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# Accounting in the Margin

## *Financial Ecologies in between Big and Small Data*

JOSÉ OSSANDÓN, TOMÁS ARIZTÍA,  
MACARENA BARROS, AND CAMILA PERALTA

### Introduction

In the last years, researchers coming from a varied array of social scientific academic disciplines (such as anthropology, history, geography, and sociology) have started to show interest in the empirical analysis of finance. These developments have not run parallel with each other but have constituted a new multidisciplinary academic field—sometimes named social studies of finance (SSF) (Knorr Cetina and Preda 2012). SSF can be characterized by some shared emphases, notably an ethnographic approach and a special sensibility toward devices and sociotechnical assemblages. Simultaneously, within the finance industry and global policymaking, growing attention has been devoted to financial literacy, payment infrastructures, and new banking products targeting those at the so-called “bottom of the pyramid” (Collins et al. 2009). Like several of the chapters included in this volume, this one contributes to the growing literature at the intersection between these trajectories, where an increasing attention is being paid to practices of industry and policymakers targeting formerly excluded financial consumers around the world (Elyachar 2010; Guérin et al. 2013; Langley 2014; Maurer 2012; Ossandón 2012).

Existing social studies of *low* or domestic finance could be classified in two types: research on the changing financial practices of people facing new types of products and financial technologies (for instance Müller 2014; Villarreal 2014; Wilkis 2014) and research that pays more attention to technologies and practices enacted by financial providers targeting previously *excluded* financial consumers (Deville 2013; Ossandón 2014; Poon 2011). To use terms associated with the work of Michel Callon and

Florence Weber, research in this field seems to be split between those studying two modes of financial knowledge and practices, studies of “market devices” (Muniesa et al. 2007) (such as scoring, credit cards, or debt-collection experiments) developed by financial firms, and studies analyzing the new financial practices and modes of “ordinary calculation” (Weber 2009) being developed by economic users around the world. This chapter tries to bridge both sides. We believe social studies of *low* finance should not only be good at collecting detailed descriptions of the practices of users and financial providers but also be one (among others, for instance policymakers) of the channels connecting both sides. The site of social studies of low finance, in other words, is where both types of calculations, the *big* data of market devices and the *small* data of ordinary financial calculations, can be observed together.

While elsewhere we have tried to develop concepts to theorize this new epistemological position (Ossandón 2017), the current chapter focuses on some of the methodological challenges this position entails. More specifically, it describes the research strategies we developed in order to deal with two issues: how, by reusing one of the most mundane objects in everyday finance, monthly invoices, we embraced the information-intensive character of credits cards and how we visualized analogously one unexpected finding: networks of credit card lending. The chapter consists of four parts (one devoted to each challenge), a brief conclusion, and a brief introduction of our case of study.

### **Context: Department Store Credit in Chile**

Consumer credit is a ubiquitous presence in the economic life of Chileans. Just go to any shopping mall, supermarket, or even medical center or university to realize that it is possible to buy almost everything with some sort of loan. As the Central Bank’s Finance Survey of 2011–12 (Banco Central 2013) shows, while 58.3 percent of Chilean households have some sort of consumer debt, 43.5 percent have a debt associated with retailers’ credit cards. Consumer credits are not only prevalent among middle-class households, normally associated to consumerism and over-indebtedness by the Chilean media, but also among low- and high-income households. Of course, Chile is not the only place where consumer credits and, particularly, credit cards have seen a significant growth in the last decades. However, the Chilean case shows an important particularity: the access to credits has neither been driven by banks (like in the United States; Guseva and Rona-Tas 2001) nor by specialized finance institutions (like

in France; Ducourant 2009) but mainly by retailers such as supermarkets and department stores. As summarized elsewhere,

In a country with a population of about 17 million, the amount of bank credit cards increased from 1,310,325 in 1993 to 4,499,627 in 2007, while retail credit cards expanded from 1,350,000 to 19,273,919 in the same period (Montero and Tarziján 2010). . . . In today's Chile, retail cards are not merely used to get installment credit, but they can also be used as credit cards in a growing network of associated stores and as medium to get "cash advances" and other personal loans. In a country where a large proportion of the population does not have a bank account, stores are becoming a main entry point for personal financing. (Ossandón 2014: 430)

Like bank credit cards in the United States (Montgomery 2006) or mobile money in Africa (Maurer et al. 2013), department store credit has transformed the financial landscape faced by those previously excluded to formal finance in Chile. This chapter discusses, more specifically, the results of our research project that studied the new "financial ecologies" faced by low-income Chileans in the context of the rapid expansion of department store credit.<sup>1</sup> We studied the ways in which store credit in low-income areas in Chile's capital city, Santiago, is complementing and/or disrupting existing financial practices.

### **First Challenge: Collecting the Traces of *Big Data***

The expansion of consumer credit in Chile has not been invisible for social researchers (Ossandón 2011). By the end of the 1990s, sociologist Tomás Moulian (1998) published a critical essay discussing the side effects of a growing access to consumption not based on an improvement of salaries and work conditions but on the expansion of credit. A decade later, a national survey showed that Chileans have a dual relationship with consumer loans. Although these loans are seen as a key access to otherwise inaccessible goods, debts are a continuous source of stress (Barros 2009). Barros (2011) qualitatively complemented this picture, documenting how consumer credit is experienced as a – sometimes painful – learning process. More recently, Ossandón (2014) used interviews with key informants and industry insiders to reconstruct the sociotechnical history of consumer credit lending in the retail industry in Chile.

When attempting to reconstruct people's financial practices, two methods seem to be favored by social researchers. On the one hand, like Barros (2009) and Barros (2011), some have used individual and group in-



interviews to access the ways in which their informants signify and understand their relationship with financial providers and goods. On the other hand, regulatory bodies have developed household financial surveys – such as the already mentioned survey commissioned by the Central Bank of Chile – to develop statistical indices (for instance, debt-income ratio) that can orientate economic policies. Without denying that good research can be (and has been) carried out with these two types of instruments, it is clear that these methods present clear limitations. Studies centered on subjective perception tend to not to be very good in getting the details of financial transactions, and household surveys extrapolate a lot from one visit and are limited by their closed questions. An intermediate, more successful, and increasingly influential technique is the creation of financial diaries as developed by the authors of the book *Portfolios of the Poor* (Collins et al. 2009). However, even the diaries look very pale if compared with the amount of information collected by credit cards themselves.

In today's *Society of Big Data* (Savage and Burrows 2014), the production of social quantitative information is not only located in state agencies or social science research departments but increasingly in private organizations such as credit bureaus, online retailers, search engines, or social network sites. In this context, credit cards are particularly intriguing objects of research. Like money (Luhmann 1982), credit cards bridge present and future economic activities, but also, like a very efficient survey, they collect and archive information of every single purchase. In the language of recent “social studies of finance,” cards are “market devices” (Muniesa et al. 2007), objects located in complex sociotechnical assemblages where transactional data and more or less sophisticated risk-scoring mechanisms play an important role in screening, pricing, and targeting loans (Leyshon and Thrift 1999; Poon 2011; Stearns 2011).

The current *datascape* (Latour 2011) has been interpreted as a challenge for social scientists (Savage and Burrows 2007) who have been trying to find new ways of making themselves useful in a context where social data is not necessarily produced by them. For instance, an increasing effort is being made to trace, scrap, and reassemble social information produced by big-data manufacturers (Marres and Weltevrede 2013; Savage 2009; Latour et al. 2012). These strategies, certainly, are not free of problems. Most of the time *big* data is also *private* data. Access is very restricted, and research tends to be limited to ex-post “reverse engineering” of the traces left online by search algorithms (Deville 2013). At the same time, and despite their vastness, data collected by private firms do not always fulfil

the quality criteria required for academic research (Rona-Tas and Hiss 2010), or they might be too structured for the type of questions posed by qualitative social investigation.

So, how should we approach ordinary financial practices in the age of big data? Or, said in more practical terms, how can we embrace the informational nature of consumer credit, accessing and using some of the detailed information collected by store credit cards, without merely reproducing data already known in the industry, as well as collecting data that address the type of conceptual questions that inspire us? With amateur detectives' good luck, we found the solution to our dilemma in a very mundane object: monthly invoices.

## Invoices

Perhaps as a consequence of the massive privatizations carried out since the 1970s, or maybe even earlier, the postal service has not been very present in the everyday life of Chileans. We rarely send letters to friends or family, not even at Christmas, and, accordingly, post offices and even mailboxes are quite difficult to find. The postal service, however, still carries out an important role: it is the main means to circulate bills. Monthly, every household receives letters with invoices or bills from companies providing water, electricity, phone, cable TV, internet, bank accounts and . . . department store and supermarket credit cards.

Figure 9.1 is an anonymized invoice of *Más*, the credit card accepted in the stores that make up the retail network of Cencosud, one of the biggest retailers in Latin America.<sup>2</sup> At the time of fieldwork, there were more than 2.5 million active *Más* cards in Chile. In order to illustrate the type of information contained in credit cards bills, the next paragraphs describe the information included in the invoice of the illustration. Readers already familiar with this type of document can skip directly to next section.

At the top left of the bill is a box that gives information about the time period of this specific invoice (until 20 July 2011); the total credit ceiling assigned to this card (Ch\$1.258.000 – at that time, one US dollar was about 500 Chilean pesos, therefore about US\$2.500); cumulated debt (Ch\$853.421) and available credit (Ch\$404.579); interest rates; next billing day (22 August 2011) and, in smaller letters, an average – in UF, an inflation indexed unit used in financial transactions in Chile – of the last three months of transactions. Below, there are two smaller boxes with advertisements. The box on the left shows the Nectar label, indicating

Figure 9.1. An anonymized credit card invoice.

**Tarjeta más**

*Debe \$5000* *Credito \$3500* *2000 línea*

Tarjeta más París

INCLUYE COMPRAS Y PAGOS HASTA EL: 22/07/2011  
 CUPO TOTAL: 1.250.000  
 DEUDA TOTAL: 653.421  
 CUPO DISPONIBLE: 404.579  
 TASA INTERES ROTATIVO PROX. PERIODO: 3,99%  
 FECHA DE PROXIMA FACTURACION: 22/08/2011  
 PROMEDIO DE COMPRAS ÚLTIMAS TRES FACTURACIONES\*: 1,78 UF

Acumula puntos Nectar más rápido con tu Tarjeta Más.

TIENDA	FECHA	MONTO	DESCRIPCION	CUOTA DEL MES N°	\$
ALAM	01/07/2011	-182.028	MONED CANCELADO		
OEST	09/11/2009	345.780	ELECTRONICA MAYOR	30/04	17.514
ALAM	18/05/2010	403.680	ELECTRONICA MAYOR	16/04	30.185
ALAM	23/06/2010	69.970	ELECTRODOMESTICOS	12/12	6.066
ALAM	25/10/2010	420.000	AVANCE AV PARIS ALAMEDA	08/18	33.017
SSA	21/05/2011	22.304	SANTA ISABEL LA PIN	02/03	7.999
FLOR	05/06/2011	100.000	AVANCE AV PARIS FLORID	01/12	9.499
SSA	12/06/2011	54.541	SANTA ISABEL LA PIN	01/06	10.392
JUMB	18/07/2011	11.831	JUMBO CONCHA Y TORO - SANTIAGO	01/01	11.831
	22/07/2011		SEGURO DESORAVAMEN		690
	22/07/2011		INTERES NORMAL		3.941
	22/07/2011		IMPUESTO AL CREDITO		48
	22/07/2011		SERVICIO DE ADMINISTRACION MENSUAL		1.904

Informamos que CAT ha cedido parte de los créditos que Ud. tiene con ésta, a Banco Paris. Sin perjuicio de ello, CAT mantendrá la recaudación y cobranza de los créditos en forma íntegra.

Estimado Cliente: Conforme a la normativa vigente, le recordamos su obligación de comunicarnos, al menos anualmente, cualquier modificación de sus datos personales y/o financieros, presentando los documentos de respaldo correspondientes con el fin de actualizar su información.

PROXIMAS CUOTAS	SEP-2011	OCT-2011	NOV-2011	DIC-2011	ENE-2012	FEB-2012
	98.579	90.580	90.580	90.580	73.096	62.571

CUOTAS Y CARGOS DEL MES: 124  
 SALDO ANTERIOR: 95  
**TOTAL A PAGAR DEL MES: 219**  
 PAGO MINIMO: 77  
 PAGAR HASTA: 06/08/2011

El Servicio de Administración Mensual puede ser GRATIS.  
 Si el promedio mensual de las compras de tus últimas tres facturas es:  
 • Mayor a igual a 10 UF, el 20% de un 100%  
 • Menor a 10 UF a igual o mayor a 5 UF, el 30% de un 30%

VEN A DESCUBRIR EL MISTERIO  
 BOULEVARD PARQUE ARABCO  
 Obtén un **30%** de descuento pagando con Tarjeta más

Contrata Seguro **BOLSO PROTEGIDO**  
 Protege tu bolso y su contenido  
 Cobertura de Compra Protegida  
 Asistencia de Bloqueo de Documentos.  
 Sólidelo en tiendas París.

Contactanos al: 600 450 5000 [www.tarjetamas.cl](http://www.tarjetamas.cl)

that Más is part of this global customer-loyalty program, while the box on the right reminds customers about the “exclusive discounts” available only for cardholders.

The box below has a table detailing transactions in five columns. The first column indicates, although in a slightly coded way, the place

where the actual transaction was carried out (for instance, ALAM stands for Santiago's main street *alameda*, officially called *Avenida Libertador General Bernardo O'Higgins*, or OEST for a store located in a big shopping center called *Plaza Oeste*). The second column marks the dates of the transactions, and the third the amount of each of them (Ch\$132.025, Ch\$346.780, etc.). The fourth column is called *description* and details the types of transactions. For instance, the first row says *monto cancelado*, which means that at that date, the customer had paid Ch\$132.000 of his or her previous debt. The second and third row say *Electrónica Mayor* (big electronic equipment), while the fourth refers to home appliances. The sixth, seventh, and eighth are purchases in the two supermarket chains, *Jumbo* and *Santa Isabel*, where *Más* can be used as a means of payment. Rows five and seven say *avances*, which means that this customer used the card to withdraw a cash loan, and the last four rows describe fees associated to the use of the card (payment protection insurance, interest, credit tax, and administration). The last two columns in the same box describe the installments, or *cuotas* in Spanish. The fourth column rates the total and paid amount of installments (for instance: 20 out of 24, 18/24, 12/12), and the last column displays the amount of money associated with each installment (17.514, 20.168, etc.). With this information, it is possible to understand each transaction. Consider for instance the second row of the table: on 8 November 2009 this card was used to buy electronic equipment at *Plaza Oeste* shopping center for Ch\$348.780. This purchase was split into twenty-four monthly installments of Ch\$20.168 each, eighteen of which have been already paid. Or the fifth row: on 25 October 2010 the same card was used to withdraw a cash loan of Ch\$420.000 that has to be paid in eighteen monthly installments of Ch\$33.017 each.

Still in the same box, but below, are two smaller boxes. The first mentions that CAT (Cencosud's card administration unit SA) has transferred part of the credits attached to this card to the bank of the group *Banco Paris*; the second reminds customers that they are obliged to inform in case of changes to their personal and financial data. Below, there is a table with one row and seven columns informing about the upcoming monthly payments (September 2011: Ch\$95.579, October 2011 Ch\$90.580, etc.). On the right-hand side, another box gives even more extra information (the total charges for the current month, the balance from the previous month, the sum of the last two, the minimum payment accepted, and the due date). Finally, the last horizontal strip on the page includes two advertisements: the first one shows a store where it is possible to get a discount using *Más*, and the second promotes an insurance policy against "handbag theft."

## Bills That Talk

Despite their different graphic designs, the invoices distributed monthly by the different retail firms in Chile do not differ greatly from the one just described. It can even be argued that they don't differ much from bills circulating in other countries. As the example showed, bills, like a finance diary, include detailed information of each credit transaction carried out with a given card. Therefore, or so we realized – in a way that could resemble the data-collection method known as “photo elicitation” (Harper 2002), in which objects such as photos or other types of visual stimuli are used to trigger discussions in interviews – invoices could be turned into an instrument to start a conversation about financial practices.

The interview situation would be something like this: we would meet at our informants' homes and ask them if they would kindly share with us their credit card invoices. Of course, as invoices might be regarded as private documents and understandably not everyone is willing to share them, this implied a lot of trust and presented a big challenge for the fieldworker. In accordance to the ethical procurement agreed on for this research, we explained every time that we guarantee total anonymity and that we would not keep or record the bills, with the exception of some anonymized photos. We explained that we were after something else; we wanted to develop a conversation where they could tell us the story of each credit transaction and where invoices could be used as a sort of external memory providing hard details (dates, amounts, places of purchase) from where to start our conversation. Luckily, most of the people we visited were very willing to share their credit invoices and to start a conversation. But then we faced another difficulty, this time more practical. Not everyone keeps all their invoices. Some were particularly meticulous and filed everything. But others only had their last invoices or, in order to help our project, just started to keep them after we had met them for the first time.<sup>3</sup>

However, even in those cases where we could only access the very recent invoices, they contained a lot of information, and we could start the conversation. As already mentioned, credit invoices do not only have transaction information for that month included in the billing period; they also contain information for all the active loans. In other words, while we cannot claim that we are reconstructing the whole history of transactions carried out with each card, like the credit issuers can do, we do with invoices get a detailed description of past transactions from which we could start a conversation. At the same time, unlike credit issuers that can only access the details of the transactions carried out with the card of their company, we could see and reconstruct the stories of the

transactions made with cards from store chains and other credit sources used by the informants.

And so we sat, for instance, in the living room or kitchen listening to the story of each of the transactions mentioned in the invoices, and this is how we reconstructed the credit practices of thirteen different households situated in three low-income/low-financial-inclusion areas of Santiago.

## **Accounting in the Margins**

Like credit cards, monthly invoices turned out to be interesting mundane objects on their own. Bills are sometimes regarded as important documents that need to be carefully filed. Invoices can also be turned into “calculative devices” on their own. Like the handwritten notes at the top of the bill in figure 9.1 show, invoices are also pieces of paper where new calculations are performed.<sup>4</sup> Invoices in this sense are not only a print-out of past card transactions but they also play an important part – together with shopping lists and cell phone calculators (Cochoy 2007) – in the household budget planning. In other words, bills are not only traces of big data collected by lenders with the use of each credit card, they are also devices of everyday calculation (Weber 2009) on their own.

Store credit certainly does not make household economic calculations simpler. Our informants did not only have to organize their monthly salary and expenses but they also had to consider the different temporalities associated with each credit transaction. In the invoice of the example, for instance, there were transactions using twenty-four, twelve, eighteen, and six installments, all starting in different months, and some associated with the purchase of particular goods (electronic equipment or home appliances), while others were associated with cash loans. The complexity multiplies if we consider that most of the people we talked to hold cards from three, four, or five different stores simultaneously. This makes a lot to calculate! Accordingly, we found several other instruments to help in this process. For instance, some used small pieces of paper stuck to the wall to remind them about paid and unpaid installments, and others kept financial notebooks that described the status of their various financial obligations in detail.

## **Second Challenge: An Unexpected Finding**

Our first methodological challenge was how to access the rich memory of transactions recorded by credit cards. We found that the monthly invoices

of the credit cards were a nice instrument. With the invoices we could access the history of every card and initiate a conversation oriented at reconstructing the stories associated with each transaction. At the same time, credit card bills turned out to be useful instruments on their own, as they were used to calculate the household budget and financial obligations. These calculations not only revolved around the many numbers printed on the invoices but they also considered handwritten numbers added in the margins. This “accounting in the margins,” however, was not only used to make sense of the numbers in the bills but also to open a whole different type of story. Check the following quotations from two different interviews:

*Patricia:* Imagine, for instance, each installment is Ch\$10.200. I give my mom eleven or twelve *lucas* [Chilean slang for Ch\$1.000], I always give her a bit more because they always charge my mom for the mail service, the use of the cards, whatever damn fee they add – a thousand for this, fifteen hundred for the other. It’s the same with my dad, they are always charging him five *lucas* extra, so I always give some extra money on top [of the installment amount] to my mom.

*Luisa:* Flor, my neighbor, was slow to pay, so now I don’t lend them [cards] to her, because then she takes a long time to pay and I have to pay everything myself. And afterwards, they screw you over with the card.

Patricia (names have been changed in order to keep informants’ anonymity) is worried about a matter that concerns many users of department store cards in Chile. It is very difficult to calculate in advance the real cost of each installment because credit card issuers do not only charge for the loan (i.e., the price of the goods plus the interest rate attached to it) but they also attach several fees associated with issues such as the administrative maintenance of the card and various insurance policies. But Patricia’s concern with those fees has to do not just with her trying to limit her expenses; she also has to figure out how much she owes her mother, Lidia, the person under whose name the card she used to get that loan is registered. Luisa, on the other hand, explains that she does not allow her neighbor to use her credit cards anymore because it took too long for her to repay, causing Luisa to have to deal with late payment penalties.

Our informants, in other words, do not only use credit cards registered under their name; they also borrow (and lend) retail credit cards to one another. There are several reasons for this, perhaps at first view, strange behavior. Even though department store credit policies are much more inclusive than those of other financial institutions such as banks, some of the people we talked to did not have access to store cards. Most of the time, they were former credit card holders who had not paid past debts

and were registered as “defaulters” in the credit bureaus and therefore rejected as new customers. These people might ask to borrow a friend’s, neighbor’s, or family member’s card when they need to buy something that was out of their reach if not bought with installments. It is also possible that a person who has credit cards of certain stores might need to use the card of another store, for instance, in order to benefit from – a quite common marketing practice in Chilean stores – sales limited only to cardholders of a specific store chain. Or, it might also be that even if you have one specific card, your credit limit is not enough to buy a particularly expensive item (for instance a new TV). Because of the behavioral credit scoring methods followed by Chilean retailers, the credit limit of a given card increases with successful repayments. In this sense, lending a card can bring the side effect of increasing its available credit.

In our study, we encountered many stories like Luisa’s and Patricia’s. These stories, much like those recently described by Wilkis (2014) in Argentina, Müller (2014) in Brazil, and Villarreal and Niño (2016) on the border of the United States and Mexico, do not necessarily fit into the traditional categories associated with studies of popular finance. It is not exactly financial exclusion or informal credit, like in rotating savings and credit associations (ROSCAs). Neither is it purely formal finance. The handwritten stories partially registered in the credit card invoices pointed to a parallel circuit of debt developed *on top of* or para-siting the new payment and credit card infrastructure (Ossandón 2017; Elyachar 2010). A nice existing concept for expressing card lending is that of “circuits of commerce” developed by Viviana Zelizer (2010).<sup>5</sup> In fact, as shown in Luisa’s citation, an important part of the interviews revolved around the edges or boundaries drawn when a commitment is broken and how the limits of these circuits can be reestablished.

But our main concern here is not to explain – or, certainly, judge – the rationality behind credit card lending, or to advance the conceptual consequences of these dynamics, but rather to discuss the methodological challenges we are dealt with while studying them. But how can we analyze the unexpected information found in the margins of the monthly invoice?

## **Knitting Circuits of Card Lending**

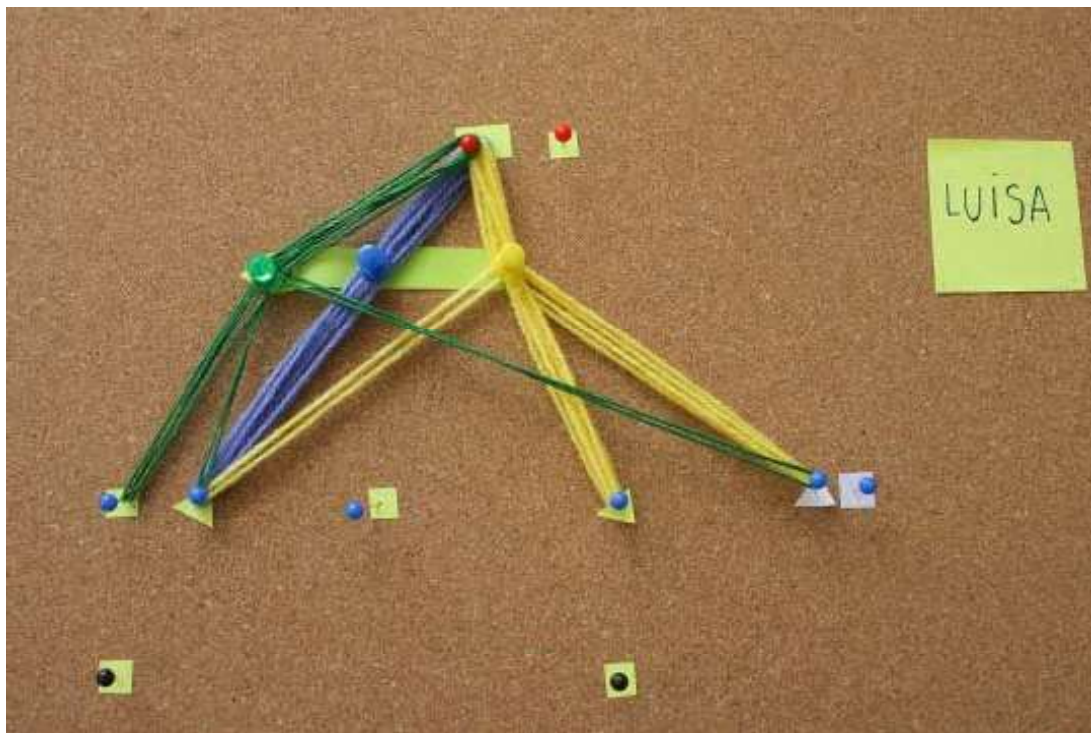
Circuits of card lending are a type of network, more specifically a socio-technical formation where different actors are connected through the common use of credit cards. Therefore, like other networks, circuits can



be visually depicted. But how and what might we see were we to examine the lending of credit cards as a network? What are the nodes and types of relations? How to classify the types of actors involved? To solve these questions we decided to do a small visual experiment.

The following image visualizes the case of Luisa. The red pins represent her and her husband, and the blue pins depict her daughters and sons-in-law. The large pins represent retail store cards. In this case, Luisa is the only one with cards – one from the store chain Almacenes Paris, one from Corona, and another from La Polar. The threads represent uses of a card involving some form of credit, and they connect the person who receives the loan of the card with the credit card used for the transaction. We can see that Luisa has used her three cards for personal transactions, but the same cards have also been used by her daughters and sons-in-law.

**Figure 9.2.** Visualization of Luisa's card-lending circuit.



For example, Luisa lent her Paris card nine times to her daughter Andrea – three times for installment purchases of merchandise, another five times to purchase goods in the shop, and once for a cash advance consisting of six installments of Ch\$15.000 each. In addition, Luisa lent her La Polar card to her daughter Andrea to buy a refrigerator and her Corona card for an advance of ten installments of Ch\$10.000. Luisa also lent her La Polar card to her daughter Katya for a cash advance and for a furniture purchase and the Corona card to her daughter Paty to buy an iron in ten

**Figure 9.3.** Visualizations of card-lending circuits (12 cases).



installments. On two other occasions, moreover, Luisa's son-in-law Rafael used her Corona card, once to buy himself sneakers and another time to buy a cell phone for his son.

We completed similar exercises with the other households.

### **Analogous Data Analysis**

We are very aware that we could have used other ways to visually depict the circuits of card lending. We know our result would look more conventional and probably more convincing for an academic audience if we had used a format for our data that can be read by social network analysis software (as some of us have done in other research projects), or even if

we had directly visualized the circuits digitally. But in this chapter our aim is not to black-box the manufacturing of our results; rather, our goal is the opposite: to illustrate the way we practically dealt with the methodological challenges we encountered in the process. And there were some reasons to do what we did that might be helpful for researchers dealing with similar issues in the future.

Network software packages are useful devices to work with massive amounts of data. They allow the visualization of networks composed by thousands or even millions of nodes and relations. But by using them, researchers are constrained by the affordances allowed by the software itself. As the amount of nodes and relations for each case in our study was quite small, limited to the amount of people and cards that connect them, we thought we could avoid the mediation of network analysis software altogether. Furthermore, in this research we used credit invoices to re-collect information tracked by store cards. Cards collect and produce digital data, and invoices are an outcome of this process of data production. But what we were trying to map out was not the digital information printed on the invoices but a type of data that has stayed outside the digital tracking, what we called “accounting in the margin.” We thought that an analogous approach would be more consistent with the analysis of this latter kind of data.

Anthropologist Timothy Ingold (2013) has recently discussed the sometimes forgotten relevance of manual labor in social research. Research is not only sociotechnically distributed and equipped by technologies such as word processing or data analysis software, it can also be understood as a type of manual labor in which we continuously use our hands to *form* our concepts and hypotheses. Most of the time, social scientists carry out such types of activities individually (for instance when we take notes in class or when we summarize what we read in a library or café), but it is different in other fields, like architecture or design, where manual academic labor is performed in groups. We decided to embrace the flexibility afforded by using our hands and organized a way to collectively analyze our data. To find the particular way of doing that, we found inspiration in the description offered by sociologist John Law (2007) in an essay about the advantages of “pinboards” or bulletin boards as a means to think visually. In Law’s words,

My pinboard isn’t of general interest, and I mention it only because it illustrates the permissive possibilities of working on a surface, flexibly, and without a very strong system of classification about what it is that goes (or doesn’t go) with what. . . . The paradox is that a two-dimensional but otherwise unstructured surface is potentially quite permissive about the char-

acter of relations between the pieces arrayed upon it. Its two dimensions produce not two dimensions but many. (Law 2007, 113)

Armed with the necessary materials – cork bulletin board, yarn, and pushpins of different sizes and colors – we met in order to think visually, and tactilely, about our findings. We placed all the materials on a table, and with the notes and transcription we had collected for each case, we started finding a way to visualize the card-lending networks.

We tried different paths. For instance, we first used the large pins to represent the human actors in each case. But as we quickly realized, in these networks, the central nodes are the cards, so they should be the stronger pins. We ended up making a coding system where stores are represented with different colors and each credit transaction with yarn. Also, we ended up deciding to locate the actors as if they were in a family tree, with parents upstream and offspring downstream.

**Figure 9.4.** Coding pinboard.



### **Conclusion: Studying Financial Ecologies in between Small and Big Data**

As Burrows and Savage (2014) have recently pointed out, the value of academic social research is being contested. Private firms – such as retailers,



banks, or Google – or state agencies – such as the NSA as we have recently learned – produce, analyze, and visualize social data in such magnitude that is beyond the reach of the resources of academic social research. In their words, “Big Data does challenge the predominant authority of sociologists and social scientists more generally to define the nature of social knowledge” (Burrows and Savage 2014: 5). In this chapter we have shown the strategies we developed to analyze one area where social knowledge is massively produced by a complex ecology of private firms: consumer credit. More specifically, we have shown the ways in which we embraced the informational character of the cards by introducing in our inquiry a mundane trace of their activity, the monthly invoice, and how we visualized analogously the unexpected card-lending networks.

In this chapter we presented the ways in which we dealt with some practical challenges in our research. The chapter, although indirectly, deals also with a more substantive issue that we think social studies of *low* or domestic finances face more generally. Research in this field seems to be split between two types of approaches: those that, founding inspiration in recent literature on “market devices,” try to reconstruct financial practices and modes of knowledge production developed by firms targeting population previously *excluded* of formal finance, and those that, inspired by recent economic anthropology, try to account or reconstruct those modes of ordinary calculation emerging with new financial products. We argue, instead, that social studies of low finance should be located *in between*: a position from where both types of knowledge and financial practices can be simultaneously observed. Elsewhere, we have discussed some of the conceptual consequences of this position (Os-sandón 2017). The current chapter has focused on some of the methodological challenges. We have as yet begun to deal with the complicated ethical dilemmas this breaching position entails.

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## NOTES

1. “Financial ecologies” is a term used by geographer Andrew Leyshon and various colleagues (2004, 2006) meaning the uneven spatial distribution of financial inclusion. As they argue, close ethnographic inspection can show that behind aggregated national or regional statistics, it is possible to find, particularly, local “financial ecologies.” In the same city there might be sectors of super inclusion – areas with many different bank branches and whose inhabitants comfortably pass the credit evaluations devised by the different types of financial institutions – and areas where branches are scarcer and it is still possible to find “relic” financial practices such as walking money lenders or rotating savings associations.
2. Cencosud is, in terms of sales, the biggest Latin American-owned retailer and the fifty-first largest in the world (Deloitte 2014). Cencosud is what in Chile is known as a multi-retailer (Calderón 2006), a multidivisional company made of firms that together comprise a full circuit of retail, including supermarkets, department stores, home improvement, bank, and insurance, all connected with their own payment means, in this case *Más*.
3. Some even agreed to try to recover past invoices and went to the stores to ask for them. Unfortunately, this latter project did not work very well, as the staff members that received them did not offer any help. We do not know the reason for this. It might have to do with practical reasons, for instance the people in the store did not know how to recover past invoices, or it could also have to do with the retailers’ data policy. In Chile, banks are obliged to record every loan they issue in a centralized data system where other banks can see

the credit burden carried by their existing or potential customers. Retailers, instead, are only obliged to share what is normally called “negative” information – or data about defaulted loans – to the main credit bureaus of the country. Some regulators and representatives of the banking industries have been lobbying for years to change the current regulation and make both banks and retailers share positive and negative data. The retailers’ representatives have defended themselves, arguing that such a change would be an illegitimate expropriation of the databases they have been collecting for years. In other words, as often happens with big data collectors, retailers see the information about their customers as one of their main assets.

4. The memory function of invoices is certainly becoming less relevant as online “banking” expands. The same is happening with department store cards in Chile. However, this feature was not yet widely used among the consumers we encountered. Future research could follow this transition.
5. Zelizer refers to circuits of economic transfers among a limited group of actors who bestow upon these transactions a shared meaning and make use of a particular means of payment, and she has paid attention to the work carried out by the actors to delimit these circuits.

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