ONLINE CONSUMPTION AND MOBILITY PRACTICES: CROSSING VIEWS FROM PARIS AND NYC

AN INTERNALLY FUNDED STUDY CONDUCTED BY THE RESEARCH OFFICE 6T IN PARTNERSHIP WITH THE RUDIN CENTER FOR TRANSPORTATION AT NYU

Context

With the growth of online shopping (or e-commerce), the **Internet is now a supply method in its own right, inducing new relationships between people and their consumer space(s).**

Despite the significant increase in online shopping and the diversity of stakeholders involved, of goods consumed and of related delivery methods, **little empirical work currently exists on how people are changing their consumption practices and their mobility practices related to these purchases.**

This finding led **6t-research office, in partnership with the NYU Rudin Center for Transportation, to conduct a large-scale exploratory survey, in order to obtain new data on the consumption and mobility practices of the population of Paris and New York City** (NYC).

Objectives

The survey aims at comparing online consumption practices of Parisians and New Yorkers, focusing particularly on:

- **Identifying the profiles of e-consumers;**
- **Singling out the determinants of online consumption practices,** notably in a context where **express and instant delivery** is developing rapidly**;**
- **Identifying the characteristics of at-home meal delivery**;
- **Estimating the impacts of online consumption practices on mobility practices**.

Why NYC and Paris?

These two cities have major differences, in particular with regards to the spatial distribution of people and activities within the city: more generally, they have very different social, cultural, and institutional characteristics.
Nevertheless, these cities also have many similarities: **they are very large, dense cities with an extensive public transportation system, and digital technology is used by the majority of the population.**
These two cities are also very different from other cities in the countries in which they are located. Their international status and the flows (people, goods, and activities) they generate attract a great number of stakeholders and logistical services.

Full report available on 6t's blog : https://6-t.co/en/blog/ and on NYU's website : https://wagner.nyu.edu/rudincenter

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The Weight of E-consumption in NYC and Paris

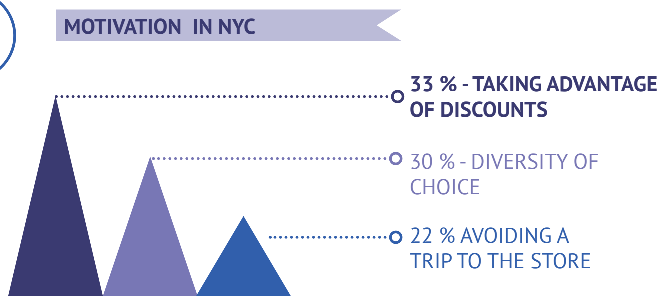
Non-food related online consumption: a widespread practice in NYC and Paris

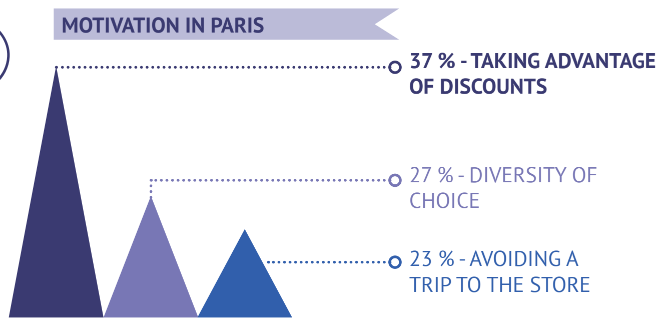
In 2017, 97% of New Yorkers and 95% of Paris respondents bought a non-food related item online. Clothing (including accessories and shoes) is the main type of product purchased (cited by 82% of New Yorkers and 67% of Parisians), far ahead of healthcare and wellness products (respectively 58% and 37%) and cultural items (48% and 53%).

New Yorkers make online purchases significantly more often than Parisians. More than a quarter (26%) of the former bought an item online at least once a week, against only 8% of the latter.

Couples with children engage more frequently in non-food related e-commerce than people living alone. 13% of Parisian families shopped online at least once a week, compared to only 6% of persons living alone. This phenomenon was found to be particularly pronounced in NYC, where 47% of families declared buying items online at least once a week, while that share barely reached 18% amongst one-person households. In Paris, 13% of families declared a weekly online shopping practice, against only 6% of persons living alone.

New Yorkers and Parisians commonly perceive e-commerce as an efficient way to benefit from attractive prices.





Logistics for the last mile: the home and pickup points are at the heart of delivery practices

In both NYC and Paris, more than one e-consumer out of two opts for at-home delivery.

NYC residents retrieve their package from the hands of their doorman at twice a rate of Parisians.

In NYC, doormen play a pivotal role in the delivery process as they collect and store at a particularly high rate.

The pickup point as a French singularity: 1/5 Parisians chose this delivery method, compared to less than 1% of New Yorkers.

When they don't receive their good at home, **51% of Parisians and 36 % of New Yorkers take a specific trip to collect their item to a store,** instead of integrating that trip into their daily mobility practices.

* Grocery shopping, meal delivery and immaterial services (such as concert or plane tickets) excluded.

Express Delivery Practices in NYC and Paris

A boom in express deliveries in NYC and Paris

Delivery time is a key differentiating factor in a sector where the quest for instantaneousness has become a highly valued and competitive matter.

Express (on the same day as the placement of the order) or even **instant delivery** (within 2 hours following the order on Amazon Prime Now, for example) allow users to reduce their waiting time after purchase.

- 24h

37% of New Yorkers and 26% of Parisians have already used a same-day delivery or collection option.

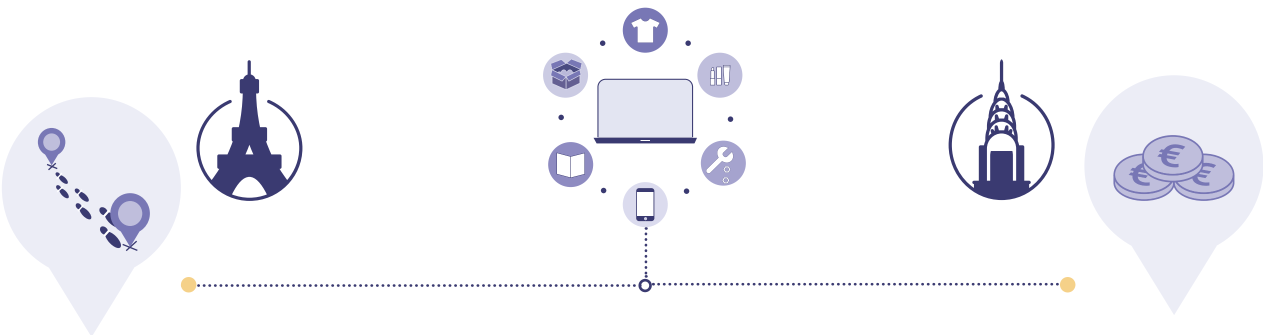
Parcel reception practices for express delivery options roughly reflect those of classic deliveries: a majority of Parisians (50%) and New Yorkers (69%) opt for at-home delivery.

- 2h

14% of New Yorkers and 9 % of Parisians select instant delivery as their delivery method.

When they chose receive their ordered item within 2 hours, **Parisians** were significantly more likely to collect their parcel themselves, **at a pickup point** (17% compared to 11% of New Yorkers), whereas **New-Yorkers preferred at-home delivery** (22% against 9% of Parisians).

Taking advantage of express delivery



Parisian e-consumers are typically willing to take a trip to the pickup point or an automatic locker in order to claim their parcel rapidly (28% of Parisians against only 16% of New Yorkers).

NYC e-consumers tend to be ready to pay more in order to get their package quickly and so as to avoid going to the store (36% of the sample against 23% of the Parisian sample).

Online Grocery Shopping Practices in NYC and Paris

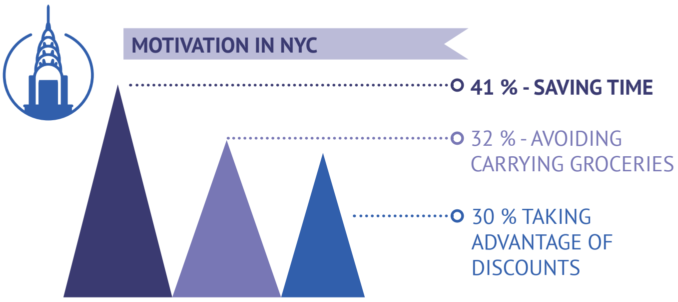
Online grocery shopping is first about saving time

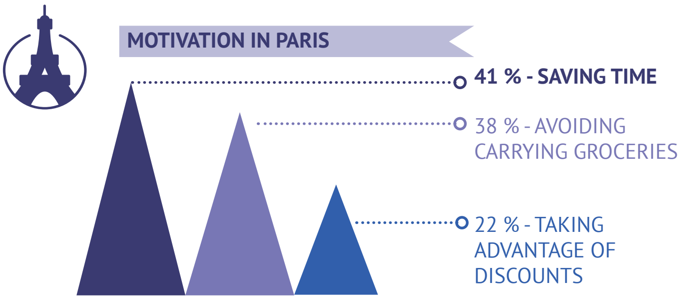
About three quarters (73%) **of New Yorkers and more than half of Parisians** (51%) **have already shopped for groceries online.** New Yorkers shop online for groceries at a significantly higher rate than do Parisians: in 2017, 56% of them made a purchase online at least once a month, compared to 12% of Parisians.

Young couples with children especially tend to engage in online grocery shopping :

- The 25–34 age group is over-represented amongst recurrent online grocery shoppers in both Paris and New York City.
- A quarter of Parisians and a two thirds of New Yorkers belonging to that type of household shopped online for groceries on a weekly basis, i.e. three times more and twice more than people living alone in, respectively, Paris and NYC.

The desire to save time is the main reason for buying groceries online in Paris and New York.





Online grocery shopping is not replacing in-store grocery shopping

A majority of both New Yorkers and Parisians maintained their in-store grocery shopping habits despite their online ones. Even when they do shop online, one in two Parisians and New Yorkers alike, shop at the store as often as they did before.

The purchasing of groceries online does not imply the all-together disappearance of in-store purchasing practices. Only 3% of both Paris and NYC residents no longer take trips to the grocery store since they have started shopping for groceries online.

Hence, in the majority of cases, **online grocery shopping complements in-store shopping.**

The purchasing of groceries online does not imply the all-together disappearance of in-store purchasing practices, but rather a fragmentation of grocery shopping practices. The latter stems from consumers seeking to multiply their circuits, "zapping" between different brands according to the type of good they are looking for, to meet their need for diversity, their price, and delivery possibilities.

*Groceries, excluding restaurants or caterings.

At-home Meal Delivery in NYC and Paris

At-home meal delivery: apps as facilitators of a growing activity

The at-home or at-work meal delivery has become a well-established and visible practice in both New York and Paris, notably following the development of digital platforms (e.g. Seamless or uberEATS).

67% of Parisians and 90 % of New Yorkers surveyed have already ordered a meal and gotten it delivered to their home, workplace or study place.

Delivery methods used for ordering a meal

Phone	77 %	90 %
Website	77 %	79 %
Apps	76 %	75 %

Sample : respondents who order meals

Although calling a restaurant or a caterer remains an overwhelming practice, 23% of Parisians and 10% of Paris no longer use their phone to order food.

The use of food ordering apps is as common amongst Parisians and New Yorkers who order meals (76% and 75%, respectively).

However, turning to an app to order a meal is way more intensive a practice in NYC: 33% of them order via an app, against only 18% of Parisians.

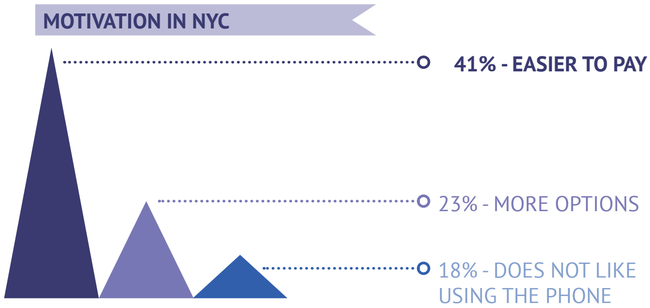
Frequency of app use for ordering a meal

Weekly	18 %	33 %
Monthly	33 %	31 %
Less often	25 %	11 %
Never	24 %	25 %

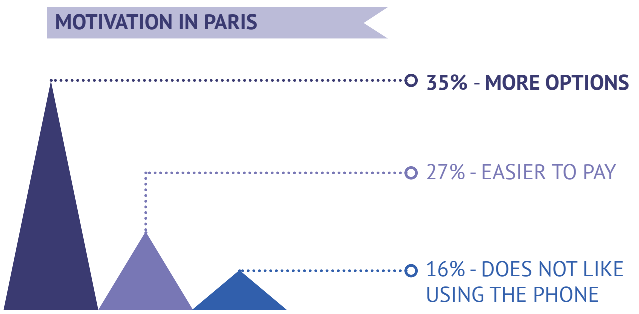
Sample: respondents who order meals

Motivations and impacts of at-home meal delivery

In New York City, the sensitivity for **the ease of payment** resonates with the accelerating shift in the United States away from cash payments and towards credit cards or new payment solutions.



Parisians' main motivation for using apps to order meals is **the abundance of choice**. This may reflect their enthusiasm given that the delivery offer had, for long, been tightly limited to few dishes (e.g. pizza, sushi).



23% of New Yorkers and 15% of Parisians eat out at restaurants less often than before they started using a meal-delivery apps.

Typology of E-consumers in NYC and Paris

E-consumers may be....

AFICIONADOS

"I'M OPTIMIZING MY DAILY SCHEDULE"

42 % OF NEW YORKERS

19 % OF PARISIANS

- Engage in both grocery and non-food related shopping online at a high frequency;
- More often high-income earning and young executives living in New-York with their partner and at least a child;
- Car-owning in majority: 70% of Parisian and 57% of NYC aficionados own a car in their household (as compared to 64 and 52% of the overall sample in Paris and in NYC). They commute by car more frequently, and use emerging mobility services (carsharing, ridehailing, bike-sharing) more often than do other groups.

SPORADIC

"I'M TAKING ADVANTAGE OF DISCOUNTS"

45 % OF PARISIANS

19 % OF NEW YORKERS

- Shop online (both for groceries and non-food related items) occasionally;
- More often medium-income Parisians living alone, employees, working class or retirees;
- Low car ownership: 50 % of Parisian sporadic e-consumers and 71 % of NYC sporadics do not own a car and favor alternative modes (walking, use of public transport) for their commutes.

OLD-SCHOOL

"I'M DIVERSIFYING MY PURCHASES (NYC) AND I DO NOT DEPEND ON STORES' OPENING HOURS (PARIS)"

28 % OF PARISIANS

25 % OF NEW YORKERS

- Frequent purchase of non-food related items online, but only occasional online grocery shopping;
- More often students aged 18-24;
- Mainly car-owning in Paris and carless in NYC: 46% of NYC old-school consumers and 60% of Parisians in this group own a car, but tend to use their car less often for commuting (6% compared to 13% of the overall Parisian sample), favoring public transportation for their daily trips.

SUPERMARKET PHOBIC

"I'M OVERRIDING THE CONSTRAINTS OF TO SHOPPING AT A SUPERMAKET"

14 % OF NEW YORKERS

8 % OF PARISIANS

- Frequent online grocery shopping but occasional online purchase of non-food related goods;
- More often medium-income earning people with children (both single parents and couples);
- Car-owning in majority: 67% of Parisians and 51% of New Yorkers in this category own a car. They however tend to use public transportation for commuting.

* Frequent use: monthly online shopping practice/ occasional: less than monthly online consumption practice in 2017

Online Consumption Practices and Car Use

A mutual reinforcement between online shopping and car use

The e-consumption typology allowed for identification of a **positive correlation between car ownership and car use, on the one hand, and online consumption practices on the other.**

The majority of aficionados uses a car every week: 62% of them in Paris and 54% of them in NYC. When they own a car, which a majority of them do, 77% of Parisian and 81% of New Yorker aficionados drive it at least once a week.

For these car-owning aficionados, the **automobile** seems to be associated with **time and energy saving—**all the more appreciated considering complex daily agendas, as well as professional and personal constraints.

Both car ownership and online consumption activities positively depend on **income**, suggesting that the latter **is a crucial determinant of both online shopping and private car use.**

Within groups that shop online less intensively, car use is found to be lower.

Despite their substantial car ownership level, **Supermaket phobic e-consumers** tend to use their car at a relatively low rate: less than 50 % of them in both Paris and in NYC drive their car at least once a week.

Old-school e-consumers are characterized by an occasional car use: only 37% of Parisians and 21% of New Yorkers drive their personal car weekly. This low car usage mainly proceeds from a low car ownership rate, while in Paris, where old-school consumers tend to be motorized, the quality and density of the public transportation network constitutes an incentive not to drive.

Sporadic e-consumers use their vehicle more rarely, notably because their households own fewer cars: barely 20 % of sporadic e-consumers in NYC and 36 % in Paris drive their car on a weekly basis. Even when they do own a car, as many as 8% of them and 14% of them in NYC never use their car. By comparison, only 0,5 % and 2 % of car-owning aficionados in Paris and in NYC never drive their car.

Considering that (both food and non-food related) e-consumption involves delivery trips that are, still, motorized for the greatest part, **choosing at home (or at work) delivery may go against sustainable mobility and congestion goals.**

Integrating these observations with the analysis of Parisians' and New Yorkers' mobility practices, **we find that the impact of delivery-related trips widens the differences in terms of environmental sustainability.**

This suggests that **online consumption practices do not modify mobility practices, but rather, reinforce them.**

Perspectives

In the context of the development of e-commerce and instant delivery, how can we promote and ensure the development of sustainable modes for last mile delivery?

1. The role of the carrier:

The question essentially arises over the last mile when carriers face significant optimization losses due to a fragmentation of flows, reinforced by instant delivery.

Two paths seem interesting to explore to remedy this situation: the concentration of flows in space and the concentration of flows in time.

- **In space:** the pooling of deliveries gives the user the incentive to take on the last mile via innovations and picking up points.
- **In time:** off-peak delivery times or the development of automatic lockers to optimize curb uses.

2. The role of cities

Cities also have a role to play in the face of increasing trade flows, with their expertise in this area being numerous and extensive (road network, parking):

- Access **restrictions:** in the form of delivery times, environmental zones, access regulations according to the type of vehicles authorized in urban centers or congestion taxing.

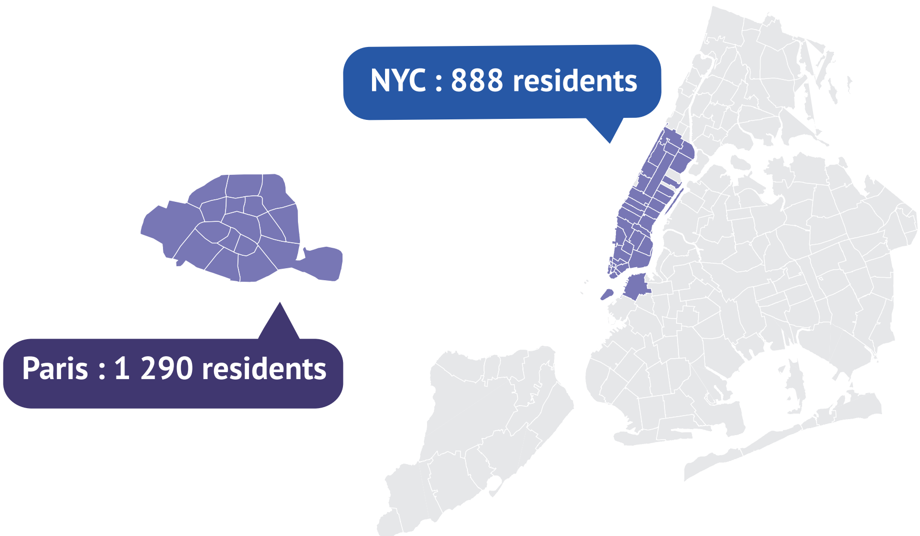
- **Encouraging efficient delivery modes**: in particular the use of electric bicycles/cargo-bikes and scooters. New York's ample supply of taxis and for-hire vehicles can also be used to deliver goods and meals for additional income and efficient use of vehicles already on the street.

Methodology

A survey of 2178 residents of New York and Paris :

- The online survey was administered via AccessPanel between the months of October and November 2017;
- 152 questions on respondents' online shopping practices (both for groceries and for non-food related items), express and instant delivery, use of meal delivery services, mobility practices;
- Respondents to the survey were selected so as to constitute a representative sample by using the so-called "quota methodology". Quota-related sample imperfections led to an adjustment of variable weighting, so as to ensure the sample's representativeness in terms of:

— Age, gender and household income for the NYC sample (based on 2010 US Census data);
— Age, gender and occupation for the Parisian sample (based on 2013 INSEE data for Paris).



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