Black Friday Mania: Analyzing Social Media Data to Understand Consumer Trends
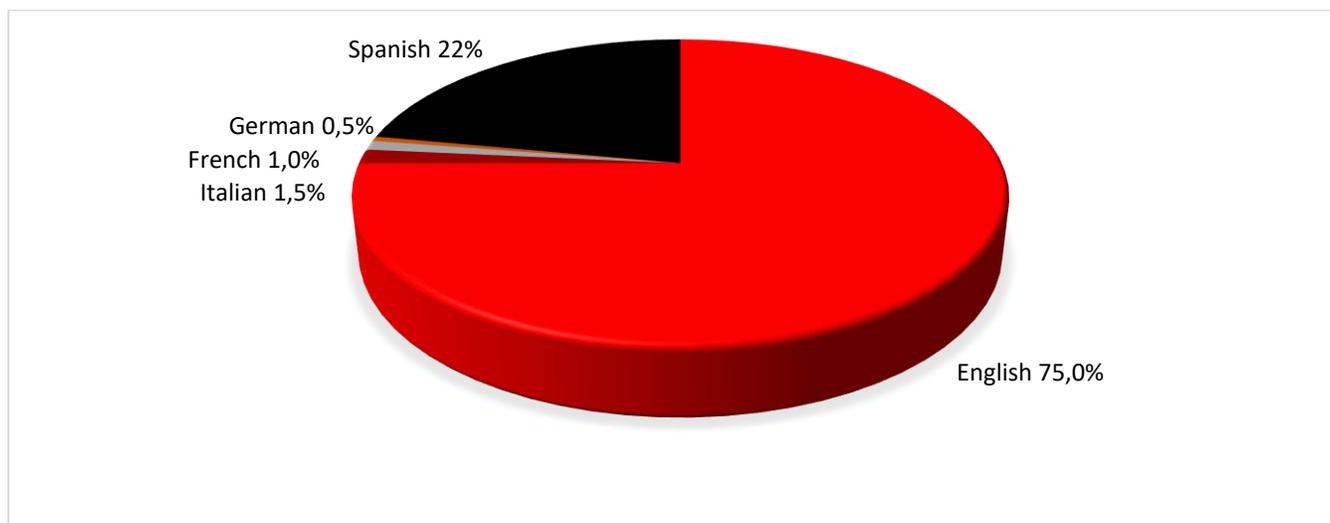
Expert System analyzes about 120.000 tweets dedicated to Black Friday and Cyber Monday

Black Friday is almost here. For 24 hours, starting Friday, November 24, shoppers can get a head start on their Christmas shopping with some of the biggest sales of the season. Held on the Friday after Thanksgiving, the American tradition drives shoppers crazy. Especially at some of the largest retail chains, it's not unusual to hear of shoppers queuing up the night before to make sure they don't miss out on special Black Friday deals. And Cyber Monday deals as well: last year, the total amount spent online during the Monday after Thanksgiving

exceeded experts' predictions: it became the biggest online shopping day in history, surpassing Black Friday's online sales numbers by over $100 million.

But what do Twitter consumers want for Black Friday this year? Are they tweeting more about Black Friday or Cyber Monday? What are the most popular products and specific brands? When has the Black Friday – Cyber Monday phenomenon started to be anchored in EU-France, Italy, Germany, Spain?

To respond to these questions, Expert System applied its cognitive technology Cogito to Twitter to analyze the opinions and purchasing intensions expressed by consumers online from October 20 to November 20, 2017. The analysis was carried out on a sample of **120,000 tweets** in **English**, **French**, **German**, **Spanish** and **Italian** associated with the most-used hashtags for the 2017 Black Friday and Cyber Monday such #blackfriday, #BlackFriday2017, #cybermonday, #cybermondaydeals, #cyberweek etc.


Figure 1 Leveraging Cogito, Expert System analyzed a sample of 120.000 tweets. English tweets represent the higher part of tweets (about 90.000 tweets), followed by tweets in Spanish (about 26.000), Italian tweets (1800) and French tweets (about 1300) while only 500 of tweets are in German.

Sentiment Analysis

Considering the global nature of the tweets analyzed (120.000 tweets in different languages), the **prevailing sentiment** dealing with Black Friday and Cyber Monday is **neutral** but the trend seems **to lead towards a more positive sentiment**.
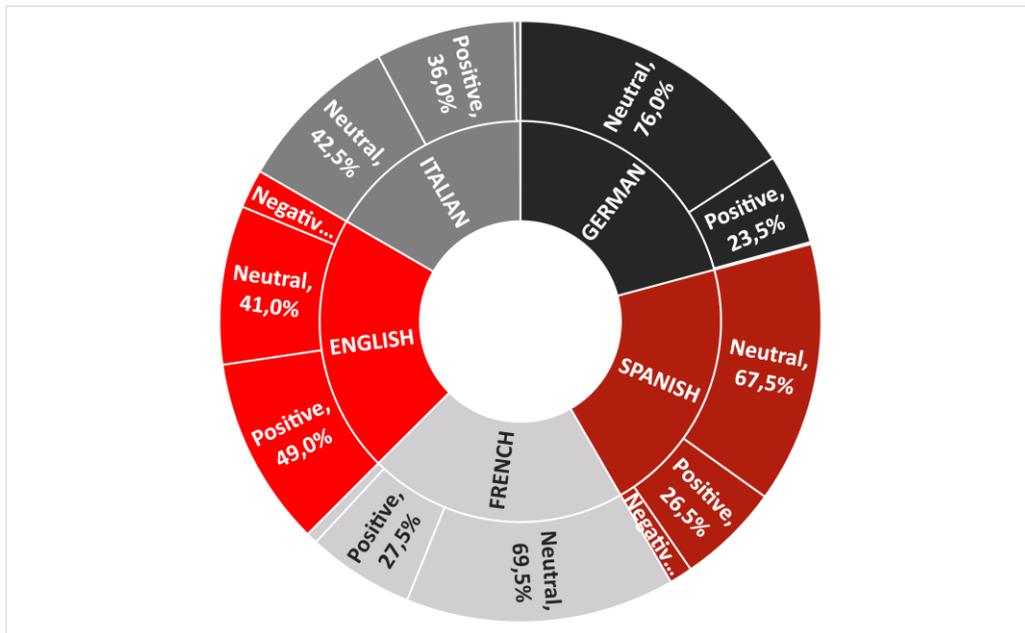
Regarding the emotional sphere of tweets dealing with Black Friday and Cyber Monday days, it looks like that positive feelings are prevailing: **excitement** followed by **surprise**, **desire**, **love**, **happiness** etc. The only negative feeling of the top 10 emotions is **remorse**.
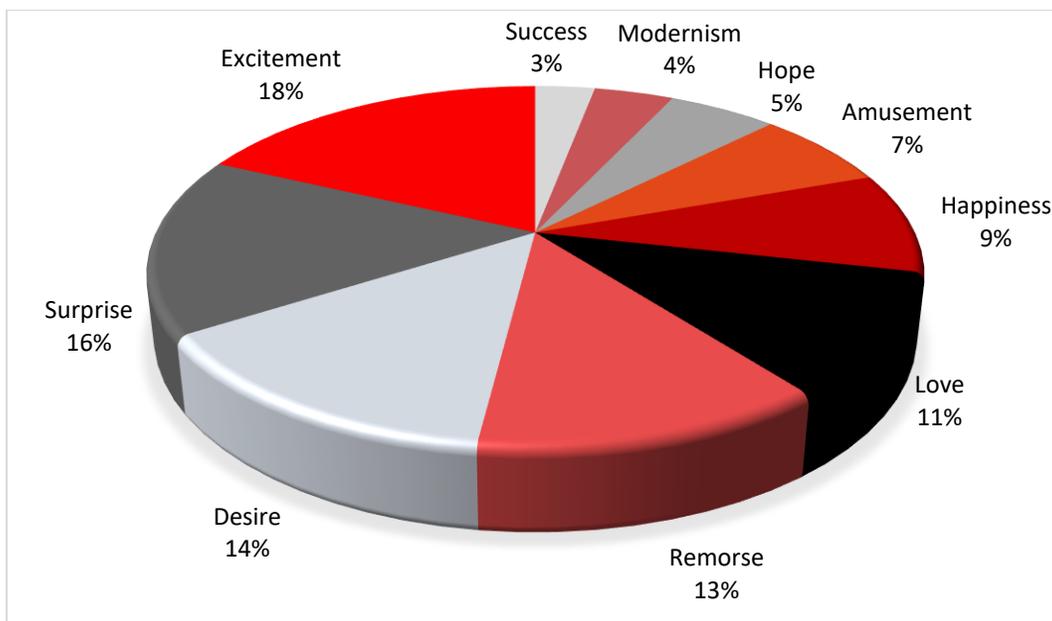
It is never too early to start planning for Black Friday 2017… also in Europe

Black Friday 2017 is now just a few days away, and it's expected to be one of the biggest days of spending the US has ever seen but – not surprisingly, there are great expectations also in Europe.

When did Black Friday land in Europe?

The Black Friday boom erupted in America in the 1980s, where it has continued to grow as more businesses move online. Instead, in Europe, Black Friday wasn't heard of until the early 2000s.

Le Monde

"A Wal Mart employee died, crushed by a crowd of buyers in New York while opening the doors on Black Friday morning"
Le Monde November 29, 2008

DIE ZEIT

"With Black Friday, the United States kicks off the Christmas season with massive discounts"
DieZeit November 25, 2011.

EL PAÍS

"Black Friday is not just any day for discounts but THE day for discounts, shopping and consumerism for Europe and the USA. The Friday after Thanksgiving was strategically chosen because it was the best time to move the balance sheet from negative to positive"
El Paìs November 20, 2008

LA STAMPA

"Shoppers in the US spent $10.6 billion on Black Friday, also known as the official start of the Christmas shopping season"
La Stampa December 3, 2008

In Europe, the Black Friday trend has continued to spread, especially over the last two years.

Il Sole 24 ORE

"Black Friday has arrived in Italy with great success"
November 27, 2015

la Repubblica

"Assault on shops for Black Friday"
November 26, 2016

EL MUNDO

"Spanish shoppers spent 29% more than the previous year Friday sales"
November 25, 2016

DIE WELT

"In recent years, this phenomenon has also reached Germany. In particular, many online sellers target customers with special offers not just for one day, but for an entire week"
November 25, 2016

In **France,** according an article published on November, 17, 2017 in **Le Figaro**, the Black Friday became a fixture in France starting in 2014. While the 2015 edition was dampened by the shock of the November 13 terrorist attacks in Paris, in 2016, around 15 million people participated in Black Friday, 3.7 million more than in 2015. Nearly €2,227 was spent every second of this day in 2016.

Black Friday VS Cyber Monday

Black Friday isn't the only day of the year for big discounts. Cyber Monday, the Monday after Thanksgiving, was created in 2005 by a well-known e-commerce site to offer discounts on hi-tech products to consumers who couldn't take advantage of the famous Black Friday deals. In 2016, Cyber Monday sales hit $3.45 billion, a new record and just ahead of BF's $3.34 billion.

Cyber Monday has also rapidly established itself on the European level.

	EL PAÍS	"Sales on Cyber Monday increase year after year, so much so that sellers mark this date on the calendar as the day of infallible sales" **December 19, 2013**
	CORRIERE DELLA SERA	"If 1.5 million users worldwide made an order every 3.5 seconds on Black Friday, on Cyber Monday, an order was posted every 2.5 seconds, and purchase of one item every second—34% over Black Friday." **December 12, 2014**
	Frankfurter Allgemeine	"Amazon, the world's largest online retailer, just inaugurated 'Cyber Monday week.'" **November 27, 2015**
	LE FIGARO	«The Black Friday concept has evolved in France, and has turned into a Black Friday Week for several brands (amazon.fr, Sephora) to prolong the pleasure of shopping from November 20 to November 27 (Cybermonday).» **October 17, 2017**

While on the one hand it may be too soon to establish that Cyber Monday will be better than Black Friday in 2017 as it was last year, on the other hand the analysis of tweets dealing with the two shopping days offers a clear picture of the buzz around the two days: **75% of tweets** are focused **on Black Friday** deals while **25%** only are about **Cyber Monday** offers. It seems that "doorbusters" in general are dying out and it is now usual to find so-called doorbusters listed online during Black Friday, so the clear split between these two days is tending to disappear.
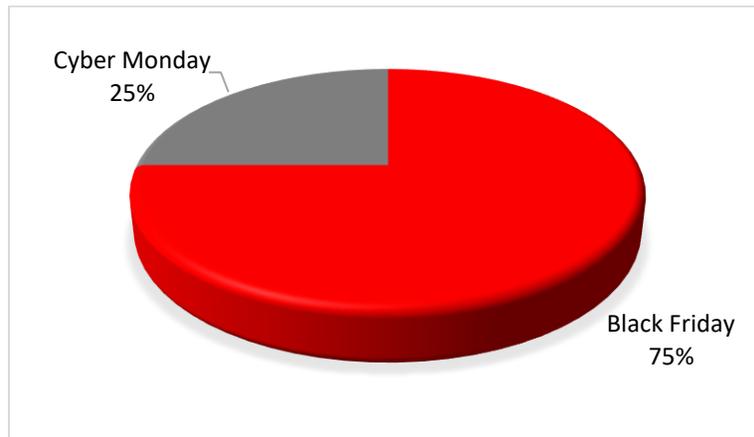
Figure 2 Analyzing the "buzz" around 2017 cyber week: Black Friday beats Cyber Monday
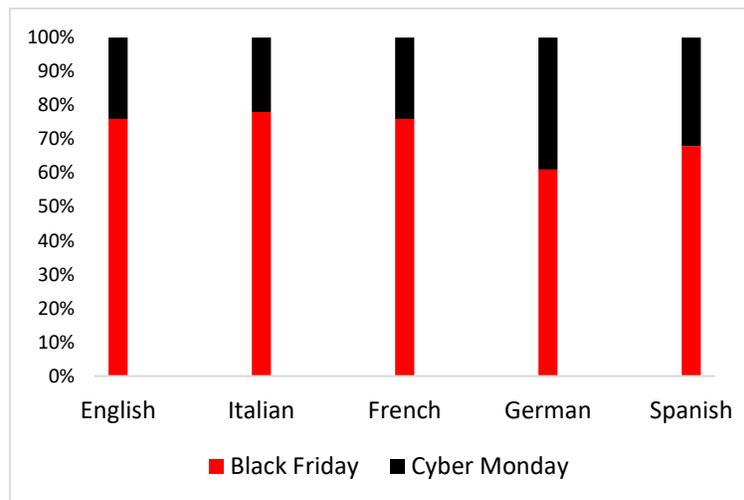

Figure 3 Analyzing the "buzz" around 2017 cyber week: Black Friday beats Cyber Monday in all the languages of tweets that Expert System analysed

Amazon is the king of 2017 "Black Friday – Cyber Monday" long weekend

Applying Expert System's Cogito cognitive technology to the tweets referencing Black Friday and Cyber Monday also made it possible to identify stores, e-commerce companies and online retailers more frequently cited in the sample of tweets analysed (120.000 tweets in different languages: English, Spanish, French, German, Italian).

Retailers popularity is often correlated to the **huge advertising campaigns** retailers themselves are doing **on social media** preparing the ground for Black Friday and Cyber Monday crazy shopping.

In tweets in all languages, **Amazon is the most frequently mentioned retailer**.

In the **English tweets**, where the battle between different retailers is more relevant, Amazon and its Companies (such as Souq.com, Junglee.com, Whispercast and TenMarks.com) are dominating the scene.

Top 10 retail corporations in the English tweets
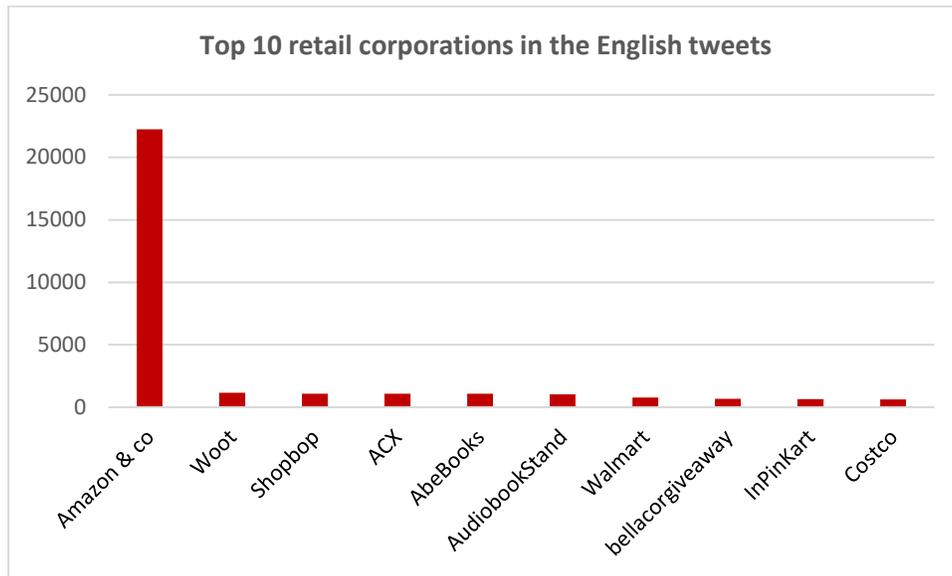
E-commerce e Cyber Monday: the New Stars also in Europe

In recent years, the greatest beneficiaries of Black Friday and Cyber Monday have been e-commerce websites also in Europe.

WELT

"For Black Friday weekend 2016, experts estimated that €1.1 billion would be spent online in Germany (compared to €924 million the previous year). This would signify growth of 18.3%."
November 25, 2016

Toluna

"9.9% of French buyers had purchased online at a discounted price for Cyber Monday, which is about 5 million buyers versus 21.2% who made online purchases for Black Friday."
November 30, 2016

LA STAMPA

"Black Friday was the day of the highest number of sales on Amazon.it with more than 1.1 million products ordered at the rate of about 12 products per second."
December 19, 2016

Considering the sample of tweets dealing with Black Friday and Cyber Monday of 2017 Expert System has analysed, in **German tweets**, Amazon is actually the only online retailer mentioned in tweets (170 mentions along 500 tweets), followed by the consumer electronics company **AVM**.

In the **Italian tweets**, Amazon is followed by a local retailer focusing on smartphones and electronics (**Vikishop**).

After Amazon, **FNAC Cdiscount** and **Auchan** are the most cited retailers in the **French tweets** while in the **Spanish tweets** Amazon is followed by **eBay**, **El Corte Inglés** (headquartered in Madrid, it is one of biggest department stores worldwide) and **Walmart**.

What are the best selling products?

Over the past two years, the US sales during the long weekend between Black Friday and Cyber Monday have been concentrated on **high-tech products** (almost 40% of sales occurred on a mobile device). European countries such as **Germany** and **Spain** have revealed the same inclination for **high-technology**; **France** has revealed interest for **fashion** instead; in **Italy**, the interest in **tech** prevailed together with the interest in **flights** offers.

"Black Friday: A dream for technology lovers"
Die Welt November 26, 2016

"Technology shops were the most fortunate"
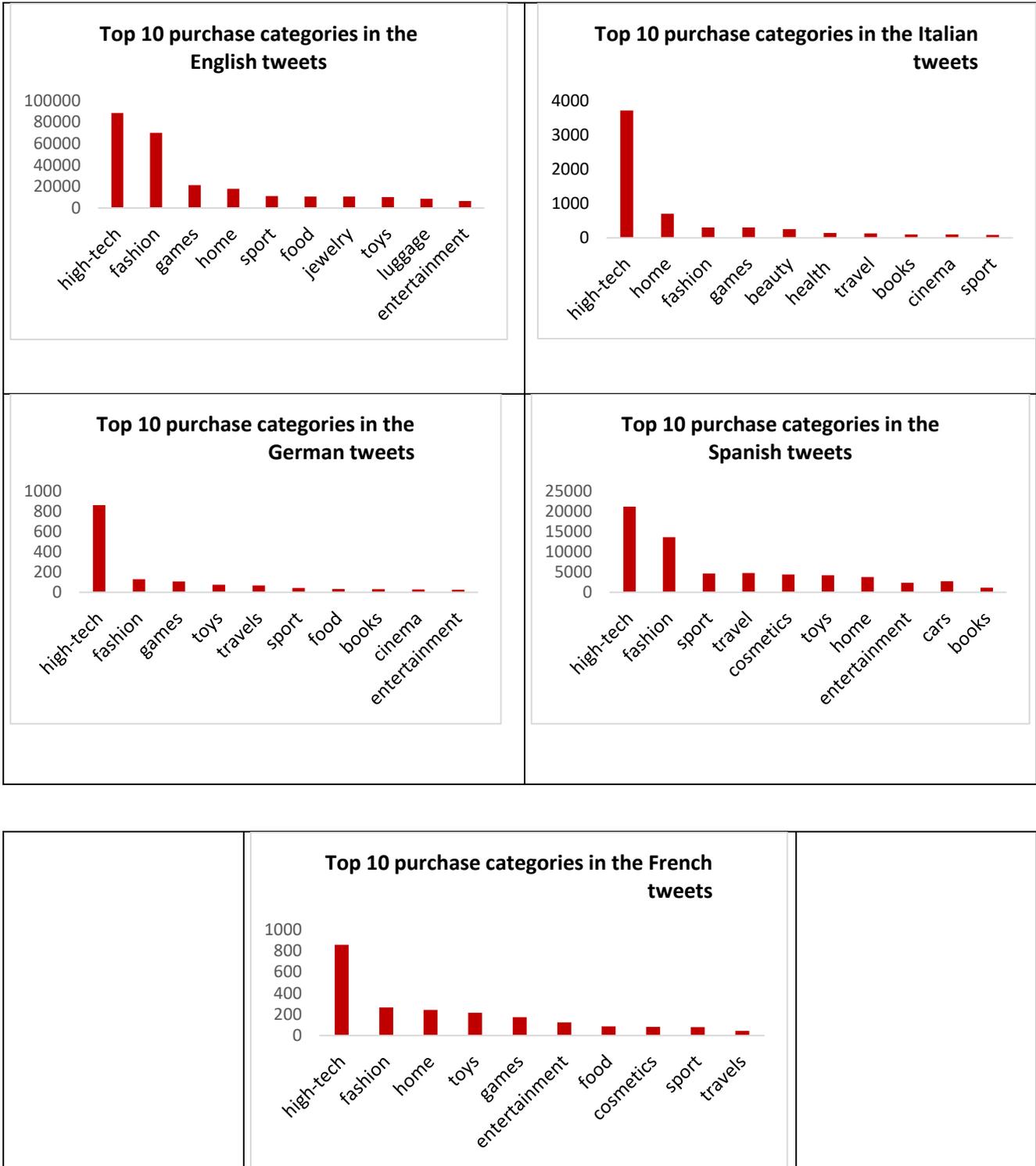**Libertad Digital** November 6, 2016

"Black Friday fever had also hit airlines"
La Repubblica November 22, 2016

"The top 3 categories of purchase in France were fashion (44,9%), perfume and cosmetics (23,2%) and toys (21%)"
LSA November 29, 2016

Top purchases categories and products of 2017

According to the sample of 120.000 tweets analyzed by leveraging cognitive technology Cogito, **high-tech** is dominating the Twitter scene also this year.

Top 10 purchase categories in the English tweets

Top 10 purchase categories in the Italian tweets

Top 10 purchase categories in the German tweets

Top 10 purchase categories in the Spanish tweets

Top 10 purchase categories in the French tweets

The analysis of **English tweets** revealed that there is interest in **pet products** offers and **health products** deals with a special attention towards discounted drugs. In the **German tweets** and in the **Italian tweets**, the idea of taking advantage of Black Friday to look for **Christmas gifts** is also relevant.

Top most relevant brands and the never-ending battle between Apple and Samsung, Microsoft and Sony

Apple is disruptive

Regardless of the language of tweets that were considered for the social media analysis dealing with 2017 Black Friday and Cyber Monday, **Apple is the most cited brand.** Also, smartphones and games consoles are along the most tweeted products mentioned in the sample of tweets dealing with Black Friday and Cyber Monday that Expert System analyzed with Cogito.

But who is winning the smartphone war? And what about the gaming battle: is there more buzz around X-box or PS4?

### Apple Beats Samsung – iPhone Beats Galaxy
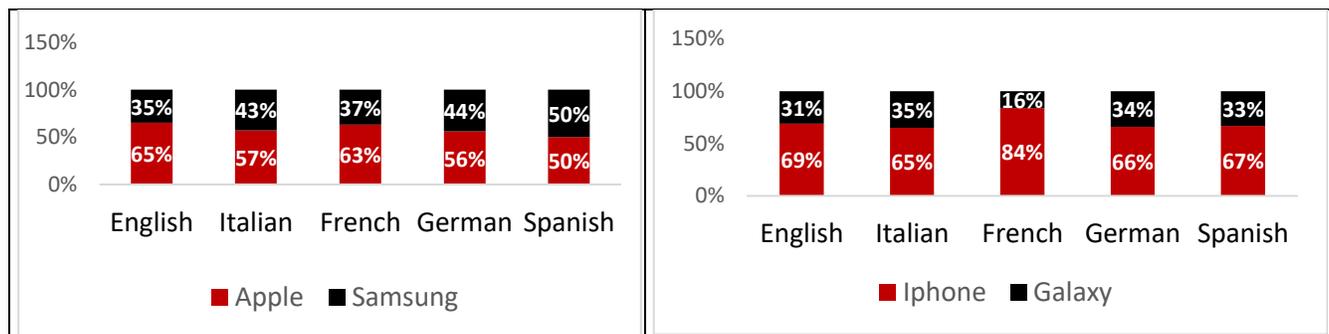
Figure 4 According to the sample of 120.000 tweets analyzed by leveraging cognitive technology Cogito, Apple is most cited than Samsung and Apple-iPhone beats Samsung-Galaxy in the smartphones battle

Microsoft Xbox is the Winner

Cyber week traditionally means also big deals on games. According to the sample of Black Friday and Cyber Monday tweets Expert System analyzed with Cogito, there is a lot of buzz around Microsoft Xbox and Sony PS4.

By comparing the two products, **MS Xbox prevails in all languages tweets except French**.
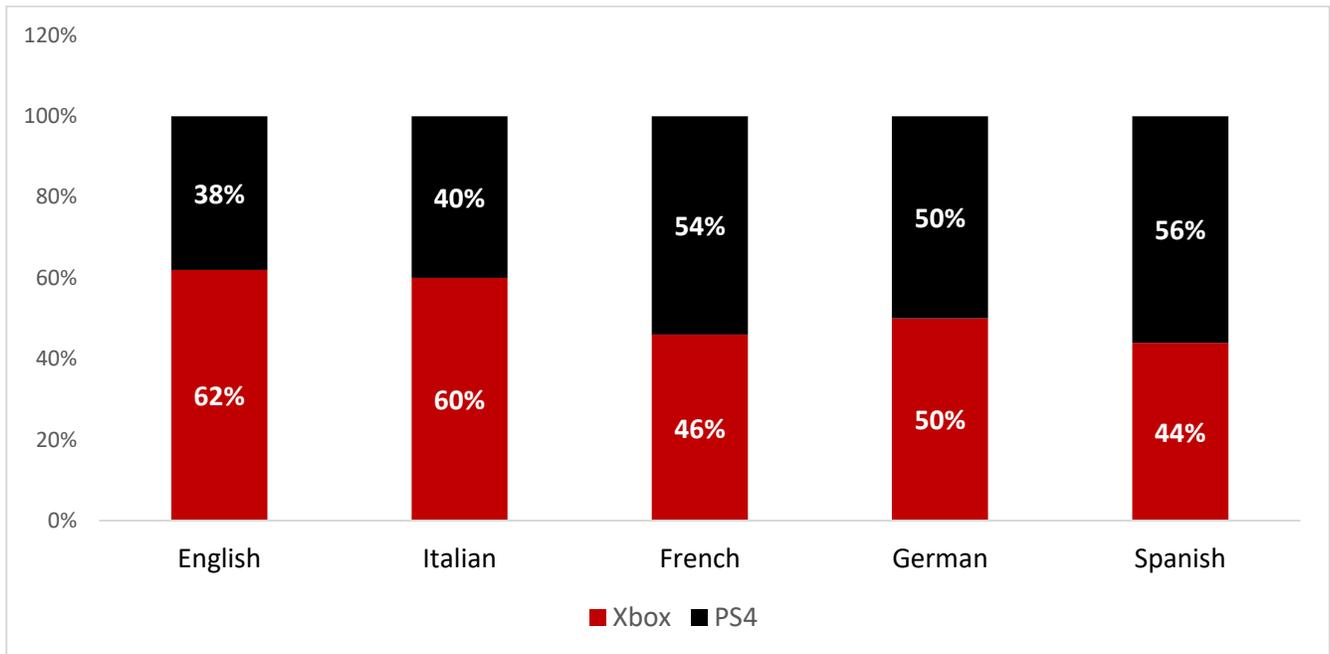
Expert System created Cogito, a text analytics technology that transforms the way organizations find, comprehend and use information. Cogito leverages proprietary artificial intelligence algorithms to deliver business value and ROI by extracting actionable knowledge from internal and external information and automating business processes. Cogito has been deployed to serve enterprises and government organizations in some of the world's largest industries (Banking and Insurance, Pharmaceuticals, Oil and Gas, Publishing and Government).

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