, but TelCo doesn't know the customer. So I think they need their input. And I think CRM will be a nice system to put info in. Because it's in their head, you know what I mean? [...] And if somebody is moving, gets a promotion, and somebody else takes it over, and if everything is already in the system, it's nicer to start..." (External account manager)

The availability of all the data in the CRM system, combined with the analytics capabilities of TelCo, enables forecasting the future revenues. Alex knows that such information is always important to the top management, who need the forecasting reports to provide estimations about the revenues in the next years to the shareholders. Thus, he is reinforcing the predictability of sales, by storing the sales opportunities in the CRM system, projecting that this will help TelCo be transparent.

"We can predict what is going to happen in the future. And TelCo is at the stock of [name of stock exchange office], so the people who are investing money, TelCo wants them to know what is happening in the future, so we have to be predictable. And that's the reason that higher management, [name of sales director], he wants to know what is the business for the next few quarters, and for the next years. And then you have to be predictable, and CRM is helping us with that." (Account manager in Sales Large)

Being opaque to influence the future

The data stored in the CRM system will eventually feed new figures and reports that can influence decisions in the future. Projecting the influence that the data and figures from this data can have in the future, the account manager may choose to be opaque in order to fiddle with such figures. Alex is always concerned about his future targets. He knows from past experience the "game" that is played in the start of every year with the calculation of sales targets, in which all actors negotiate about who should get a higher and who should get a lower target. If the sales management sees a very high opportunity in his funnel, they could assign him with a higher target compared to other account managers. Projecting how easily a major opportunity will become visible in the funnel report in CRM and (based on past experience) expecting that it will immediately attract attention with the risk of influencing his future targets, Alex prefers setting a lower value than the real one if he has to store a very high opportunity.

"When you fill in that a customer maybe would sign for a contract for one million, then also, it would be possible that your target is changing, it would be higher. So some people try to stay low, under the radar... And if they are successful, great, but if they're not successful, they didn't lose anything, in the system..." (Account manager in Sales Large)

The CRM system allows for the major business opportunities to easily attract the attention of management, as they will always rank the funnel report based on the value of the opportunities. Alex knows from past experience that management develops high expectations when they see a major business opportunity appearing in the weekly reports, so it will be more severe if they eventually see in the oversight of the funnel that it didn't turn to an order. Projecting the possibility of not closing the deal for a major business opportunity and appearing to have failed, Alex prefers that his opportunity doesn't rank high in the weekly reports, and thus sets a lower value when storing it in the CRM system.

"And everybody is playing the safe side. Because if you put in a lead for a customer project is probably worth one million... As soon as you put it in for one million, [there will be] visibility, and so the end management will have a lot of attention on you and your project. So if you fail, then [the failure is] visible. So that's why people are holding back, until they know for sure that they are right about it." (Account manager in Sales Large)

Finally, the CRM system allows for the sales opportunities to become visible across various sales channels. Thus, a high sales opportunity that flashes in the weekly reports can trigger political discussions about where the customer should be allocated. In fact, in the start of every year customers are reallocated to the sales channels based on their revenues and it is a well-known principle that customers who bring very high revenues deserve to get more attention and to be served by account managers in a higher customer segment. Nick, the account manager from Sales Medium, has had experiences in his team, when they had to lose their high potential customers to Sales Large. He knows that his big opportunity will start "flashing" in the weekly reports and will attract the attention of Sales Large. Nick is projecting the future: if this opportunity turns to a deal, this will ensure him not only reaching the order intake target, but more importantly it will help him significantly with reaching his revenue targets in the next two years. However,

if Sales Large finds out about the opportunity through the CRM system, they will try to get the customer (and thus all potential revenues) away from him. Thus, by recognizing the situation, and projecting how it could evolve, Nick chooses to set a lower value for his originally big opportunity, in order to decrease its prominence in the CRM system.

"When you put such a big amount in CRM, people are going to see it, and people are also going to try to take the client away from you. For example, Large Enterprise. Because they say, "Oh one million, that shouldn't be a medium client, that should be a large client, he has to come to us." Then that discussion starts. So a lot of people say, "no, no, I don't want to be in the spotlight". I would do the same maybe, I would just put it for 200,000 while I know in my head that the opportunity is 1million, but I don't want anybody else to know that it's that big opportunity." (External account manager)

Temporality and practices of visibility making through the CRM system

In the previous paragraphs we described the practices through which account managers are dealing with the transparency of the CRM system information. We see that in order to deal with the consequences that they may face if their actions become visible, they often play with the CRM data to fiddle with the reports and figures that render their actions visible and often even prominent.

"We play hide and seek. Yeah, it's a game. It's a game. Eh... Me personally, I'm not the person who is always doing that. Because I think yeah, I can say that it is 1million or I can say that it is 100,000. Yeah, I will sign it for 1million. I don't care about that. But there are a lot of colleagues who will sign it for 100,000 euros. It's a game. It's hide and seek. Yeah... It's ridiculous when you think about it. Because, when you are looking at the predictability of the account managers, you are not predictable when you sign it for 100,000 while it's 1million. So yeah, I don't understand it, but it is happening." (Account manager in Sales Large)

Had the CRM system not been there, TelCo would still try to impose transparency, and account managers would still try to play games. Nevertheless, the materiality of the CRM system not only intensifies the effect that numbers have on people's behavior by adding pressure to them, but it also reinforces an almost effortless engagement in this numbers game, as account managers can always edit the values of sales opportunities while the customer is in the "suspect" or "lead" phase in the funnel, without leaving traces.

Information about the customers, the interactions with them, their sales opportunities and orders, becomes visible across the whole organization. Sales managers, higher management, other account managers, specialists and other stakeholders can access this information in real time, so they can respond quickly to sales opportunities, running deals, and other incidents. The fact that the data remains stored in the CRM system allows the account managers to use information about their account managers that was previously stored by others, but also to store information that will be useful in the future for a specialist, a customer service employee, or even another account manager.

At the same time, all the stored data can haunt the account managers: e.g. a high opportunity stored now will keep threatening their bonuses in the future for longer time, as it will be quickly spotted in the CRM system. Furthermore, the CRM system makes the extraction of data for the preparations of reports and figures that help evaluate the performance of the account manager very easy, and in fact much easier than a paper archive or even the use of Excel files. Analytics features allow for almost automatic accumulation and summarization of the data in figures and tables, which can also be post-processed (e.g. by ranking the sales opportunities based on their value), so that actors can quickly spot information that is important to them (e.g. the sales manager seeing which major business opportunities come up in their team). Thus, when account managers fill in some information in the CRM system, they will almost automatically start projecting what impact this data will have on their future performance.

The account managers can distort part of the data easier than before: in fact, while the customer is in the "suspect" or "lead" phase, they are responsible for it and thus have the freedom to add the values, codes etc. which they prefer, as well as changing them back to the real estimated values later, without leaving traces. After the specialist picks up on the lead and puts the customer in the "prospect" phase, the account managers themselves cannot directly change the sales opportunities anymore, only track the funnel of the customer. This also implies that data from the past can be opaque only on data such as sales opportunities that were never actualized, or sales interactions that were incomplete or missing.

Thus, the CRM system triggers the actors to not only make judgments in the present situation, but also to reflect on the past and project their future. In fact, the account managers know that their past, present and future are interwoven with the data in the CRM system. Such a data-constructed reality, that constitutes not only a view of the present (e.g. current status of customers in the funnel), but also a view of the past (e.g. past orders) or the future (e.g. sales opportunities), is performed in the ongoing practices (Scott and Orlikowski 2014) of registering data in the CRM, creating figures and weekly reports, monitoring these reports, and so on.

Furthermore, we get to see that the transparency that is perceived to be enabled by the CRM system often brings opportunities for opaqueness: as the account managers evaluate the influence that this data-constructed reality can have on their performance, being visible to everyone and instantaneously, and know that they have the ability to shape it to some extent, they choose to enact opaqueness at times. Consequently, we see performativity of transparency in practice (Roberts 2009).

Thus, account managers choose to be transparent or opaque in the present, shaping the data-constructed reality of the present, as they are reflecting on the effects of the transparency produced through the CRM system in the past (e.g. weekly reports for routine activities, or having received pressure from colleagues on sales opportunities that were made visible), and projecting their intentions for the near future (e.g. reaching the targets or avoiding pressure). Further, we see how the level of accuracy in the data stored by previous enactments of transparency (e.g. customer interactions) or opaqueness practices (e.g. fake leads), which constitute a data-constructed reality of the past, influence the account managers' practical evaluations in the present (e.g. checking the CRM figures), and their expectations for the future (e.g. estimating whether he will reach his target). Finally, the account managers project how the sales opportunities and customer interactions that they store for the future (shaping the future data-constructed reality) might influence their future situation (e.g. their targets in the next year), by identifying with past experiences (e.g. how targets were calculated in the past years), and thus try to influence their future through their actions in the present (being opaque or transparent).

Discussion

The performativity of transparency

In this study we have tried to unpack the performativity of transparency: i.e. transparency, having sociomaterial agency, offers the possibility to enact not only visibility, but also opaqueness, on the things that it is aimed to shed light on. In order to do so, we have illustrated how account managers, as they enact the CRM technology, find themselves playing a numbers game, switching modes between transparency and opaqueness to achieve their goals. The numbers (and other types of data) in this game are not merely the resources through which account managers try to attain their goals, but are actually actors themselves, having equal power to influence the account managers' actions. Thus, transparency is performative, in that it changes that which is rendered transparent. In other words, transparency is not merely a guideline in the organization, but it is sociomaterially constructed through the enactment of the CRM system, while it triggers sociomaterial practices that reveal or conceal the information about the customers and the actions of account managers. Other material forms that could also make employees' actions transparent, such as paper archives or the exchange of Excel files via e-mail, would not trigger the same sociomaterial practices. Account managers are well aware that whatever they do has a material effect: for example, all information they store about their customers, sales opportunities and customer interactions becomes visible to many different actors and in real time, thus making their exposure, performance evaluation, and so forth much easier than other forms of transparency. Hence, they will try to influence that material effect and play with the numbers and other data they store, according to how they evaluate the situation at hand (using not only their perceptions but also by making sense of the data-constructed reality captured in the CRM system) and the ways through which the CRM system can make things transparent (e.g. ranking of sales opportunities based on their value, or calculation of white spots). The fact that the changes that they make in the stored values in the CRM system do not leave any traces, compared to a paper archive for example, also highlights the importance of the materiality of this technology in enacting the opaqueness practices.

In order to better understand the performativity of transparency, we also have to recognize that all sociomaterial practices of making the employee's actions visible to other employees and managers are

oriented towards a temporal orientation: The data and functions of the CRM system are not only related to what is happening in the present, but also refer to the past and can even help project the future, thus making the material effects of transparency even more perceptible. Consequently, at every moment in the present, the account manager is oriented towards a data-constructed reality of the present, past, or future, while simultaneously considering the data-constructed realities and the situation in the other two temporal orientations. It is through this trichordal temporal orientation (Emirbayer and Mische 1998), that transparency actually works as a blind, which can open and render things transparent, but it can also close and make them opaque.

In figure 1 we illustrate this dynamic of shifting modes from transparency to opaqueness in practices of visibility making, through the materiality of digital technologies and the different temporal orientations. More specifically, we can see that transparency can trigger both practices of being transparent or being opaque. Reflecting on how a practice of making something transparent was enacted in the past could influence people to choose whether they will make some information transparent or opaque in order to influence their present or future. On the other hand, our analysis showed that reflecting on the opaqueness of the past would only lead to enacting opaqueness also in the present.
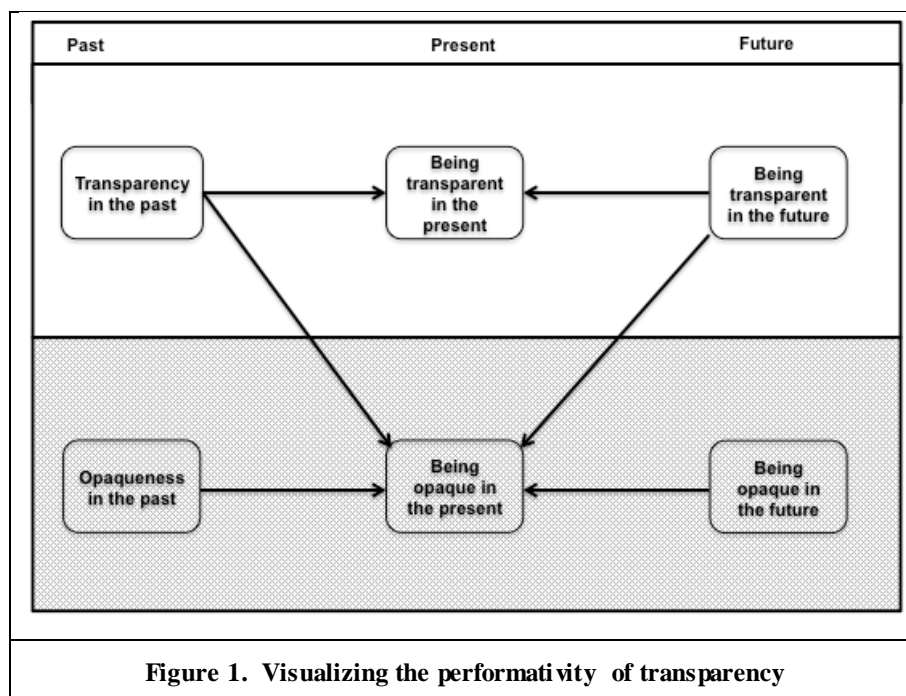
Figure 1. Visualizing the performativity of transparency

Theoretical implications

The insights of this study inform past views on IS which have considered information systems as ways to increase transparency in the organization, looking at technologies such as enterprise systems, knowledge management systems, management information systems, and other systems, as ways to develop an information panopticon (Burton-Jones 2014; Elmes et al. 2005; Zuboff 1988). Instead, our study suggests that the transparency enabled by such systems often triggers opaqueness, which can be enacted through the same technologies that are perceived as forms of transparency. In so doing, our study indicates that that transparency and opaqueness are not merely observability and concealment of employees' actions respectively. Instead, we need to develop a more sophisticated understanding of these concepts, that takes into consideration their material effects. For example, account managers often make their actions transparent because they want to effectively coordinate the sales process with their colleagues, or to retain knowledge of the customers. At other moments in time though, the effects on their targets or the competition with others matter more they may have to face the consequences on their targets. The flexibility that they have to go back to the CRM system and change something from opaque to transparent makes the interrelation between transparency and opaqueness even more nuanced.

The paper contributes to recent studies that highlight the tension between transparency and opaqueness by looking at the development of opaqueness practices for productivity (Bernstein 2012), use of performance data for impression management (Cunha 2013), the use of shadow systems as a form of material loose coupling (Berente and Yoo 2012), imperfect numbers in performance measurement (Andon et al. 2007; Dambrin and Robson 2011), practices of calculation and fraud in accounting (Boll 2014; Cooper et al. 2013; Neu et al. 2013), and so forth. Our analysis of the performativity of transparency contributes to these studies, by analyzing the sociomaterial practices through which transparency and opaqueness are produced. Our use of the chordal triad of agency (Emirbayer and Mische 1998) helps extend the work of Hansen and Flyverbom (2014) on how digital technologies afford transparency with a temporal orientation.

Furthermore, the study contributes to the studies in organizations that take a performative perspective (Gond et al. 2015), and particularly to studies of technology in organizations (Orlikowski and Scott 2014, 2015), by highlighting the temporality that is inherent in the notion of performativity. The study at TelCo shows that sociomaterial practices reconfigure reality along a temporal dimension. In other words, the enactments of sociomaterial practices can draw the attention towards the past, present, or future and perform different consequentialities. For example, the interaction of account managers and sales managers with the weekly report on sales opportunities draws the attention to the account managers with substantially high opportunities, increases the pressure on them, and thus influences how the account managers interact with the system in the future, e.g. by choosing to store a lower value in the system to "stay under the radar".

The insights of the study also provide implications for practitioners seeking to use digital technologies to increase transparency in their organization, suggesting that the materiality of these technologies, combined with the way they evaluate their employees, will have a significant impact on how the employees will enact the technology, and thus render their actions transparent or opaque to the organization. For example, if the CRM system at TelCo generated a digital trace every time an account manager would edit the sales opportunity in the system, it would probably limit the opaqueness in the system, as account managers would know that their changes would be monitored.

Limitations and boundary conditions

Despite the aforementioned contributions, our study involves certain limitations: First of all, we were not able to follow the account managers in their visits to the customers, due to confidentiality reasons. Since we could not observe this part of their practice, we had to rely on their accounts and compare the descriptions amongst multiple respondents. In addition, our limited encounters with the directors of TelCo (two interviews in total) made it difficult for us to illustrate their involvement in the numbers games, although our data often implied that to some extent opaqueness was tolerated by higher management. Finally, the bureaucratic structure and the culture of TelCo set a boundary condition for the generalizability of our findings. More specifically, the numbers games might emerge differently in a smaller organization with a flat structure, in which the higher management may be situated closer to the employees and evaluate them more by observing them in their work rather than by using quantifications.

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