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PACHÉ (Gilles), « Innovation de service dans une perspective historique. Le cas de la “plateformisation” »

RÉSUMÉ – Le point de vue s’intéresse à la “plateformisation” en tant qu’innovation de service majeure, dont l’importance est aujourd’hui reconnue dans l’organisation des chaînes logistiques contemporaines. Sur un plan technique, la “plateformisation” s’appuie sur le modèle hub-and-spokes, largement diffusé en transport aérien, mais aussi en logistique de distribution. Trois exemples historiques indiquent que l’on peut retrouver les origines de la “plateformisation” dans des événements, souvent dramatiques, qui ont jalonné le cours de l’Humanité, ce qui permet de relativiser l’originalité réelle de cette innovation de service.

MOTS-CLÉS – histoire, modèle hub-and-spokes, innovation, plateformisation, chaîne logistique

PACHÉ (Gilles), « Service innovation in historical perspective. The case of “platforming” »

ABSTRACT – This viewpoint focuses on “platforming” as a major service innovation, which importance is now recognized in the organization of contemporary supply chains. On a technical level, “plat-forming” is based on the hub-and-spokes model, widely used in air transport, but also in retail logistics. Three historical examples show that the origins of “platforming” can be traced back to the often dramatic events that have marked the course of humanity, which puts the real originality of this service innovation into perspective.

KEYWORDS – history, hub-and-spokes model, innovation, platforming, supply chain

# SERVICE INNOVATION IN HISTORICAL PERSPECTIVE

The case of “platforming”

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## INTRODUCTION

The question linked to the universalist or culturalist nature of management tools and approaches is very old. This is also the case in economics, with the seminal work of Rostow (1960/1990) who tried to identify a standard model of the stages of economic growth, independently of any institutional context. Logistical services do not escape the temptation of universalism, i.e. the application of the same organizational framework of product flows, also independently of any institutional context. Since the 1980s, the implementation of platforms by large retailers has thus become widespread throughout Europe. The policy of “platforming” has led them to abandon direct supplies of their stores from manufacturing factories. This policy has spread to all large retailers in a homogeneous manner, which allows many academics to conclude that “platforming” is a universal service model. It is possible here to refer to *circulation norms*, in the sense of Colin (1982), which are imposed on companies in the management of their supply chains. We will show how circulation norms provide an original insight into the implementation of service innovations that are prominent in contemporary supply chains.

Historians report on situations in which “platforming” was at the origin of logistical performances, some of which led to the success of projects that were fatal for humanity (like the triangular trade). The interest of the approach is to investigate historical phenomena in order to better understand the contemporary dynamics of some innovation ecosystems within logistical services, which sometimes lead to excesses of what Bauman (2007) calls “liquid times”. The methodology of this viewpoint is based on the analysis of secondary data from research conducted by historians on the above-mentioned phenomena, identifying more specifically the designing and delivering of innovative logistical services in their works. The purpose of the contribution is to underline that circulation norms are not linked to the managerial revolution that began in the second half of the 20<sup>th</sup> century. On the contrary, they appear very early on as a true service innovation. Through three, sometimes dramatic, historical examples (the triangular trade, the Armenian genocide, the Overlord operation), we will describe the existence of highly structured “platforming” processes, which today serve as a reference to the famous hub-and-spokes model. The three historical examples finally enable us to identify a “service-based archetype” that indicates how networks for logistical innovation were created in the past.

The focus on service innovation from “platforming” processes, as suggested in the viewpoint, is in line with the critical analysis conducted by Gallouj *et al.* (2003). Indeed, even if “platforming” processes are based on the technical system of hub-and-spokes, they correspond to a radically new approach of interface management between supply and demand, resulting in a strong reduction of transaction costs. According to Gallouj *et al.* (2003), it is important to break from this narrow vision of service innovation, which has long been synonymous, in the dominant economic streams, with the adoption of technical systems of industrial origin. The main issue was then to assess the impact of innovation on different variables such as employment, skills or work organization. Although it remains important to understand the purely technical dimensions of service innovations, it is only possible to analyze the resulting change in interactivity and coordination between actors, e.g. within a supply chain.

## 1. AN OVERVIEW ON “PLATFORMING” PROCESSES

The massification logic on which “platforming” is based has been known and studied for many years. They are at the origin of a model of “space radialisation” which has deeply reorganized the shape of contemporary supply chains. Monnoyer and Zuliani (2007) have clearly underlined the structuring power of these radialisation practices by relying on the case of Airbus, which famous A380 aircraft production network (and associated services) extends over a larger scale. One of the most emblematic configurations of “platforming” is undoubtedly the hub-and-spokes model, which originated in the air transport and express courier industries (Lumsden *et al.*, 1999; Bowen Jr., 2012). It means that the location of a shipping unit, for example a factory, is close to a structuring axis, itself connected to a focal point for grouping and then splitting, towards another structuring axis on which the destination unit is located, for example a store (see Figure 1).

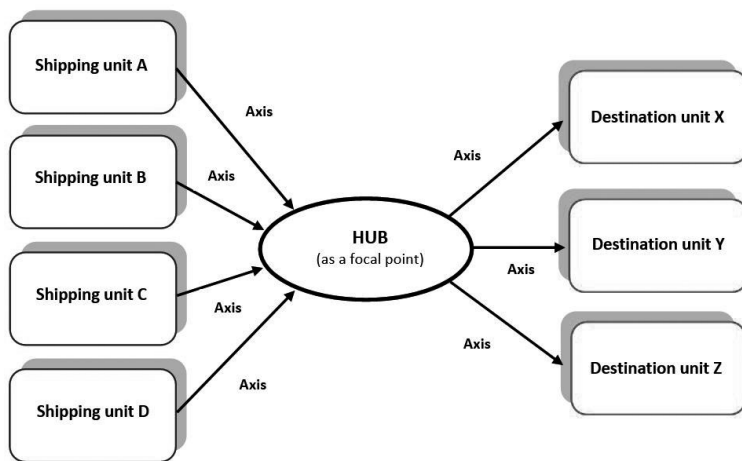


FIG. 1 – Hub-and-spokes model.

The hub-and-spokes model was designed by Frederick W. Smith in the early 1970s. While he was a student at Yale University, he wrote

a dissertation in which he presented a business plan for a company in order to be capable of delivering a package within 24 hours from any shipping unit in the USA. At the time, air freight transport was divided between passenger airline companies. For these companies, parcel delivery remained a marginal activity and the logistics service quality was poor. Using operations research tools, Frederick W. Smith imagined the creation of a specific fleet of aircraft, based on a hub through which parcels transited before leaving for their destination units. The advantages of this type of network are numerous: fewer routes and aircrafts, shorter lead times, optimized aircraft loads and lower costs (Mason *et al.*, 1997). Drawing directly from his dissertation, Frederick W. Smith created in 1971 an air transport company: Federal Express, renamed FedEx in 1994. After two years of testing, he bought 14 Falcon 20, chose Memphis as a hub and launched his business serving 25 American cities. His experience in Vietnam with the US Army, accustomed to integrating air and ground transport, gave him the clever idea of parking his trucks on the runways of airports to accelerate transshipments prior to delivery.

In the Frederick W. Smith fresh perspective, the notion of spatial proximity was fading in favor of a time proximity in which high delivery frequencies over a given period (week, day) do not call into question either transport productivity - thanks to the extreme massification of flows in the hub - nor the economies of scale achieved by the shipping unit involved in “platforming”. In other words, the time proximity defines a *maximum temporal accessibility*, making it possible to better plan the coordinated sequencing of logistical operations, for example a daily supply of manufactured products to the hub, which consolidates the various multi-origin flows before distributing a store’s “mixed” delivery each morning with no (or almost no) stock. Kasarda’s (1999) old but still relevant article is full of concrete examples in which large manufacturing companies have set up near airport hubs to win time-based competition, upstream of the supply chain for the supply of parts and components, and downstream of the supply chain for the delivery of finished products to customers.

Little has been written on the topic. However, the geography of the structuring axes - or radial axes - determines industrial and logistical investment decisions. However, it is both the connection to grouping platforms and the coordination of flows within “platforming” that directly conditions the logistics service quality provided to destination units (Khorheh and

Moisiadis, 2015), and consequently the market shares that shipping units can hope to obtain. The battle over speed between FedEx (the innovator), DHL and UPS (the followers), for example, is a testimony to these stakes, especially since consumers who order online, in direct relation to logistics performance of companies, can express their dissatisfaction with the failure to meet delivery windows. It would be a mistake to believe that “platforming” is just a recent service innovation linked to the acceleration of flows in a just-in-time economy. On the contrary, history shows that “platforming” has been at the origin of logistics performance, some of which have unfortunately enabled the success of tragic projects for Humanity.

## 2. THE TRIANGULAR TRADE CASE

Triangular trade, which took place from the 16<sup>th</sup> to the 19<sup>th</sup> century, consisted in supplying Europe with products from the American colonies, and in return providing them with the labor needed to operate the plantations, based on a proven economic model (Grenouilleau, 2018). The key resources of each country were as follows: (1) for Europe, clothes, wheat, jewelry, pearls, alcohol and weapons; (2) for Africa, slaves, mostly prisoners of war and mostly the result of tribal conflicts; (3) for the Americas, sugar, coffee, cocoa, indigo, cotton, tobacco, etc. In other words, it is above all a question of trading and getting rich. Stein (1979) was thus able to identify 500 families who had fitted out 2,800 ships bound for Africa in Nantes, Bordeaux, La Rochelle, Le Havre and Saint-Malo in order to transport labor to the Colonies of America, buy raw materials there and then export them to Europe to make a comfortable profit. For that purpose, a process of “platforming” was initiated to organize the grouping, transport and distribution of slaves as efficiently as possible (Fulconis *et al.*, 2017).

It has been demonstrated by historians that inter-tribal conflicts, *razzias*, customary law and offences have fuelled the sources of supply of slaves in Africa (Coquery-Vidrovitch, 2016). The *razzias* are legally organized by sultans to supply traders with African captives for their exporting. Far from wanting to suppress a trade from which they took profit, these

sultans only thought of imposing transit taxes on the caravans along the different “spokes”. To become more efficient, African slave traders will increasingly need sophisticated logistical means, and to have more weapons and horses - a guarantee of power - they will be forced to sell more captives by engaging in wars against neighboring kingdoms. Other tribal chiefs also organized *razzias* and sold men for beef, weapons and clothes. In this tragedy, therefore, it must be recognized that there was collaboration by native potentates who cared little about the destination of their compatriots.

Captives from the hinterland, the indigenous “suppliers” must have had strong relays and relationships, as well as porters for barter products. The supply networks, although they extended from the Senegambia to present-day Angola, were in fact limited to a few sites that acted as genuine switching units in which grouping operations and transitory “storage” of slaves were carried out. These sites were in fact the real hubs of the triangular trade: Juda in Benin (now Ouidah) and Lagos in Nigeria, which centralized nearly 60% of the supply, but also Loango in Congo and Luanda in Angola (see Figure 2). For each of the European countries involved in triangular trade, the counters played their role of *concentrator* perfectly. Once grouped together, the slaves would then have been ready to face the crossing of the Atlantic Ocean before being distributed and then sold in the Colonies of America for those who would have survived the terrible journey.

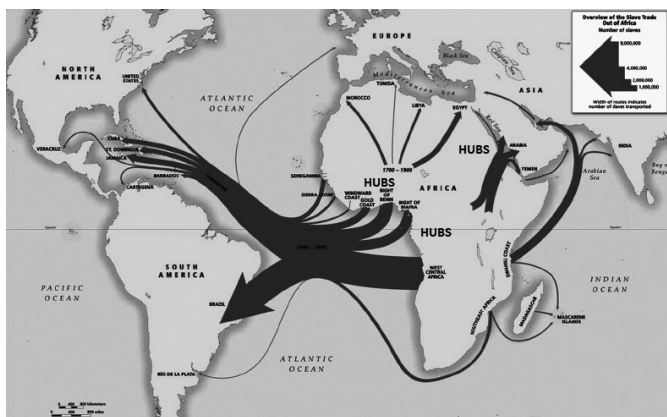


FIG. 2 – “Platforming” in the slave trade.  
Source: Adapted from Eltis and Richardson (2015).



### 3. THE ARMENIAN GENOCIDE CASE

Even if for some historians, the first (colonial) genocide of the 20<sup>th</sup> century was that of the Hereros and Namas in present-day Namibia, perpetrated by German colonial troops from 1904 onwards, and leading to the deaths of 85,000 people, the Armenian genocide of 1915 is the one that has left the most lasting impression, both in the horror of the exactions committed and in the rigorous nature of its implacable organization. The approximate, but generally accepted, death toll is 1.5 million (Mouradian, 2013). The origins of the Armenian genocide are now well known. Prey to revolts by Christian subjects in the north of the Ottoman Empire (vast territories were lost during the Balkan wars), it collapsed at the turn of the 20<sup>th</sup> century. In 1908, a movement of young army officers (“Young Turks”) seized power. They entered the war alongside Germany in 1914. After a disastrous campaign against Russian forces in the Caucasus, they were defeated at the Battle of Sarikemish. The Armenians of the region were then accused of siding with the Russians, and the Young Turks took advantage of this to present them as a real threat to the State.

The deportation of Armenians from Eastern Anatolia was methodically managed. With the exception of the Armenians in Constantinople, who were protected by foreign embassies and communities, Armenians in urban centers were kept away to prevent their elimination in the cities from causing disorder. Convoys were therefore organized along the roads, which acted as “spokes”, and most of them placed in concentration camps for four months, demonstrating the speed of the deportation resulting from their rigorous planning. Of the 1.2 million deportees, approximately 600,000 died on the roads. The survivors of the deportation were distributed to about 20 camps, divided into three main axes: the first axis follows the Baghdad railway line; the second axis follows the Islayie-Alep route; and the third axis follows the Euphrates line. As from October 1915 a new main phase of the genocide begins, that of the extermination of the internees in the camps in Syria and Mesopotamia, which still led to the death of 300,000 to 400,000 Armenians.

In reference to the methodical organization of the deportation process, scheduled from the Spring of 1915 onwards, Bloxham (2003) does not hesitate to speak of a real “logistical” issue driven by the Young Turks to resolve the Armenian question. This death logistics was supervised by civilian and military officials and was accompanied by a systematic campaign of mass massacres, as stated above. Hewsen (2001) has proposed a historical atlas that provides a detailed picture of how the movement of Armenians took place until their deaths. It shows that a true process of “platforming” was explicitly set up by the Young Turks through different “relegation zones” within the Ottoman Empire. These are presented as places for grouping families from which deportation routes to the concentration camps were organized, which can be likened here to the radial axes of the hub-and-spokes model (see Figure 3).

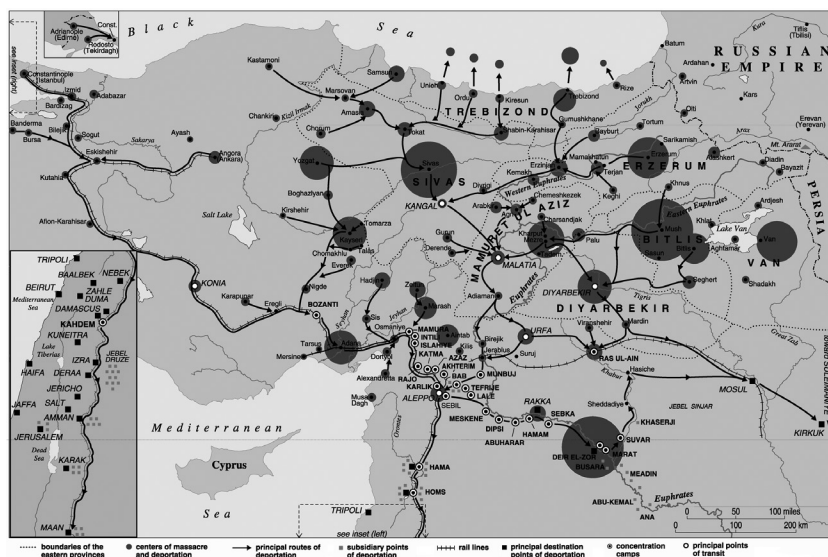


FIG. 3 – Armenian genocide: routes of deportation acting as “spokes” and centers of massacre/deportation acting as “hubs”.

Source: Armenian National Institute, Washington DC.

#### 4. THE OVERLORD OPERATION CASE

Military logistics has been a continuous source of service innovations to optimize the support of troops in combat and to defend possessed or conquered territories. Thus, Colin (2013) was able to highlight how the French Royal Navy forged, in the 17<sup>th</sup> and 18<sup>th</sup> centuries, an efficient tool to counter the powerful British Navy, relying on what would later become *archetypes of logistical services* in terms of procurement from a network of global suppliers, the development of nomenclatures and production ranges, but also the construction of warehouses to ensure optimal stock availability. The turning point in the evolution of logistics took place during World War II, and more specifically during the Overlord operation. Beyond the extremely meticulous preparations, we may say that the success of the Overlord operation is largely based on a large-scale “platforming” process.

Unlike the Germans, who failed in their will to invade the United Kingdom for lack of meticulous preparation of operations, the Allies decided to plan with extreme rigor the logistics accompanying the liberation of the Nazi-occupied European Continent. Thus, the many logistical facilities necessary for the success of the Overlord operation were put in place, both in terms of storage and transport, in particular with the creation of artificial ports equipped with handling equipment, towed from England and anchored in front of the Normandy beaches, and depots located in the South of England, themselves replenished by depots on the East coast of the USA. The Allies were also to devise a remarkably efficient system for concentrating the flows, based on the model of future air transport hubs, by choosing a gathering point for the invasion fleet in the middle of the English Channel on the eve of D-Day (humorously called “Piccadilly Circus”). From there, the Allies would reach the famous Normandy beaches *via* four channels (as “radial axes”) previously secured (see Figure 4).

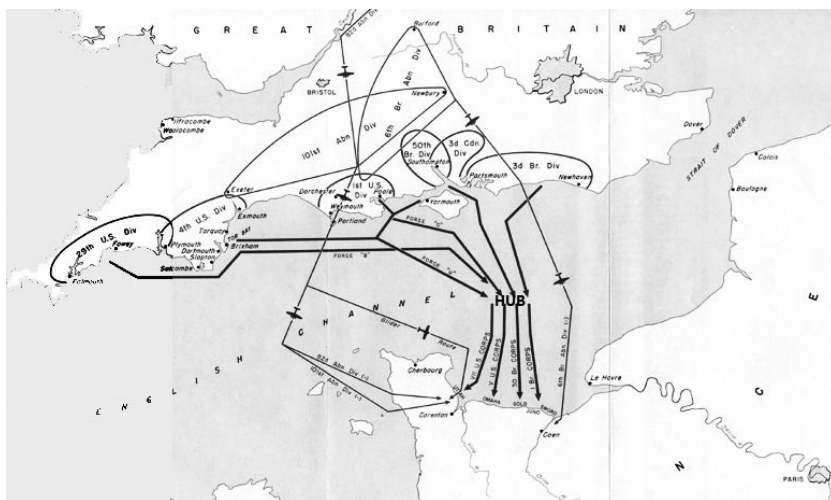


Fig. 4 – “Platforming” in the Overlord operation.

*Source:* Adapted from Harrison (2012).

Even today, the Overlord operation is still considered the most important military logistics achievement in modern history. We also know how essential it was in the birth of a management approach that spread, from the 1950s onwards, to all industrial and commercial companies, capable thanks to it of freeing themselves from spatial and temporal constraints to conquer increasingly globalized consumer markets. For a long time confined to an instrumental vision favoring the analysis of tools dedicated to the management of materials flows, logistics will gradually develop service innovations that contribute to the collective value creation (or co-creation). The origins of logistics, marked by the contributions of military discipline, explain why the emergence of an organizational vision has not always been easy, even if it is now a reality, both for practitioners and researchers.

## CONCLUSION

This viewpoint presented three examples of “platforming” from modern history. Many other cases could have been mobilized with a more or less similar conclusion. During Antiquity, for instance, the transport and storage of grain for the supply of Rome required a complex supply chain. The interruption of maritime shipping during the winter months thus required the products to be stored in suitable places, from hinterland regions to the sea and from the sea to hinterland regions, for redistribution. As a result, early hubs have been implemented in Africa, Asia Minor and on the margins of Italy itself. Another example is that of spices, frankincense and myrrh, transported in the ancient world over long distances to customers located in the Mediterranean, crossing the Arabian Peninsula on camels. Hull (2008) explicitly refers to supply chains based on a hub-and-spokes model with spokes that are totally secure given the value of the products.

In other words, there is limited novelty in many contemporary managerial practices, which simply update, with the help of disruptive technologies, old but sometimes proven approaches. After all, the accounting documents used in 4500 BC, intended for the various stakeholders, attest to the fact that managerial thinking is very old. Logistical organizations do not escape the presence of these distant roots, and they can be found today in many management models. In particular, it is clear that “platforming” has a high degree of generalization, which explains its dissemination within many business networks, where hubs are crucial for their operation and the implementation of a dynamic of spatial diffusion. More generally, hubs play the role of accelerators in the development of growth of an exponential nature, as can be the case today with the Internet. They thus constitute a radical innovation of service, the in-depth study of which is more than ever indispensable.

## REFERENCES

- BAUMAN Z. (2007), *Liquid times: living in an age of uncertainty*, Malden (MA), Polity Press.
- BLOXHAM D. (2003), "The Armenian genocide of 1915-1916: cumulative radicalization and the development of a destruction policy", *Past & Present*, n° 181 (November), p. 141-191.
- BOWEN JR. J. (2012), "A spatial analysis of FedEx and UPS: hubs, spokes, and network structure", *Journal of Transport Geography*, vol. 24, n° 10, p. 419-431.
- COLIN J. (1982), "Réseaux de circulation des marchandises, réseaux de circulation de l'information", *Bulletin de l'IDATE*, n° 7, p. 99-109.
- COLIN J. (2013), "Les prémices de la logistique: l'organisation des marines de guerre en France du XVII<sup>e</sup> siècle au XVIII<sup>e</sup> siècle", in FABBE-COSTES N., and PACHÉ G. (Eds.), *La logistique: une approche innovante des organisations*, Aix-en-Provence, Presses Universitaires de Provence, p. 219-230.
- COQUERY-VIDROVITCH C. (2016), *Petite histoire de l'Afrique: l'Afrique au Sud du Sahara, de la préhistoire à nos jours*, Paris, La Découverte.
- D'ESTE C. (1983/2004), *Decision in Normandy*, London, Penguin Books.
- DJELLAL F., GALLOUJ C., and GALLOUJ F. (2003), "L'innovation dans les services en France: un bilan (1999-2002)", *Economies & Sociétés*, Série Economie et Gestion des Services, n° 5, p. 1979-1999.
- ELTIS D., and RICHARDSON D. (2015), *Atlas of the Transatlantic slave trade*, New Haven (CT), Yale University Press.
- FULCONIS F., GODBILLE T., and PACHÉ G. (2017), "Organization of Transatlantic slave trade: a global supply chain perspective", in HEMPEL K., DUEDAHL P., and POULSEN B. (Eds.), *Reforms and resources*, Aalborg, Aalborg University Press, p. 73-108.
- GRENOUILLEAU O. (2018), *La traite des Noirs*, Paris, Presses Universitaires de France, 3<sup>rd</sup> ed.
- HARRISON G. (2012), *Cross-channel attack: US Army in World War II-The European theater of operations*, Atlanta (GA), Whitman Publishing.
- HEWSEN R. (2001), *Armenia: a historical atlas*, Chicago (IL), University of Chicago Press.
- HULL B. (2008), "Frankincense, myrrh, and spices: the oldest global supply chain?", *Journal of Macromarketing*, vol. 28, n° 3, p. 275-288.
- KASARDA J. (1999), "Time-based competition and industrial location in the fast century", *Real Estate Issues*, vol. 23, n° 4, p. 24-29.

- KHORHEH M.-A., and MOISIADIS F. (2015), "Investigating opportunities and challenges of consolidation in hub-and-spoke logistics networks", *Australian Academy of Business & Economics Review*, vol. 1, n° 2, p. 120-134.
- MASON R., MCKENNEY J., CARLSON W., and COPELAND D. (1997), "Absolutely, positively operations research: the Federal Express story", *Interfaces*, vol. 27, n° 2, p. 17-36.
- MONNOYER M.-C., and ZULIANI J.-M. (2007), "The decentralisation of Airbus production and services", *The Service Industries Journal*, vol. 27, n° 3, p. 251-262.
- MOURADIAN C. (2013), *L'Arménie*, Paris, Presses Universitaires de France, 5<sup>th</sup> ed.
- ROSTOW W.-W. (1960/1990), *The stages of economic growth: a non-communist manifesto*, Cambridge (MA), Cambridge University Press.
- STEIN R. (1979), *The French slave trade in the Eighteenth century: an old regime business*, Madison (WN), Wisconsin University Press.