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# **ECONOMIC CIRCUITS IN MADAGASCAR: 'AGENCING' THE CIRCULATION OF GOODS, ACCOUNTS AND MONEY**

## **Consumption, Markets and Culture**

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# **ECONOMIC CIRCUITS IN MADAGASCAR: 'AGENCING' THE CIRCULATION OF GOODS, ACCOUNTS AND MONEY**

*Abstract: Recent economic sociology literature has focused on the circulation of goods along discontinuous economic spaces as a widespread modality of value creation. This paper explores how these “in-between” spaces open to stabilized chains of transactions that maintain resilience toward disruptions and uncertainties. It defends the idea that the day-to-day circulation of actors, goods and money into and between markets leads to an “economic circuit.” We define an economic circuit as a socio-technical and spatialized chain which organizes on a regular and continuous basis the circulation of goods and payments between ‘kinship’ partnerships. Exchanges are circular, assembling heterogeneous medias and transfers, and relying on financial arrangements, as a crucial mode of transaction continuity. To develop this idea, the paper draws upon the case of the small-scale fishing trading networks in Madagascar. It aims to explore the mundane arrangements and the ‘socio-technical agencements’ operating in the whole chain of goods circulation.*

*Keywords: Agencing ; economic circuit ; fish ; trading routes ; market ; Madagascar*

Recent economic sociology literature has focused on the circulation of goods along discontinuous economic spaces as a widespread modality of value creation (Guyer 2004; Lepinay and Callon 2009). This new focus has reconsidered transactions by emphasizing the centrality of disjuncture and conversion as a nodal market mechanism opening to profit opportunities. In these approaches, the “in-between” commerce has primarily been described as an area of speculative/arbitrage operations for deft traders who profit from price discrepancies between different markets. This paper provides a different perspective regarding this particular trading area by highlighting how it opens to stabilized chains of transactions that maintain resilience toward disruptions and uncertainties. Furthermore, this paper defends the idea that the day-to-day circulation of actors, goods and money into and between markets leads to an “*economic circuit*.”

We define an economic circuit as a socio-technical and spatialized chain which organizes on a regular and continuous basis the circulation of goods and payments between ‘kinship’ (or at least familiar) partnerships (Zelizer 2004). Exchanges are circular, assembling heterogeneous medias and transfers (Maurer 2012; Slater 2013), and relying on financial arrangements, particularly delayed payment, as a crucial mode of transaction continuity. The idea of economic circuit focuses on the creative adjustments and constant reconstructions taking place in the course of transactions, which endow the circuit with (temporal) elasticity and resiliency towards unforeseen events and uncertainties.

To develop this idea, the paper draws upon the case of the small-scale trading networks in Madagascar connecting rural and peri-urban areas to urban marketplaces. Our study of these micro-economic circuits will home in on the mundane and cobbled arrangements connecting the micro-entrepreneurs in the whole chain of goods circulation. It aims to explore the interesting properties of the 'socio-technical agencements' (Hardie and MackKenzie 2007; Caliskan and Callon 2010,) operating in these small-scale autonomous organizations of local producers and retailers.

The paper is organised as follows: after presenting the ethnographic method liable to capture the economic circuits, we present the theoretical underpinnings of the concept. Then, we will attempt to trace the on-going circulation of people, goods, accounts and money between rural and urban areas, paying attention to the mundane arrangements connecting the micro-entrepreneurs throughout the chain of production. By characterizing the functioning of an economic circuit, we will shed the light on key mechanisms in the understanding of how market reliability is established and how people deal with the risk of indeterminate economic exchanges. From this description, the discussion will come back to the idea of "economic circuit" to evaluate its importance in our understanding of market agencement.

## ***Methodology***

The fieldwork was carried out on the East Coast of Madagascar, investigating the well-established informal fish circuit (game and sea fish) stretching between Toamasina city (Tamatave) and coastal villages from five to one hundred kilometres away from the city. The small-scale fishing supply chain links up fishermen from the coastal villages with urban market places.

The study of economic circuits was performed via classic qualitative methods (i.e., observations and interviews) combined with the key methodological aspect of so-called "shadowing research." (Mc Donald 2005 ; Czarniawska-Joerges 2007). The shadowing technique consists of closely following people or things, such as goods or money, throughout the practices in which they are involved. To reconstruct economic circuits, their circulation and commitment within chains of transactions, from rural to urban areas, were notably observed.

Our fieldwork began from the upstream of the circuit in the rural villages, including 26 in-depth interviews with regarding their economic and material life: self-consumed products, craft and agricultural activity, local exchanges with

other households and external trade with urban markets. Subsequently, we focused on how goods were collected before leaving the village, whether by the fisherman or by local gatherers. The next stage consisted of shadowing the route of the fish from the village until they arrived at the marketplace, which included observing the intermediaries' passing baskets of fish from hand to hand, transporting them in lumbering boats and on motorcycles and crossing the town to arrive at the marketplace. Throughout this study, our attention focused on material agencies like small notebooks, baskets, scribbled invoices and interchangeable monies. However, we also noted the 2-way transfer flows, which included other types of goods, such as domestic imports from the city. As in ethnography, the shadowing technique resulted in unexpected observations as well as breakdowns in practices and in people's routines.

Although ethnographic fieldwork has been documented in social sciences literature (Marcus 1995; Katz 1997; Cefai 2010), it is important to emphasize the methodological challenge that exploring economic circuits represents in the sociology of markets. If the daily workings of production and trading chains have not been adequately documented, it is probably because they were not embraced by methodologies that were primarily limited to interviews within a site or multi-sited investigation. Shadowing practices and flows from place to place through any form of data collection (including grasping documents and catching information in passing) enables routes to be traced. Given the fleeting and contingent property of daily disruptions, shadowing practices and flows captures the course of transaction as well as the creative adjustments that cope with instability or disagreement.

## **Theoretical challenge: the concept of 'economic circuit' in the sociology of markets**

### ***The routes of trading***

For too long, anthropological literature has considered rural economies to be the realm of domestic economy and reciprocity. In his seminal work on the Andean region, Mayer (2005) describes how the peasant economy is based on a permanent come-and-go between the household economy in rural spaces and the urban marketplaces. While these distinct economic "spheres" differ in both geographical and socio-cultural distance, they remain interdependent. In so doing, the connection of the "spheres" allows for trade, particularly when "moving goods and services between markets for profit" (p. 435). Nevertheless, he shares with other anthropologists the idea that this "space in-between" is the realm of individual through conversion and arbitrage. In this paper, we study the

exchanges between rural and urban economies by focusing on the issue of communication, transportation and money infrastructures.

In his historical perspective on the knowledge of *position and juxtapositions* in Euro-American societies, Nigel Thrift (Thrift 2004) sheds light on the unthought-of technological infrastructure of “addressing”, “tracking” and coordinating (timetables, diaries, barcodes), in other words the material infrastructure of the supply chain. In a similar vein, François Vatin (Vatin 1996) also reminds us of the importance of spatial organization and communication in the organization of markets in his study of the 18<sup>th</sup> century milk processing economy in France, just like in the small-scale units of Southern Senegal. These works invite to consider the creative *agencing* of circulation and flows. Observing local markets in developing countries where there is a distinct lack of infrastructures brings the issues of transportation, transfer and connection back to the centre stage. Inventing local solutions to logistical failures is at the core of everyday trading practices. We shall be attentive to the way goods and payments are localized, tracked and transferred along routes more or less stabilized.

### ***Dealing with markets uncertainties***

The everyday life of markets is constantly challenged by disruptions, uncertainties, unexpected outcome, which are most often diffuse and invisible. While the literature in markets has addressed the issue of uncertainty as a fundamental element underlying any commitment to action (Beckert 1996, 2003) it has been more attentive to the various strategies of reducing uncertainty and stabilizing transactions than to the way people cope with ineluctable and unforeseen events in the daily making of markets.

According to ample literature based on reducing uncertainty in economic exchange, the idea of economic circuits matches other approaches in the role of closing social structure when dealing with uncertainty. Indeed, handling uncertainty commonly refers to the concept of trust when explaining how (formally and informally) networks can solve the issue of coordination (Granovetter 1985 ; Uzzi 1999). Networks convey information and reputations about good’s qualities and partner’s reliability. In environments where the lack of formal institutions (e.g., norms, policies and institutions) and the weakness of infrastructure intensify trading risks, scholars have highlighted the “trading circle” as a specific configurations of social relations leading to trust-based exchanges (Gratz 2003; Zelizer 2004; Elyachar 2005 ; Mamhoud 2008; Dolan & Scott 2009). In many ways, the moral economy of the trading circle limits

individual opportunism as far as the value of reputational capital is inseparable from belonging to a social network (or a community).

Starting with actor-network theory (ANT), Callon's idea of sociotechnical agencement extends the social network to various technologies, often diffuse and invisible, which make goods calculable and configure the calculative agencies and uphold the agent's choice. Agencement can address the sociotechnical and material mediations by which the goods—their value, properties, etc.—are enacted (Callon 1998; Azimont 2010). In the context of the informal economy of emerging countries, technological design is much less achieved. Nevertheless, these specificities don't radically change the nature of market agencements. Instead of moving through controversial algorithms (Muniesa 2004; Lepinay 2011) or the automatized process of calculation (MacKenzie and Millo 2001), we observe baskets secured with twine, small notebooks and interchangeable moneys. But here, as elsewhere, people "calculate," and instruments and technologies are part of the calculative agencies.

The original perspective developed in this paper shifts the focus in the way that transactions are "disturbed" by unforeseen events and daily disruptions along the supply chain. This move from uncertainty to ordinary disruptions sheds light on other fundamental aspects of market agencements and, notably, the centrality of "agencing" (i.e., the process of articulating entities). We suggest that the concern with mundane and daily disruptions can be understood as a special case within the handling of uncertainty that calls for creative adjustments and constant reframing in the course of transactions. This perspective will provide a fertile ground to explore how these disruptions call for reframing operations in order to return to an *equilibrium of cooperation* (Quéré 2006, 121)<sup>1</sup>.

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<sup>1</sup>"An equilibrium of cooperation is achieved in an agencement when the co-functioning of associated components is seamless, particularly when agents have appropriately tuned their behaviour in the course of their interactions with the environmental elements and detected the limits beyond which either the behaviour of things and people becomes once more indeterminate or their abilities (bodily among others) and habits are stretched beyond their possibilities"

and confirm the reliance of agents engaged in the economic circuits. This means that the reliability of any agencement is always built as and when actions and related contingencies occur and thus requires regular adjustments. What happens if the quality of the product is poor or if there are problems with the supply? What are the subjects of conflict? How do people negotiate prices according to the variations of the final market? These breakdowns in the normal operation of trading networks concern a process of what we call ‘*agencing*’ markets.

### ***The concept of ‘economic circuit’***

We call “economic circuits” the routes organised by trading networks between distinct economic areas. The concept of “economic circuit” is borrowed from Zelizer’s idea of “circuits of commerce” (2004), but differs in several important aspects. While Zelizer focuses on the “configurations of interpersonal relations [that] people carry on valued economic activities” and the “relational work” engaged in the process of differentiating meaningful social relations, we insist on the material routes, trade and connection: the process of articulating distant spaces, managing flows and channelling arrangements (Trompette 2007) (i.e., the socio-technical *agencing* that connects spaces and creates a continuum of action between various places). For us, the concept of economic circuit as both a trading circle and an agencement emphasizes the issues of “circulation” and “flow” of entities.

Four features characterize the economic circuit:

- The existence of a circulatory dynamic, which makes its way across the transfer routes (of ownership, of goods, of money), and the spatio-temporal dimensions of transactions or in other terms the « goods and money roads ». Circuits, in our conception, refer to creative circulation agencing modalities to organize the flows.
- A closing social structure based on the association of privileged partners linked by various types of ‘kinship’. The notion of economic circuit also designates these “enduring structures” (Araujo 1999) usually referred to in the economic sociology literature as a “network” but, as suggested by Zelizer (2004), it differs in its relatively closed and bounded social structure.
- An ‘assemblage’ of transactions, where people combine heterogeneous media, equipment, service exchanges, to form market channels and



organize the daily goods flows. Closed to the idea of “communicative assemblage” developed by D. Slater (2013), the economic circuit relies on combinations, connections and *bricolage* in the use of different means of transfer, the swapping of goods and services and interchangeable money (Maurer 2012).

- A capacity to constantly restore the ‘equilibrium of cooperation’ in which participants are engaged: focusing on the many re-framings called for by the everyday disruptions to economic life brings us closer to an understanding of how market reliability is established and how people deal with the risk of indeterminate economic exchanges.

In the following sections, we shall now characterizing the idea of ‘economic circuit’ through the empirical case of Malagasy small-scale trading networks connecting the rural or peri-urban villages to the urban markets.

## **Uncertainties in Malagasy economic circuits**

### ***The fluctuating supply from the peasant economy***

The small-scale fishing supply chain links fishermen from coastal villages with urban market places. The second largest city in the country, Tamatave, is strategic as a port and major logistical hub of industrial imports and exports and essentially legal product flow, as well as minor tourism industry. Tamatave is where rural retailers acquire supplies from their wholesalers, and where everyday products that are so hard to find in the countryside may be purchased. For the fishermen of the coastal villages, Tamatave is an important market opportunity.

Malagasy fishing villages fit into peasant economy patterns based on a complex combination of agriculture and self-sufficiency, local exchanges (i.e., reciprocal obligations, barter or monetary trade) and imports/exports with urban markets (Mayer 2005). Exploiting fluctuating resources and opportunities and dependence on volatile incomes are features of this economy. Most of the micro-entrepreneurs we met combined several small economic activities (e.g., craft, small grocery, snack bar, repair shop, and cell and phone recharge), and developed them according to constant arbitrages in relation to short-term priorities (Little 2003).

The fishermen specialize in sea fishing or freshwater fishing but the type of fish or shrimp they bring up in their baskets or nets often varies<sup>2</sup>. In the villages, the production of goods fluctuates in relation to climatic events but also depending on time spent farming and fulfilling self-consumption needs (rice and manioc but also market gardening, home breeding and the manufacture of charcoal). Production for exportation is the primary means to acquire cash: it is generally intermittent, organized on a short-term basis and based on limited or specific monetary needs: meeting everyday spending needs, covering schooling expenses<sup>3</sup> and participating in a family event, etc.



Figure 1: A fish gatherer weighing fish products provided by a fisherman

The quantities and varieties circulating are therefore relatively limited and fluctuating, just like the need or the opportunities to make money. Two resulting consequences can be highlighted: (1) the supply chain and its disruptions, which play a determining role in market orientation (e.g., product availability, global volumes and prices), and (2) cash shortages.

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<sup>2</sup> The fishermen working the Pangalan Canal, where we performed our observations, use home-made methods (canoes dug out of wood, hand-made nets and creels), affording them only a limited catch from their immediate environment.

<sup>3</sup>“Schooling expenses” are paid by families to cover operating costs (e.g., teacher’s salary and educational materials) in primary and secondary schools where the State cannot afford to do so.

## ***Unreliability and high cost of the supply chain***

In the fish circuit, the volumes sent by the fishermen are done so on a just-in-time basis: there is no stock. Fish are caught in the morning and sold the same day or, at the latest, the next morning because of the lack of any reliable means of conservation. The fish are transported by car, motorcycle or boat and are placed in cool boxes to prevent them from going off, although this is not always possible. The quantity of cool boxes that can be transported is limited either by vehicle capacity or by the driver's decision to take passengers and freight. Cool boxes are well worn and not completely sealed, thus affecting the freshness of the fish. Hence, aside from a transport limited to small quantities, disruptions are considered normal, as is the lack of reliability of devices and products. People are used to living with many objects that are out of order.



Figure 2: The cool boxes

Yet, logistical costs can vary significantly depending on how optimized the loaded capacity is: everything that circulates (products, money, ice for cool boxes, etc.) has a fixed transportation cost that is paid by the fishmonger or by the market intermediary (fish gatherer). The cost of transportation<sup>4</sup> for a full cool box is the same as for a passenger (50 000 fmg – 3.44 euro); for an empty box (for the return trip with the blocks of ice), it is half the price; and the tax for money transfer is around 2.5%<sup>5</sup>. This leads to substantial threshold effects, depending on the filling level of the cool box or the basket<sup>6</sup>, or the amount of

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<sup>4</sup>The prices that follow were recorded during the fieldwork carried out in 2011.

<sup>5</sup>The transportation of cash money may also be based on a fixed fee: e.g. transport on the Pangalan canal: 5000 fmg for an amount not exceeding 500 000 fmg or 1000 fmg for an amount exceeding 500 000 fmg.

In 2011, the transportation costs were as follows:

- for a basket: 7 500 fmg (0,51 euro)
- for a full cool box: 50 000 fmg (3.44 euro)
- for an empty cool box: 25 000 fmg (1.72 euro)
- for a block of ice: 5 000 fmg (0.34 euro). A cool box usually contains 4 blocks of ice.

<sup>6</sup>An approximate calculation of the cost/price per kilo for transporting the famous Malagasy shrimp between the Pangalan Canal and Tamatave gives the following result: the sale price per kilo is about 20 000 fmg (1.37 euro); a fisherman usually sends around five kilos and cool boxes

cash money transferred. Indeed, this constraint can lead to negotiations with the drivers so that the maximum weight allowed by the cool box (40 kg) can be slightly exceeded.

### ***A complex chain of transactions***

A range of often-different middlemen (gatherers, carriers) mainly mediates the supply chain and the transaction relationships. The term “gatherer” designates all sorts of market intermediaries who buy fish (like other foodstuffs) in the villages in order to sell these on. In the rural areas there are rural gatherers (or producer-gatherers or fishermen-gatherers when they have their own production or fishing activity), who gather the goods in their village and sell them to “urban gatherers”. In the urban areas, the gatherer-fishmongers, who buy the goods either from rural gatherers or directly from producers, sell these goods themselves on the urban markets<sup>7</sup>.

Yet, the main partners in the transaction (rural producer/urban sailer) are often located at a distance from each other without easing way to meet and transfer information, commodities and payment. Thus, the uncertainties with respect to products, availability, quality and logistics can be exacerbated by the low frequency of direct social interactions, which could afford an opportunity to smooth out any disturbance. Of course, none of these markets or small-scale trading networks is legally regulated. Agreements are set up by mutual consent and there is no contract or other proof to fall back on in case of a dispute.

### **Economic circuits: kinship and ‘techship’**

In this section, we identify two key mechanisms in the understanding of how people deal with the risk and how market reliability is established: “kinship” supports compulsory alliance networks; “techship” stabilizes the chains of coordination.

#### ***Trading and kinship: two sides of the same relationship***

Kinship refers to a genuine extended family relationship<sup>8</sup>, but also to the various types of closeness felt between privileged partners Kinship provides knowledge

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can contain up to 40 kilos of freight (fish and ice). Depending on fish availability, the cost of transportation can be equal to at least 12.5% of the product value, reaching 25% on a bad day.

<sup>7</sup> In this article, we use the term fishermen-gatherers to refer to the partners located upstream of the circuit (in coastal villages or rural areas) and gatherer-fishmongers to refer to those who sell on the urban markets.

<sup>8</sup> Insofar as the unit of reference is not limited to the family nucleus but encompasses a broader family circle, which sometimes even includes part of the village or its surroundings (“everybody is more or less a relative”).

on partners (Hardin 2006). But the mutual ties between the actors, strengthened over the course of their business relations, seem essential. Whether or not it pre-exists engagement in the economic circuit, a closeness or kinship regime authorizes a system of expectations and obligations, which stabilizes the alliances within these networks.

The relationship between kinship and trade can be essential when an activity is launched, as it is rare for relatives not to provide resources: to help buy a license on the market or a first boat for fishing, to set up a stock of goods to open a grocery store, to obtain the capital required to launch a small business activity, etc. A son, a sister or other relative may contribute with a family loan or by making a direct purchase (which is not necessarily reimbursed). This initial link, where credit and kinship are combined, may be compared to a relationship based on mutual assistance. Over all, it involves the partners mutually engaging in their future exchanges. The account given by Mrs. Françoise, who is a gatherer and retailer of freshwater fish on one of the Tamatave markets, highlights the setting up of this regime of closeness as part of a business association.

Mrs. Françoise started her fishmonger's activity 6 years earlier (in 2005) when she decided to leave her job as a cleaner. Her first initiative involved setting up a partnership with the fishermen in a coastal village (Andevoranto) to guarantee her supply.

Translator: "To begin with, she tried to identify the families or people she knew in Andevoranto (...). She went out there, she looked for a partner in Andevoranto, she found one, she negotiated a payment system, and then she went to see her cousin about a stall and a license."

In her correspondence<sup>9</sup>, she calls her Andevoranto business partners (a couple who fish and gather) "my dad and mum Salam." Translator: "Because she considers them like her mum and dad. They are not part of her family, but they are people she knows and whom she considers to be part of her family."

This account highlights the way the ties of kinship and the business association are progressively wound together. The kinship may be real (a cousin who already has a license to sell on the market, which she extends to allow Mrs. Françoise to open her stall) but not necessarily: the fishermen from Andevoranto with whom she sets up a partnership are "acquaintances". But as her story unfolds, we can see how her relationship with the couple evolves: while they are partners when she sets up her business, they become "*like her mum and dad*" in her daily dealings with them. The relationship of kinship thus seems to be activated according to a rhetorical or almost performative register.

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<sup>9</sup> Which we read with her.

Underlying Mrs. Françoise' story we can hear the essential challenge she faces, i.e. how to stabilize her source of supply. In some small-scale supply chains like the fish circuit, more greatly exposed to competition between market intermediaries, it is not unheard of for gatherers (urban or rural) to financially invest in the fishermen they work with (by buying fishing nets, cool boxes, or even canoes) in order to ensure their loyalty. Hence, the relations of kinship with their suppliers are described as a means of supporting privileged exchanges and arrangements and limiting competition, as shown by the following series of excerpts from interviews with gatherers or fishermen:

Translator: "In fact, these gatherers, they have family ties with the entire village on the canal (...), they have families who do them favours, that's why it's much more difficult for somebody else who's not from here."  
(Interview with a fish gatherer from Tamatave).

Researcher: "So who are the suppliers here? His brother who's a fisherman and also his son-in-law who lives in the village too." (Interview with a Tamatave fishmonger).

Translator: "They have historical ties with the village, they have friends, they have family." (Interview with a fish gatherer from Tamatave).

The carriers who ensure the circulation of products and money between villages and towns are not interchangeable 'nobodies' but privileged and regular partners. As once carrier explains, it would be problematic for a fish gatherer to exploit the competition between carriers by - in local terms "putting ice elsewhere" (i.e. entrusts it to a competitor). Faced with the competition of other gatherers or even simple travellers<sup>10</sup>, each gatherer strives to build up a privileged relationship with "its" carrier, so as to guarantee the transport of their perishable foodstuffs. Translator: "All the drivers are friends of the gatherers (...). It is the gatherer who decides to choose a specific cooperative as a partner in order to benefit from a close relationship based on trust and prevent the fish from going off." (Interview with a carrier).

The kinship framework combines business relationships with a system of mutual assistance, expectations and obligations, particularly to overcome a shortage of cash. The entanglement of kinship with business networks allow partners to set up various arrangements such as payment facilities, exchange of services, or other forms of flexibility.

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<sup>10</sup> Who could be more profitable for the carriers than cool boxes filled with fish (see 1). Thus, negotiations focus less on prices than on the volumes transported in relation to the room available.

### ***Techship: material devices to support coordination***

Another feature of the economic circuit relates to the material logistic infrastructure, which ensures the circulation of goods between discontinuous and distant areas.

- Coordination chains to articulate spaces and commodities

Along the economic circuit, it is not so much the actors' specialization in terms of the product life cycle that is surprising but the way so many flows (fish, logistical systems, money, fuel, etc.) are managed.

In the morning, and depending on the distance and transport conditions, the Tamatave urban gatherers send out cool boxes or baskets filled with blocks of ice to bring back the fish from the fishing villages via the carriers with whom they are "linked". In the villages themselves, the day's catch is bought from the fishermen by the rural gatherers (sometimes fishermen themselves), who fill the cool boxes or baskets with fresh fish. The baskets or boxes are taken to road transport areas where the carriers are waiting for them. Thus, the carriers form a central channel and a point of convergence for the multiple rural supply circuits. These circuits then diverge once more at the bus station or port as the goods are sent on to the retailers and urban markets. Depending on the location of the villages, the transport may involve various steps by road or river (boat), along with the intermediate or final steps where transport may be by scooter or on foot.

The alliance bringing together the fishermen, carriers and gatherers does not just involve managing the flow of fish. The villagers sometimes use the empty baskets (with ice) to fetch everyday groceries from the urban centres. The actors' interdependence, the various networks and the swapping of services play a joint role in ensuring the permanent fluidity of these circuits.

- The main role of human and material agencies

We can also observe the central role of a certain number of human and material agencies that support flows and transactions. The transport is a central link in the circuit (see diagram 2), which is also one of the most well-structured in the chain insofar as the carriers are genuine professional organizations with salaried drivers. Their regularity provides the exchange system with a form of security.

Translator: "Trust, it's to do with the organization with the boat (...), in fact, the log book and all that (...), with all this organization, there is trust even if it isn't their family, there is trust because it's well organized." (Interview with a Tamatave gatherer). This is confirmed by

another gatherer. Translator: “There’s an organization in the boat, there are commission supervisors, the riverboat pilot and his crews, who pick up the fish from the people in the village (...). So the owners from the village ask the boat crews to take these baskets with their names on them to the gatherer and it’s only later that the gatherer sends back the money via the same person.” (Interview with a Tamatave gatherer).

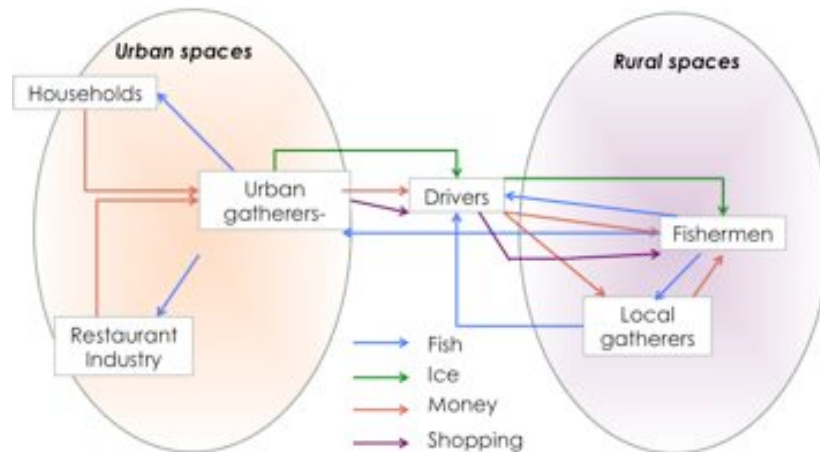
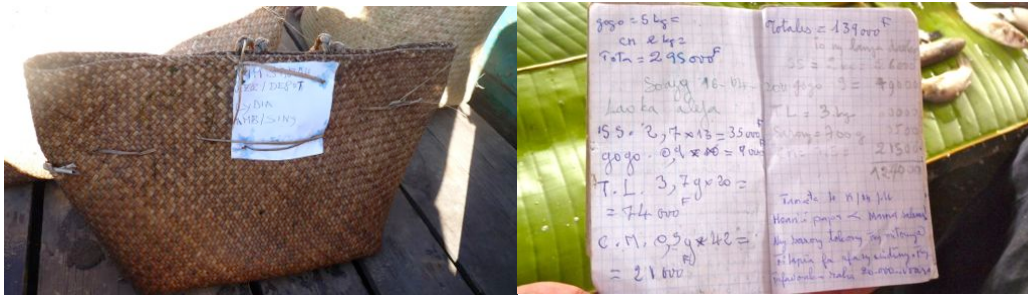


Figure 3: The central role of the carriers in the transport of various goods

As the baskets and cool boxes are passed from hand to hand between the main partners of the fish circuit (retailers/gatherers/fishermen), without their owners being present, they are “equipped”: small notebooks are attached to the basket or inside the cool box, wrapped up in plastic to prevent them from becoming damp. The books contain written information such as the different types of fish sent, the weight of each species and the price paid by the gatherer. On its journey back to the village, the empty basket or cool box carries the same notebook, inside which the cash to pay for the fish has been inserted.

The basket, notebook and inscriptions thus form essential communication channels between the fishermen and the retailers. It is expensive to communicate via mobile phone: it is not insignificant to see the partners (rural fishermen-gatherers/urban gatherer-fishmongers) using this device to exchange what they consider to be the essential information: have you got any fish and was it transported today?





Pictures 4 & 5: The basket of fish and the notebook

## Agencing, timeframes and price-setting

Understanding the “agencing” process requires observing the coordination mechanisms negotiated, modified and “transformed” in the course of action, as the conditions of exchange are constantly readjusted.

### *Financial micro-arrangements and entanglement in the exchange circuits*

In the small-scale trade sector of Madagascar’s periurban or rural world, multiple types of informal micro-credit are omnipresent (Fontaine 2008). In relations between suppliers and intermediaries, deferred payment, rather than real credit, is not only a tolerated practice but sometimes instituted. It is less a question of debt or borrowing than offering payment facilities: the supplier waits for the commodities to be sold before being paid.

Within the economic circuit, the transactions are constantly recomposed and reassembled. They can also include extra-services and alternative moneys. For example, the notebook commonly contains a list of shopping for the village fishermen’s family or families, to be bought from the money made from the sale of the fish:

Translator: “And these people, the local gatherers and fishermen, send off small notebooks, and in them there’s a whole list of products they’re going to sell in Tamatave, along with orders if they’re going to be buying anything, without leaving their village, they do their shopping using the notebook. For example, after selling the fish, they ask the people who sold the fish to buy 1 kg of rice, a bag of rice or some other grocery. So instead of sending money for the price [the payment] of the fish, you buy me rice and you send the rest back in cash.”

Researcher: “So they do the fishermen’s shopping with money from the sale of the fish

Translator: - their groceries and so when that’s the case, it’s the receivers working in the boat or the pilots and baggage handlers who pass on all these messages and they then follow up on their supplier’s requests, they do them a small favour for buying that.” (Interview with a fish gatherer, Pangalan canal).

While the flows of goods for sale and products for domestic consumption cross paths along the economic circuits linking the rural villages and urban areas, so too do the means of payment, the swapping of goods and services and alternative moneys. Everything is entangled within the circuit: the merchandise circulating is formed at once of the goods exchanged and the moneys used to make the exchange. These “assemblages of transactions” offer characteristics that are very similar to the “assemblages of communications” identified by D. Slater (2013) in Africa when he studied the combinations and connections in the use of different communication media (dispatch of written messages, telephone use, text messages, etc.). They can be found in many places along the chain through the exchange of services, and they make it possible to optimize the human and material costs of transport. Used with excessive parsimony, the mobile phone appears to be one of the essential media for the daily making of this flow continuum. On the Pangalan canal, one fish gatherer describes these service exchanges between carriers and gatherers as follows:

Translator: “They use phones for several reasons: first, if the pilot does not have any petrol, he knows that the gatherers will be coming here in the morning so calls ahead of time and asks these guys to buy the fuel. (...)

“They [the gatherers] pay for the fuel?”

“Yes, they pay for the fuel and the pilots reimburse them, because they come from Tamatave (by motorbike or scooter). And vice versa, when the gatherers don’t have any petrol, between them, for example, if yesterday evening one of them runs out of petrol and can’t get here, he phones his colleagues for them to come and pick up the fish from their usual customers: “I can’t get out to the village, please bring all the fish”.

Between colleagues, they help each other, because they don’t live in the same places, but they help each other.”

The economic circuits brim with creative activity involving adjustments and arrangements. This creative playground involves calculation and equivalence-making activities since goods and services can replace monetary payment. Instead of pinpointing the specialized nature of the transactions (domestic versus

trade), this reflects the multi-dimensional aspect of the various series of assembled transactions.

### ***Calculation, valuation and price-setting in an exchange cycle***

Economic circuits are affected by the ups and downs and disagreements of daily market life: participants do not see eye to eye about the quality of goods, may not agree when assessing quantities, and be forced to negotiate price variations on the urban markets. What do people resort to in order to put their differences aside and reach an agreement? Within the small-scale fish trade in which the transfers of goods and payments are daily, the normal adjustments to current transactions are part of a transaction cycle. Like the deferred payment, the deferred regulation maintains, if not renews, the course of exchanges. “Repairing” the damage done is generally postponed to the following actions.

Let us once more follow Mrs. Françoise after she has set up her partnership with the fishermen in Andevoranto. The transaction cycle is triggered by the dispatch of a down payment to enable the rural fisherman-gatherer to buy fish from the fishermen in the village (or to pay for the fisherman’s own catch). Translator: “And when the partnership has been set up, she starts to say, ‘I’m going to send you money to buy fish.’ And so she sends the money to the person who is the partner, a sum of 500 000 fmg, **which she used as a down payment**. That sum is going to be used to buy fish locally.” This down payment is to be constantly renewed through the sale of fish on the urban markets. Every morning the fish bought by the rural fisherman-gatherer are listed in the notebook that travels with the goods.

(Madagascar, 11 March 2011) Fydélis, the translator, reads from the notebook, “For Mrs. Soize, here is the fish sent: S.S., that’s the name of the fish, 35 kg, that’s the quantity of fish and 13, that’s 13 000, it’s the price of the fish, that amounts to 455 000 francs. Below, it says TLM, that’s the Tilapia, 19 800 [the Tilapia is sub-divided into two categories]: small TL: 1.5 x 10 kg, that’s 15 000 fmg. And so on... So all of yesterday’s fish, that amounts to 647 300 fmg. That’s the price she got for the fish yesterday at the bus station at 2 pm.”

Mrs. Françoise thus uses relatively precise accounting to follow the goods bought with her down payment, specifying the species and quantities she checks when she unpacks the catch and sells it in the urban market hall. The fish will be sold on the same day or on the morning of the following day. However, the sum corresponding to the purchase (here 647 300 fmg) is sent back early the next

morning, in the cool box, in order to renew the down payment and allow that day's fish to be bought. On the other hand, it is during the sale of the fish that all kinds of "tests" emerge requiring the partners to consult with each other and revise the terms of the exchange. To pass on her claims, Mrs. Françoise can use the phone but generally prefers to use the same small notebook, which actually turns out to be the central communication channel: the notebook attached to the cool box or basket does not only contain the goods accounts but also the claims and negotiations between the two parties. Reading the notebook provides access to several "adjustment" sequences between the partners.

#### Sequence 1a: fish not fresh enough

Mrs. Françoise recounts a situation where the fish sent is not fresh enough and therefore has to be sold at a lower price than the price at which it was bought by the gatherer. This might lead to a telephone call to the fishermen or to a message being left in the notebook: "Why is your fish not fresher?" In this situation, the resolution mode consists in suspending payment of the fish and readjusting the fisherman's payment to bring it in line with the real price. Translator: "Once the fish has been sold, she sends the money back with an explanation, 'I received this sum of money for the sale and here's what I owe you for the fish.'"

#### Sequence 2a: ill-adjusted prices

The notebook describes a second situation in which the fishermen have not differentiated two species of fish – the Tilapia and the Saro – when the price of the Saro is lower than that of the Tilapia: 16 000 fmg compared with 20 000 fmg for the Tilapia. Mrs. Françoise writes a note for the fishermen: "Dear mum and dad Salam, the fish cannot be sold at the same price as the Tilapia, because the price of the Saro has gone down in Tamatave, I made a loss because of this price." The notebook does not contain the fishermen's response but shows that for the following transaction, the Saro fish have been separated from the Tilapia, with a lower price given for the Saro.

#### Sequence 3a: the difficulty managing quantity increases

The fresh produce volumes fluctuate. When there is a big catch, the rural fisherman-gatherer may increase the quantities sent, leading to a difference in relation to the down payment (500 000 fmg). If the surplus is sold, the extra payment may be sent on the next day. However, the seller may experience difficulties depending on price variations on the market or cash availability. Translator: "The gatherer from back in the village sent too much fish so her money [Mrs. Françoise' cash flow] doesn't

cover the price asked. She picks up all the fish sent, but her price capacity is lower, she can't keep up with the fish delivered, she doesn't have the money to pay straight away, so she tells the rural fisherman-gatherer, 'You'll have to wait because that's much more than the agreed quantity, so I'll sell them, but you'll have to wait a bit, I won't pay you straight away like usual.'

These three sequences demonstrate the extent to which the partners' mutual commitment in the transactions is "put to the test" because of this inescapable uncertainty. Mrs. Françoise cannot control the purchase made with her down payment and has to simply cope with what her partner decides to do in terms of quantity, quality and purchasing price, since the price requested by the rural fisherman-gatherer includes her own margin. Conversely, the fishermen have no means of controlling the sale of the fish and measuring the actual margins and/or losses made by Mrs. Françoise. However, over the course of the adjustments, Mrs. Françoise is regularly obliged to test her partners' willingness to accept a re-allocation of her losses to the benefit of their lasting association.

In the case described above, only the seller's losses at the end of the chain have an impact on the fishermen, especially when market prices have dropped. Other partnerships also involve a re-distribution of profit as exchange cycles are periodically interrupted. This is the case of the gatherer-fishmonger mentioned in what follows. He sells freshwater fish on the Tamatave market and claims to have a partnership with his "close family" of fishermen-gatherers from the surrounding villages. The following two sequences illustrate the way in which price variations on the market impact all of the partners, in terms of loss and profit, but according to cycles with different timeframes.

Sequence 1b: negotiating prices

First, the gatherer-fishmonger talks about the situation where he has to negotiate a drop in prices in line with the Tamatave market rates.

Translator: "In fact, the price is always a set price. But sometimes, when the market back there is not great, that's when he asks the fisherman to lower his price a little, because the price is exorbitant in relation to what he earns [market price], that's when he'll write a letter to the fish owner [fisherman], or phone him. So he mentioned two possibilities: either he phones or he sends a letter, depending on the Tamatave price conditions." The price drop is thus re-allocated to the fisherman the next day. "So the next day, there is a price cut in the notebook." Conversely, explains the gatherer-fishmonger, the fisherman might ask for a price increase, "and, in the same way, if the price is still low, he [the fisherman] also sends

letters saying “we ask you to agree to this price, I’ve increased it a bit, because we are losing out so we’re asking you to accept this price that we’ve just put down on paper.”

#### Sequence 2b

Secondly, the gatherer-retailer makes a clear distinction between two accounting levels: the first concerns the renewal of cash flow for buying fish; the second concerns the setting up of a reserve fund based on net profits. Translator: “Everything noted in the notebook, that’s price and kg’s [quantities],” price assimilated to a cost price, “because back there, they have set expenses, they know ‘how much it costs.’” The money sent back to the fisherman the next day is based on this price: “it’s not yet the profit, it’s the investment capital, so that the [rural] gatherer can buy the fish.” Once the fish has been sold on the market, the gatherer-fishmonger sets up a reserve fund from the net profits: “for example, the price of crab [paid to the fisherman] is 9000 fmg. He [the gatherer-fishmonger] simply reimburses the 9000 fmg. But when he sells the fish on the market, if he sells it at 15 000, that’s a margin of 6000 and then he halves that 6000 margin, which makes 3000. But he doesn’t send that money back straight away, he keeps it.” This reserve fund allows him to maintain down payments in case of loss (drop in prices, poor-quality fish). However, this adjustment cycle is suspended every month when the fishermen and the gatherers go through the accounts and split the net profits equally. Translator: “At the end of each month, the fisherman comes to Tamatave to pick up, so for them, they work on a monthly basis. He [the gatherer-fishmonger] pays for the fish collected every day and pays out the profit once a month.”

The deferred payments, like the ex-post compensation for damage or the longer term adjustment of prices, weave an exchange cycle that transcends any one transaction. This temporal interplay/timeframe generates other forms of calculation: instead of an instantaneous calculation on an immediate transaction, the agent is attached to a middle-term action time horizon.

### **Discussion**

Focusing on the process of *agencing* reveals the following social mechanisms by which to economic circuits maintain their everyday resilience.

First, economic circuits are based on a closeness or so-called kinship regime that provides partnerships with faithfulness (against competitive partnerships), payment facilities (different payment) and trust (distant agreement). Rather than

considering kinship as an “extra” support to market relation, we observe its constant entanglement with business networks. Economic circuits mingle these two regimes of exchange. These shifts in cooperation agreements might characterize a form of “relational work,” in the sense of V. Zelizer ; however, the ultimate goals are not to mark out the borders between close ties and trade relations but, on the contrary, to make these disappear. Kinship and trade appear as two sides of the same relationship: the normative borders are dissolved and the composition, or even the confusion, between the regimes contributes to creating obligation and trust in a long-term cycle. As for technologies and formal rules in western markets, kinship ‘are’ and frame market relationships.

Second, the property of the economic circuit concerns the material and technical infrastructure, ensuring the circulation of goods along routes, which we call the “techship.” Economic circuits are based on coordination mechanisms that combine various forms of equipment, tracking devices, writing (or accounts) etc. Supply sources, transport and fluidity of circulation (especially for perishable goods) absorb resources and investments, while the intermediaries ensuring this fluidity (baskets, carriers, notebooks) are central to the economic circuit. The relational (kinship) and material (techship) infrastructure of economic circuits frame the flows of entities, wherein the lack of formal rules and the precarious conditions of translocation make the routes of goods particularly difficult.

Third, economic circuits are based on the “assemblages of transactions,” which sustain the fluidity of trading between distinct economic areas—in our case, the peasant economy and urban marketplaces. People combine different monies, currencies and commodities depending on opportunities or disruptions. Contemporary research on mobile exchanges (Maurer 2012; Slater 2013) illustrates how things can have a different status within short exchange cycles. “Airtime can be a commodity in one instance, an actualized, technologically mediated relationship in another (through talk and text) and a method of payment, means of exchange and store of value in a third (when used as an alternative currency). It can continuously pass into and out of each of these moments – it is unstable, and reversible” (Maurer 2012, 591). Within economic circuits, translations and conversions are not an exclusive ability of individual traders, but a key support to the continuity of flows between discontinuous economic spaces.

Last, the economic circuit allows for the sharing of risks and profit between partners involved in the supply chain. Shadowing the permanent micro-arrangements in the course of the transactions and throughout the business cycle illustrates that the equilibrium of cooperation is based on a long-term

process. Re-framing, compensation for damages and recovery of outstanding debt are not instantaneous, but spread over the timeframe of an exchange cycle, alternating the advantages afforded. It can be said that the participants' commitment rests on a subtle usage of time: it is central to the way people bargain and negotiate over price elasticity and allocation of risks, and then manage to stabilize their business relationships. Our observations converge with the idea that a transaction is always a stage in an exchange cycle (which is different from a repeated exchange as reasoned by economists). Furthermore, in the context described, where transportation is key, the time taken to shift products, money and, above all, written communications, significantly contributes to people's calculation processes: it makes it possible to change set prices, opens up new opportunities to solve disputes and fosters reciprocity in the long term.

The economic circuit described in this paper articulates rural and urban areas in a developing country where infrastructures and market technologies are weak. Observing its properties—particularly the spatial and temporal settings of money and goods circulation and the day-to-day market arrangements—in other contexts is an exciting challenge for future research.

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