I come from California. I was born in San Francisco and raised in the Santa Clara Valley – now known as Silicon Valley.

I went to elementary school at St. Joseph of Cupertino – Cupertino is one of the towns of the Valley and in the 1970’s my school was surrounded by orchards. The Santa Clara Valley – Silicon Valley – was then mostly apricot, plum, apple and almond orchards. Across the street from my school was the Mariani Fruit Packing Company – a famous family in the valley who made dried fruit from the orchards.

One of my childhood memories of that place is stopping with my Mother and brothers after school to pick a few ripe apricots from the Mariani trees and eating them there on the side of the road in the hot sun.

I also remember the day when the Mariani Fruit Packing Company closed, and the factory was torn down, along with the surrounding apricot trees.

In its place, a pristine white office building was erected, with a giant plastic apple out front – that office building was one of the first Apple computer headquarters.

So I have literally seen first-hand the changes of our technological age.

Following the theme of your conference, tonight I will briefly outline some of the ethical challenges posed by new technology for media and communications and its consequences for those who work in the media and for all of us who are shaped by it.

We are all aware of the epochal changes of the last few years in how we receive information. The Internet and today’s use of social media have increased the speed and accessibility of news and information and created a sense that while we are more connected and better informed, we are also overwhelmed with a never-ending stream of images, ads and distractions.

The essential task of the journalist, to report a story accurately has not changed. What has changed is that this story is now distributed through channels which demand speed and do not guarantee attention.

It used to be that YOU went to the news – by turning on your television or your computer and typing in cnn.com or ansa.it to go to a dedicated news website.

The increasing trend now is that news comes to you, via social media like Facebook and Twitter, on your smart phone.

A 2016 Pew report said that 62% of the US population get their news from social media and nearly half (44%) of the general US population get their news from Facebook.

One of the ways in which traditional news organizations such as CNN are adapting to this phenomenon is by partnering with Facebook, for example, to place news on that platform in order to reach a wider audience.
So for example when I do my reporting on Pope Francis for CNN, I may also do what is known as a Facebook Live, which is a live-streamed video, seen only on Facebook.

The aim is that it might drive viewers back to the CNN website or app, because of course there are also financial considerations, especially for traditional print media attempting to keep afloat in the technological world.

But this melding of news and social platforms creates new challenges for journalism and has important consequences for the user.

**ATTENTION**

One is that a news story, let’s say about chemical attacks in Syria, competes for attention on a platform which is also trending entertainment stories and videos of cats.

In traditional media, editors decide the important news of the day and put those stories at the top of the broadcast or on the front page of the newspaper.

In the virtual world, YOU decide what you want to click on and statistics show us that given that choice, many choose entertainment or videos of cats.

In 2016, the top story on Facebook Live was a video of two people exploding a watermelon. For 45 minutes they wrapped rubber-bands around a watermelon until it exploded all over them. It received 10 million views in the first 5 days of posting.

**POPULARITY**

Related to this, is the question of popularity of a story. Social and digital media allow journalists and editors to know how many people are clicking on a story and even how much of the article they read or how many seconds of the video they watch.

How much a story is “liked” or “shared” becomes important too.

A popular story brings in more advertising dollars but the popularity of a story versus its newsworthiness becomes an ethical decision which journalists and editors must confront every day.

**USER-GENERATED REPORTS**

Another consideration for editors and journalists given the interactive nature of social media is user-generated reporting.

We have all heard about the benefits of social media to bring us eye-witness accounts from far-flung places in the world and generate massive grass-roots revolutions, such as the Arab Spring.

A traditional news organization wants to be able to use those reports and videos to enhance their coverage, but has to be very vigilant to verify its authenticity given that the authors of those reports are not journalists of the organization and therefore not bound by any particular standard of journalistic ethics.

CNN has a team of 40 people world-wide to authenticate user-generated news and most news organizations also now have these departments.
FAKE NEWS

The fact that users can now interact with news brings us to one of the biggest recent ethical challenges of news and new technology: the advent of fake news.

On a traditional news website, fake news is rarely a problem. Everything is written and sourced by the journalists working for that organization. Viewers trust that brand.

On a social media platform, such as Facebook, the possibility of someone posting a fake story is significantly greater and in fact happened in the 2016 US Presidential elections.

According to NewsWhip, a social media analysis company, in the two months before the US election, a third of the top 200 stories about the two presidential candidates were from fake news sites. [http://money.cnn.com/2017/05/09/technology/facebook-fake-news/](http://money.cnn.com/2017/05/09/technology/facebook-fake-news/)

The news site Buzz Feed, for example, uncovered teenagers in Macedonia who reportedly created more than 100 fake political news websites during the US elections in order to earn money from on-line advertising. [https://www.buzzfeed.com/craigsilverman/how-macedonia-became-a-global-hub-for-pro-trump-misinfo?utm_term=.nbnR2JjJ6Q#.xoloEABA1J](https://www.buzzfeed.com/craigsilverman/how-macedonia-became-a-global-hub-for-pro-trump-misinfo?utm_term=.nbnR2JjJ6Q#.xoloEABA1J)

These teens had no political agenda, they were in it for the money.

The experience of the US elections led Facebook and other social and traditional media outlets to increase their vigilance against fake news websites and articles.

It seems their efforts are paying off: just after the recent French elections an analysis by NewsWhip showed that only 10% of the top 200 news stories about the French elections were from fake news sites [http://money.cnn.com/2017/05/09/technology/facebook-fake-news/](http://money.cnn.com/2017/05/09/technology/facebook-fake-news/).

Fake news, then, is likely a manageable problem.

It is often said that in the new social media world, the role of the traditional journalist will no longer be necessary. But the fake news phenomenon has shown us just the opposite is true: in a world where the viewer is unsure what news to trust, a historical news brand, such as CNN, BBC or RAI, becomes once again an authoritative resource.

The larger ethical challenge posed by news and social media is the so-called “filter bubbles.”

FILTER BUBBLES

The social feed is the stream of videos and articles which show up on your phone. These feeds are dependent on complicated algorithms, devised by the social media platforms, based on choices you have made in the past – by clicking on certain articles and videos.

The news, articles, ad and videos which come into your smart phone are tailor-made for you.

So if you are a conservative Catholic who votes Republican and likes fishing, the Internet platforms know this information about you and will send you more stories and videos and advertising about fishing, conservative Catholic issues and Republican politics.
It will not send you news about Democrats, Hindus or race-car driving.

This is called the filter bubble and it is another of the challenges of social media life.

The filter bubble, all those stories, ads and videos shape and reinforce your vision of the world. Ideologically, politically, religiously, linguistically it sends you more of the same. Taken to the extreme, the concern is that these bubbles keep people unaware of opposing points of view or other news going on outside of what they are interested in.

Ironically, as we become more connected, we become more enclosed.

The morality of using private viewing information to manipulate the advertising and content of what you see and just what to do about filter bubbles is a continuing ethical issue for social platforms.

**IMAGES AND LANGUAGE**

Finally, there is the question of images and language.

Ever since the advent of television, we have been in the age of the image. In the age of social media, words and text are decidedly secondary to images.

Social media thrives on emojis, bubble words, acronyms – the 140 character tweet is already considered lengthy.

Technology has changed our language – we speak about disruption, users, output, productivity- not to mention our young people’s ability to read, concentrate, write and speak.

The demise of language is one of the areas to which we should be most attentive. Language changes and adapts, of course, but it also represents our concepts and what ideas are most important to us.

If we are losing beautiful words from our lexicon in favour of technological words, words like courtesy, hospitality, dwelling and presence, then we are also losing them from our lives.

This is no more evident than in the ethical sphere, where an important study questions whether young people today even have the language to make ethical decisions.

A study published by Oxford University Press in 2011 of 230 young adults ages 18-23 reports that “most young adults do not consider moral problems in their everyday life.” *(Lost in Transition, Smith, Christoffersen, Davidson, Snell Herzog; Oxford University Press, 2011)*

The subjects reported “that they had not experienced any moral dilemmas within the last few years.” When asked about certain moral issues, the majority of responses were: “I don’t really deal with right and wrong that often”, “It’s personal” or “It’s up to the individual.”

The majority of emerging adults, the study says, have as their goal “material affluence; they are not critically aware of problems of consumerism and materialism…or a world of hurt, regret and other negative emotions.”

That world of hurt and regret, that world damaged by problems of excessive consumerism and materialism – as Pope Francis tirelessly calls attention to – is the world that the best of journalism also calls our attention to.
And so the greatest challenge posed by the virtual world is not in any one particular ethical problem that it presents, it is that we will no longer see them as problems.

Fortunately, many of us are dedicated to thinking deeply and speaking widely about these things and the Vatican has been one of the main protagonists of an on-going discussion about ethics and values in a technological age.

The work of the Centesiums Annuus pro Pontifice Foundation is testament to that.

Right here, at the Lateran University, an American priest, Fr. Philip Larrey, Chair of Logic, organizes conferences in conjunction with the Holy See’s Secretariat of Communications, one of which I moderated, with executives from high tech companies, advertising and communications to discuss what they call Core Values in the Digital Age.

And I must highly recommend a book which Fr. Larrey has published, Connected World, which contains interviews with leading managers, engineers, philosophers and journalists exploring the future of technological developments with an eye towards ethics. It is an eye-opening read and will introduce you to many of the vital discussions around these topics. (Connected World, From Automated Work to Virtual Wars: The Future, by Those Who are Shaping It, Penguin Random House, 2017)

Pope Francis has been a leader in this area and has called for the next Synod in 2018, to be on Youth, Vocation and Discernment, which will no doubt be an important contribution to the discussion.

Ladies and Gentlemen,

I come from a land of apricots – and an apple.

And the truth is I stole those apricots many years ago from the Mariani fruit trees and so I was comforted to hear the Pope tell the story recently about the Madonna dei Mandarini who is venerated in the south of Italy, by fruit thieves.

The story is that when the tangerine thieves go to heaven and are in line at the gates in front of St. Peter, the Madonna tells them to hide and at night lets them into heaven through a side-window.

Well now, many years and technological changes on, I have two young children.

And they already know how to use an Apple computer and they will surely soon know how to use virtual reality glasses and driverless cars.

But my hope for them is that there will be orchards.

And that they will also know what it means to gaze at a low-hanging apricot and feel desire in their hearts and hot sun on their skin.

And that they will know right from wrong and that, yes, it is wrong to steal fruit, but that the Madonna will help them into heaven through a side window, anyway.