FRANCESCO ANTINUCCI

MR. ANTINUCCI: Okay. Actually I'm going to speak very little about technology. I am going to speak rather of what's behind technology, or what should be behind technology according to my view. I've been working on technology applied to cultural heritage for the past 15, 16 years -- as Bernie Frischer we'll remember, being as old as I am in this field. And when we started this enterprise, we were enthusiastic about it, as Bernie will certainly remember. It seemed obvious that the added value of technology to this field was going to be enormous, being one fundamental component of it what we call the "visual arts". Technology, in fact, had just improved to the level where it could deal with visual images in a way that no technology had been able before.

So the marriage between these two things looked not only promising, but it looked like the thing to do. And we did a lot of things. All of us who are here. But if you go to museums today and try to assess what has been the impact of all this, after 15 years, well I guess we all feel that promises haven't been kept the way we expected. So I started asking myself why is that so and I tried to investigate it a little bit.

Part of the fact has to do with the reasons that the former speaker just outlined: the approach that includes only technology and tries to reconstruct the world, so to speak, in technological terms. And in doing that, one ha necessarily to assume a model of who the user of this technology is, who the target is. Now - and I want to say this very clearly - when we do that, no matter how sophisticated we are, we invariably tend to assume that the people who are going to use this technology are pretty much like us (except for children, because we are very aware that children are different from us). Maybe with a little less knowledge, a little less of this or that, but basically they are like us. And therefore, when we devise something, if it works for us, it looks nice to us, then it's good. I mean, it's going to work.

Okay, this is totally wrong, unfortunately. And that's for a number of reasons, the main one being that people who go to museums have changed dramatically in the past 10, 15 years. And we don't realize that very clearly. We don't realize how large this change has been.

So I'm going now to -- to go a little bit into this problem, and show some of the data we collected that reveal this difference, and, as a consequence, point to the fact that we should do something really very different when we approach this problem in technological terms.

Of course, I'll talk about the situation of my own country, Italy. Let's see some data.

[slide 1]

Italy has 402 state-owned and operated museums. These were visited in 2005 by over 33 million people. To have an idea of how large this figure is in relation to the country, think

that Italy has a population of less than 60 million inhabitants. Of course, many of those visitors are from foreign countries. So we asked who are those 33 millions.

Now, the first interesting thing to look at is the distribution of this 33 million people into the 402 museums.

[slide 2]

This shows the number of visitors of the first 30 most visited museums
Notice just the form of the curve which is a sort of asymptotic one, you know, very curved. This means that very few museums have got most of the visitors, and most of them just share what's left. If you now take not the first 30, but all of them, all the 402 museums this tendency is even stronger.

[slide 3]

Look at how "curved" this curve looks. In looking at that curve I felt I remembered something, thus I asked around till I stumbled into a friend of mine who is an economist, who immediately told me that this is the classical curve that describes the economic phenomenon known as "oligopoly".

Oligopoly is a market situation whereby a few players in the market get practically the whole of the market. It's different from monopoly: there are, in fact, a lot of players. But the first three, five, or ten of them, depending on how concentrated it is, get practically everything except some left-overs that the rest of the players have to share. There are a number of markets like that and they form for a number of different reasons.

One of the most interesting case is that where the dominant position gets established because of the name of the firm and /or product. What is commonly called the phenomenon of "brand name". The dominant position established by the brand name does not have to do with the actual "content" of the product, but rather by its "envelope", so to speak, its name. If you take athletic shoes, for example, there are as you know, two or three brands that take the largest portion of the market. This does not happen because they are better shoes that the others, in no reasonable sense of the word better. At least they are not so much better as to justify the difference in market share (and/or price paid) with other much less known brands. In other terms, there is no proportion in terms of the "value" of the product: less known shoes may be less valuable (though very often they are not: in fact, they are indistinguishable from the famous ones) but not to the extent represented by their different market share.

Now look at the distribution of visitors in museums as summarized in this slide.

[slide 4]

The first 5 museums, that represent 1.2% of the total of 402, pick up 13 million visitors, which represent 40% of all visitors to all museums. The first 9 museums, that represent

2.2% of all museums, get over 50% of all visitors. Now this leaves 393 museums to share the other half. And so on. 33 museums, that represent 8% of all museums, pick up three quarters of all visitors. This leaves 369 museums to share a quarter of all visitors.
And even if you wanted to absorb 90%(!) of all visitors, that would take less than 90 museums: 310 museums, that is, three quarters of all museums, have practically no public. And that's not because they are all uninteresting. Quite the contrary. It's true, some museums have better stuff, some have lesser stuff. But this "content" difference is in no way proportionate to the amount of their visitors.
A distribution where this happens is quite different. Let me show it quickly.

[slide 5]

In this slide, the line on the bottom, parallel to the x-axis represents the distribution where every museums gets an equal number of visitors. Obviously, this is an ideal case. But now if there are differences, as there are in reality, and some places are more liked than others (or have better stuff), one would expect them to receive a fraction of visitors more, roughly in proportion to their better "offer". When this happens the distribution becomes something like this:

[slide 6]

The straight line of the equal distribution has become an oblique line, but it still is a straight line: it is not a curve. The line will be more or less inclined according to how large are the differences among museums, but it will stay more or less straight. This means that there are museums that are favored over others, but in a pretty much continuous way, as it should be if this "favor" reflects the value of its content. This is a non-oligopolistic distribution. The more the line becomes curved, the more the market becomes concentrated among a few player. Just as a way of example, we can look at the following distribution:

[slide 7]

This represents the pasta market in Italy. As it is well known, It is an oligopolistic market: a few of the 140 producers take up most of the market. It is, however, a less concentrated market than the museum one (as you can see by comparing the two curves)!

In arguing through these data that museums behave like a brand-name market, we are basically saying that people go to museums not so much for what's inside them, not for their offer in terms of art works displayed, but rather because of the name they have got for themselves. People do not choose what's into the museum, the museum content, but rather the museum (brand-)name. It is the name in itself that attracts people. Let me now try to give some direct evidence that this is in fact so. The evidence will take the form of a comparison among "equals", so to speak.

You all know that there are two old roman towns that have met with exactly the same historical fate: they have been destroyed at the same time by same event, the eruption of the Vesuvius volcano. I'm obviously talking about Pompeii and Herculaneum. The two towns are also close to each other. Now, being both roman towns, close to each other and frozen in time at the very same moment, they are quite similar for the purpose of forming an idea of how a roman town of the 1st century looked like. In fact, if anything, one might even argue that Herculaneum is a better place. It is a smaller place, and therefore easier to grasp, some details are better preserved and, also, it' much closer to the city of Naples – the tourist starting point for any visit – than Pompei. But now look at the figures of visitors:

[slide 8]

There just is no match. Pompei gets nine (!) time more visitors than Herculaneum.
Now, there is nothing in Pompeii that counts as nine time better than Herculaneum, in no sense Pompeii is nine time better than Herculaneum, which is what more or less we would expect if the distribution of visitors were a normal distribution.

Here is another example, this time taken from painting collections.

[slide 9]

In Rome there are at least four major painting collections that belong to the state. As you can see from the numbers, the Galleria Borghese, which is certainly the best known one, gets nearly three times more visitors than the other three places put together. Now, if you take only the first of them, Palazzo Barberini, you find that it has an incredible collection. It has nothing less that the Galleria Borghese: it has paintings from Raphael, Caravaggio, and others just as the Galleria Borghese. And furthermore in one of its room it has a huge fresco ceiling representing the Glory of the Barberini family painted by Pietro da Cortona, which is one of the masterpiece of all time painting and worth a visit just by itself. Yet Palazzo Barberini has five times (!) less visitors than the Galleria Borghese. Considering the importance of the collection, one can say that practically nobody goes there. But the Galleria Borghese is a brand-name, while Palazzo Barberini is not. And just to discard possible "external" motivations, I should add that the location of Palazzo Barberini is in the very center of Rome, much closer to the hotel and tourist area than the Galleria Borghese, and its access ticket is less expensive.

Given these basic facts, we tried then to understand what happens into the museum. What do people do when they go there? Since it does not look like they pay much attention to what's inside, we tried to assess this in a number of different ways.
First, we went to people who had just come out of a major museum and asked them a few questions. In order to make this investigation as much representative as possible, we choose the Vatican Museums. It is one of the largest and most visited museums in the

world: current figures are about 3.5 million visitors per year. It is by far the best known museum institution in Rome and its public, coming from all over the world, is certainly representative of the public that makes up the current crowds of museum visitors.
We set ourselves just at the exit of the painting galleries, so that we could meet people that had just terminated their visit to the paintings. We selected only the two most important (and famous) rooms of the galleries, the Raphael Room (where the two very well known paintings of Raphael, the Transfiguration of the Virgin and the Coronation of the Virgin, are) and the Caravaggio Room, and asked a few question about them.
The first question was whether they remembered having just seen the two rooms of Raphael an Caravaggio.

[slide 10]

Now, it's not surprising that 69% of the visitors said they did remember the two rooms. What is surprising is that 31% of them did not remember having seen the two most important rooms of the painting gallery they were just coming out of. About a third of the people don't remember the two most important rooms they had just gone through.
Of course we discarded those who didn't remember, since the questions we were going to ask were about those rooms, and went on with those who did remember. We gave them a list of the authors who were present in these rooms and asked them which ones they remembered. There were 8 authors - Raphael, Caravaggio, Guercino, Guido Reni, Domenichino, Poussin, Andrea Sacchi, Jean Valentin - and these are the results:

[slide 11]

46%, which is nearly half of all the visitors, remembered just Raphael, and three quarters of them remembered only Raphael and Caravaggio, the two main authors. Only a bare 15% could remember a third author beside the main two.
One might easily wonder why do we put and keep all those paintings in there.
Somebody might be likely to ask why are we asking something about names. Names of authors, proper names, might be difficult to remember, but after all painting is a visual experience and it is that that counts most. One might not remember the name of the author but might well remember the painting as a visual image.
Thus we also did the visual part. We took six reproductions of paintings. Four of them were in the two rooms, but two were not: we included these as control items. The four present were the three most important paintings of the two rooms: the two Raphael and the Caravaggio. The fourth was, in contrast, one of the least known: a painting by Jean Valentin. The two paintings that were not present in the gallery were two Caravaggio, one of which is in a Rome church and the other in the collection of the City museums.
We showed them the color reproductions one by one and specifically asked them whether they had seen the painting in question in the galleries they had just gone through or not.
I'm sorry I don't seem to have a slide for these results.
However, the main ones are:
10% of the people did not recognize any of the reproductions. They did not remember having seen any of the four paintings shown, even the Raphael ones.

The incredible thing is that 32%, that is about a third of the visitors, only remembered one painting, and that is the Raphael's Transfiguration, but they did not remembered the other Raphael painting. the Coronation.
Still more incredible is the fact that 21% of the people told they had just seen in the rooms the two paintings that were not there!
I remind you that this is immediate memory: tested minutes after the experience, not hours or days after.

So finally, just to be sure, we went inside the room, and observed what they actually do in the rooms when they go there physically. We basically wanted to check what they were looking at. So, first of all we had to choose an objective, observable criterion to establish what counted as "looking at a painting" (as opposed to not looking at one).
We started by assuming that a good criterion would be if they stopped in front of the painting for five seconds. Armed with this criterion we then went to collect data, but we soon discovered that there were practically no data! After more that an hour of observation people who would stop to look at a painting for at least 5 seconds could be counted on the fingers of one hand.
So, we lowered the threshold to three seconds, but the numbers were so low that one could not make any significant generalization concerning the visitors' behavior with respect to paintings. So, finally we lowered it to one second. Thus, the numbers you'll see in the slides refer to people who actually stopped one second in front of the painting: if they did we counted it as "looking at the painting". These are the results.

[slide 12]

It's not surprising that 92 percent of all visitors that go in the Raphael Room go see "The Transfiguration "– especially with this criterion -; what is incredible is that the other Raphael, which is hanging in the same room, gets seen only by half of these people. It means that the other half goes by without stopping not even one second, there. Again, only 56 percent of the people who go into the Caravaggio Room actually looks at the Caravaggio painting which is in there. 44% don't look at it, not even for one second.

I'm not going to comment on the other percentages, given the miserable figures. Thus, this is what people do when they go inside the rooms of a painting gallery: they walk (or run) through it, they don't look at the vast majority of the painting that are there, not even for one second.
This is the situation that we have to print in our mind, when we think at the millions of people who go to museums today, especially when we want to design and construct something for them. Because we can't do that, we can't design anything really usable and helpful unless we have a good and realistic model of the behavior of the users. What seems obvious, for example, is that the very arrangement of a painting gallery does not capture the attention of the visitor, not event the attention to look at the very objects to show which the gallery is made for.

And since we don't keep this in mind, we are inevitably going to make mistakes when we design a build our technological applications for museums. A good case in point is, in

fact, the website of the Vatican Museums. It is, because it is what we in the trade would call "a well done site". First of all, it's complete. You can navigate all the rooms of the different collections. It is detailed. Once in a room, which is modeled in 3D, you can look around (in a QuickTime manner). You can stop on any object, bring it up, enlarge it, get information and comments. So, there is everything you might want and all that is easily accessible, intuitive and very friendly.
So, to the same people who we questioned when they came out of the painting collection we also asked a few questions about the website of the museum.
As a side issue, let me say that when we do studies on websites that are not autonomous – meaning something that exists only on the web – but are the website of "real" institutions that are also represented on the web, we should always, as a matter of methodological correctness, take into account the population that contacts the institution itself and not that of those who go onto the website only. This is, in fact, a "special population", with respect to the general population that has to do with the institution, which has already selected itself by deciding to contact the institution through that route. In simpler words, you don't want to do studies on the working of the website of such-and-such an organization by looking at the population of only those who connect to its website.
For example, because you might miss an incredibly important piece of data, like the one shown in the next slide.

[slide 13]

The first question we asked was whether they had visited the museum website or not.
As you can see, 82% of the people said they had not.
Thus, if we have in mind something like to use the website as a tool for preparing a meaningful visit. Or to invest in it as whatever type of communication tool, we should keep in mind that, as things stand now, we will be going to work at most for only 16% of the people who actually go to the museum.
Still more interesting is when we ask this 82% why did they not visit the museum website.

[slide 14]

27% said they did not have time to look at it. You may believe it or not. But another 27% certainly cannot be believed: they said they did not know there was a museum website. If you type just the word "vatican" into any search engine, the site of the Vatican Museums comes out among the first four items. This answer is a way of masquerading the fact that they weren't interested in looking at the website. And, in fact, 46% had the "courage", so to speak, of clearly saying that they did not look at the museum website because they did not want to. And they did not want to, because they weren't interested: they wanted to see the "real" museum, not the "small"/"copy"/"fake"/etc. one.
It seems that people have a resistance to go onto the museum website. They are positive in negating the value and interest of that, and this attitude is common to the vast majority of the museum visitors.

Thus, all the work and the investment put in the construction of the website goes for only 16% of the visitors. And that low percentage is even more discomforting when one asks the reasons for contacting the museum website. Here are the answers:

[slide 15]

About half of them (48%) what to get practical information, about opening times, address and ticket price. Only 23%, which is 7 persons out of the 190 interviewed, said they went to the website to prepare for the visit they were going to make.
Many things can be said about these data, but one seems obvious. Given the way it is rceived and used by museum visitors, something is wrong with our widespread and accepted view of a “well done museum site”
The data are independently confirmed by the Internet Benchmarking Report, issued by an independent authority that monitors activities on the web in Italy. In the 2006 Report they had a focus-group on museum sites. It was found that 85% of the people went to the museum site to find out about address, times, and costs. And, furthermore, 40% of the people who went to a museum website spent there less that 1 minute.

So, I think -- am I running out of time?

MR. BOBLEY: Yeah.

(Laughter)

MR. ANTINUCCI: Okay.

MR. BOBLEY: It's okay.

MR. ANTINUCCI: I am just going to conclude. The data seem to show that people don’t get very much out of museum visit. It is this problem that we should address. But we should address it by keeping well in mind what the target population of our attempts really is. Digital, image based technology can be one of the most powerful means we have to deal with this problem. But, again, we should tailor it to the real needs and attitudes of our target population and not to some preconceived idea we might have about it.

Thank you.

(Applause)

MR. BOBLEY: Thank you. Any questions? Oh, we've got one in the back we've got a microphone for our folks in the audience?

SPEAKER: (Off mic)

MR. ANTINUCCI: Oh, okay, I forgot about that.

They were by and large -- they were people between 20 and 35. Oh, and they all had either a college degree, or a high school degree in the proportion of 70:30, 70 percent had a college degree, and 30 percent a high school degree. Thus, they are people who have a fairly good level of instruction and, given that and their age, might be presumed to be fairly well acquainted with basic technology like Internet navigation.

MR. FRISCHER: I have a question for Andrew.
Are there -- are you aware of similar studies in the United States, visitors to American museums -- I found this report really fascinating and I just wonder if it's generalizable?

MR. ACKERMAN: The Metropolitan Museum of Art in New York has done a lot of research. And I remember a study 20 years ago, the number one question asked at the Metropolitan Museum is where are the bathrooms?

(Laughter)

MR. ACKERMAN: The number two question is where is the art, which is a fascinating thing when you walk into a place like "the Met."? A lot of studies have been done in tracking visitors, and actually timing, where they go and how they go. They reveal a lot of different things, I mean it is -- I think it is difficult to generalize. And art museums and history museums, science museums all have different results.

It seems that the conclusion one can begin to draw is that, and it is very obvious in a way, we all learn differently. So, the greater the diversity of techniques and presentations, the greater chance you have to engage one individual visitor because you have different options. So the traditional art museum experience at the Vatican actually appeals to a very narrow range, percentage-wise, of people because it assumes one particular way to learn.

And particularly in United States, when we have such a diversity of audience because of the diversity of the population, those assumptions need to be broken down. I mean, still particularly in the art museum world, proceeds more from a presentation created for your colleagues, fellow scholars, than it does for the public.

That's not different I think in a lot of natural history museums, science museums and certainly children's museums. But there is a great deal of literature about visitor studies.

MR. ANTINUCCI: I want to stress that what I said is only valid for the "typical" (at least in European terms) art-historical museum. It's typicality resides in the fact that the Vatican Museums is one of the five or six most visited museum of the world.
Of course if it's not an art-historical museum, with its typical galleries filled up with objects or painting, the data might be quite different. But my interest is exactly in that: what do the millions of people who visit them get out of this visit in terms of the all-important phenomenon that we call "cultural transmission"? It seems very, very little.

MR. FRISCHER: Francesco, may I ask you two questions?

One is, I -- if I took that test at the Vatican gallery I might come up with the same terrible result, because you only get to the gallery normally after going through the rest of the museum, and by then it may be 2 hours or 3 hours that you have been visiting, you have seen the Sistine Chapel, the Borghese Apartments, all of that Greek and Roman sculpture, Etruscan Museum, Egyptian Museum, and you probably only go over to the painting gallery because it is near the cafeteria where you maybe want to have a coffee or lunch. And so I wonder with -- if you -- if it would be interesting to do this study again and ask people how long they have already been there, and then maybe go to another museum where they just are entering as the first thing they see in the day, and I wonder -- I hope for -- benefit of my fellow human beings -- that at least you get up to 3 seconds or 5 seconds.

And the other question I have is about technology. If you see people walking around museums with audio guides, and you said we have to get their attention, and so many museums now just give you the audio guide free, and almost guarantees that you will stop and look at a certain number of paintings or statues for some period of time, because you are listening to the audio guide, and I don't know what the average amount of time the treatment is per art object, but it must be a few minutes anyway.

So, do you -- what do you think about audio guides and how that might play in?

MR. ANTINUCCI: Can I answer this last question next year? We are doing this study on the audio guides now. In the first study we excluded people who had the audio guides -- as we excluded the people who were in organized groups with a guide. We did include small groups of friends visiting together. We wanted to start with the ordinary single visitor.
For the first question, what you said might be true, and the painting collection of the Vatican Museums might be the worst case for this tour-order reason. But I don't think that the data are going to change very much in another, comparable size museum. Yesterday, for example, I was at the National Gallery and casually observed visitors around me (unfortunately, I can't help doing this since I saw the results of our study) and it did not look like their behavior was different.
On the other hand, we should remember, that no matter how large and dispersed the collection is about 10% of the visitor do look at painting, do stay enough in the room to see a numer of the paintings, do remember what they have seen. The interesting fact is that 10% of today is pretty much what used to be the total population of museums 15 or

20 years ago. Museums haven't changed - I mean their basic way of exhibiting - in those years. And it is just for those people they are basically organized. The only thing that has changed in these 20 years is the fact that a lot of other people go visit museums that did not use to. This mass of people are simply not "adjusted" to the traditional museum structure, hence their behavior. But since they we'll go on going to museums – the reason has to do with the evolution of the social structure itself – I think we should do something to adjust the museum structure to them, like providing the right tools to get in contact with they objects they don't even see today.

MR. TALBERT: Just three brief comments. One, I hope that when we talk about the website, we will also take into account not just those visitors who might have looked at it before they go, but those who perhaps are stimulated or inspired to go and look at it further after they have been. And also of course all those people who, for whatever reason, can never go to the Vatican museum but nonetheless would like to see the objects in it and learn about them. And for that reason go to the website and have many valid reasons for exploring it and perhaps returning to it.

The audio guide, I must say from my own experience, strikes me as something that is very worthwhile. And one instance of that I came across recently was a system where you have the audio guide with you, and if you push the button at the relevant point it would tell you something about the painting or the object, whatever it was.

And then it would say, have you heard enough about this? You know, would you like to move on to something else, or would you like to hear more? We can tell you -- but it gives you a short clip and then it is prepared to tell you more as well, which struck me as very effective for the visitor who might be interested in certain particular objects or paintings.

If I may say so -- actually it seems to me that for the major sites and museums, a very large category of those visitors who are there, ones who haven't particularly chosen to go to that museum or site at all, but are there because the tour operator has brought them. And it strikes me that one thing that might be done for more effective presentation is for museum directors and other authorities to be in closer touch with tour operators.

So the tour operators might include in their information beforehand, website addresses, other possibilities that those participants in groups could look at.

MR. ANTINUCCI: Can I answer?

I will start with the last point because this is an interesting question, and everybody keeps telling me about the tour operators, and their major responsibility in creating the kind of concentration we see. And I must say, that at the beginning, I myself was inclined to believe so till I find out how it really works. And the basic fact is that tour operators would be glad to go elsewhere. For example, if you tell them rather than going to Pompeii go to Herculaneum, they would do that very eagerly. They don't do it because, contrary to what we think, it's the people who don't want to go there, it s not true that

they don't choose: they positively choose the brand name they want and refuse to change it. Can you imagine? When they go back to their place they want to be able to say that they have visited Pompeii, not some obscure site that goes by the name of Herculaneum. The same goes for the Galleria Borghese. I talked to the man who is in charge of one of the tour operations in Rome and he said it is a real hassle for them to go there, quite clearly. We have to hassle to stay there, to put the people in – the place is small and there is a strict limitation on number of visitors –it's very difficult to park or even stop the bus because there are so many of them there, and so on. He said he'd be glad to go elsewhere, including, of course Palazzo Barberini (I asked him). But it's just not possible: people would not get on his bus. As one might expect, the brand name is preexisting and the tour operator has just to operate according to that. They are not the ones who create them. But they do build an alibi for us with respect to searching who/what is responsible for the overcrowding system.

Concerning the afterward visit to the website, I would like very much to know what -- how many of those people who we interview did go afterwards there. But I have no way of tracking them, unfortunately, and it would not be easy to set up a way of doing it without influencing for this very reason their behavior.
And what is it you said? I forgot about the third point.

MR. TALBERT: Well, also those many, many other people, and one can think of very large numbers of students for example, of all types and levels and places who have no immediate prospect to being able to go to visit the Vatican Museum, Italy or --?

MR. ANTINUCCI: Oh yeah, yeah, of course, of course, that is absolutely true, but it is true that the increase, the enormous increase in the number of visitors is actually a reflex of the even greater increase in the number of people who travel. Tourism is the fastest growing industry in the world. So, since people are moving more and more that function of the website – being able to visit a gallery without going there – becomes less and less important. I agree with you, we should take them into account, but it is not that population whom we should mainly address when we build a museum website.

MR. TALBERT: Well, and I'm sure I speak for many others when I say that I think we are very grateful to you for raising these broad questions about what a museum website should be for and what a virtual presentation would be for. But I hope at the same time that, that you and others and museums will be minded to keep working on this and to keep making these presentations.

And certainly what Dr. Ackerman presented was, I thought, extremely effective for the kind of audience that he has in mind. And surely this is the kind of direction in which we want to be going to use digital technology and virtual modeling and these other techniques. Because they are opening up dimensions which just haven't been possible until the very recent past.

MR. BOBLEY: Okay, I will take one more question from Susan Malbin from IMLS.

MS. MALBIN: I would like to return to your earlier point about branding an institution and technology. That is sort of the pre-visit before you ever get there. Have there been -- have you done some studies or have there been some studies, and what kind of a difference that makes about the -- or the knowability of the institution before you get there. And the effect of sophisticated web presence or sophisticated technology on branding, before you get there. Maybe you choose to go elsewhere if it were a better brand?

MR. ANTINUCCI: You see, in Italy, and in some parts of Europe we have -- we might have a different situation in the fact that some of those cultural institutions are really identified with the very place. So, in a place like Florence, it is the Uffizi. There is no way somebody can go to Florence, and not go to the Uffizi. Or Rome and the Colosseum, okay?

So, it is - in this sense it is a brand name, but it is not constructed by anybody: it has been constructed by history, by long known and practiced associations, you know, by a common process. The interesting thing in cases like yours would should be to look at whether you get the asymptotic curve among different institutions or not. Whether, instead, you tend to get the (more or less) straight line.

One other thing that I -- well, I have no time -- but one other thing that I didn't show is that if you go and check people of a different kind, like visitors of -- let us call them, visitors of movie theaters -- rather than visitors of museums, you get a quite different picture, I can show it in this slide:

[slide 16]

The distribution is represented by a straight line. It means that there are movies that are liked more and movies that are liked less but you know they distribute overall regularly, and this because people don't go to a movie theater as such. They go to see a movie, namely they choose what is inside the movie theater, and this is because they have the cognitive capacity of choosing among those objects that we call movies, which is exactly what they don't have in the case of a museum. And that is why you get the brand name phenomena.

MR. BARNSBACK: Okay.