



## Big Data

Anthony Lilley, Magic Lantern Productions

### Introduced and chaired by

AMA board member Carol Jones, Director of marketing and communications, Chapter and board member of the Welsh Chartered Institute of Marketing

This is a master class that is going to demystify Big Data and as the co-author of *Counting what counts – what big data can do for the cultural sector*, Anthony is going to explain what it means, how we need to be user-centred and data-led and what steps we all need to take to achieve it. Anthony is Chief Creative Officer and CEO of Magic Lantern Productions Ltd, an award-winning interactive media and multiplatform creative house and consultancy. He is also a director of China/UK media specialists, Zespa Media. Anthony has worked on world leading brands including Top Gear, Doctor Who, The Guardian and many others as well as for clients as diverse as Sony Playstation, BBC, C4, IMG, London 2012, Google and Procter and Gamble. He works on trans-media strategy, develops creative concepts and advises on policy around the world including, most recently, in the UK, the US, Australia, China and Qatar. He is a member of the Content Board of the UK's communications regulator, OfCOM, a board member of the UK Gambling Commission and holds or has held Visiting Professorships at the University of Oxford and UK Centre of Excellence for Media at Bournemouth University. He is a Fellow of the Royal Society of Arts, a Trustee of the English National Opera and Chair of digital culture agency, Lighthouse. Anthony was awarded the Order of the British Empire (OBE) in the Queen's Birthday Honours list in 2008

### Big Data and You

It's nice to be back at an AMA conference. I'm a lapsed arts creative. I was a theatre director and producer dabbling in technology when I first came out of college then I repaid most of the money I lost putting on ITC-level plays by sorting out data, databases and box office issues for a few years and presenting (I believe) the first Arts Council-funded tour of seminars on the World Wide Web in 1994. I diverted into being the creative head of Magic Lantern Productions working in digital media and broadly in learning and media and broadcasting. More laterally I'm back in the arts as a trustee and occasional consultant.

I was commissioned by Arts Council England and NESTA to work on the *Counting What Counts* report about eighteen months ago because I'd been banging on about what was coming – the world of Big Data and increasing amounts of data available being both an opportunity and a threat for the cultural sector. We started at a high level talking about the policy area around how we make the case for culture and public service broadcasting.

I've been a non-exec at OfCom for about five years until recently and I'm very concerned with being able to make an evidence-based case that when we spend public money on cultural things whether that's BBC, Channel 4, arts funding, museums or whatever, we are able to show the impact of what we do. I believe that increasingly we are starting to see – via social networks, through peoples' behaviour online that then affects their behaviours in the 'real world' – positive impact in new and exciting ways which might help us make the argument for spending money as a society on culturally important things in addition to some of the ways we've used in the past. I was interested in the theoretical end of how that might be done but when I started to dig into it, it became apparent that there's a set of questions about what 'big data' is that needed answering. And also a set of questions about how you get ready to take advantage of it because, none of us in the sector are the scale of Google and there are a lot of practical issues to resolve around how you get ready to take advantage of the opportunities. *Counting What Counts* looks at that stuff but it's not a practical guide. It's slightly more academic and a policy guide based in practice.

Big data is one thing to Google and something else to an organisation that is operating at a different level but we're going to take a look at some of the principles. In our daily lives we have a tendency to react with 'oh no, not more data. I've got enough of that'. That's a completely reasonable response that was once described to me as 'infobesity' which was both amusing and horrific at the same time. I'm currently fascinated with the concept of mindfulness and how we can use techniques to deal with all this digital crap that's in our lives. How do you overcome the 'surely not more data' question? The answer to that I think is to stop thinking about data in the way that you might have done traditionally. As either a load of stuff to fight your way through or as accountability: data that people want you to provide because they want that data for some reason and think of it instead as an asset, as part of the way that you prove your value and crucially to prove the way that you become more resilient, the way you bring in more money and have greater impact for your work. It's subtle but I find it quite interesting sitting on the board of one of the 'big ten' that boards are quite good at understanding financial data, that's what they 'get' but when it comes to any other form of data it can be a little like you've 'fallen off a cliff' and there isn't really an understanding beyond the financial of other forms of data that can be useful. We need to get beyond the mind-set of accountability and also introduce an investment mind set which means you're doing this because it is good for you as well as the ones who are putting up the money.

That led to looking at where arts organisations found themselves on the spectrum of ‘data maturity’ – where are you on the journey. Usually the answer is different if you talk to the marketing director than if you talk to the CEO or the Chair of the Board. How do you find out where you are and how do you tell a story about how you need to continue on that journey? I will explore big data; as companies like Google see it, and some of the notions about what is going on along with some of the practical issues of being ready for big data and what happens next.

### What is big data?

They say that ‘big data’ is about the Three V’s; the Volume of data – there’s a lot more; the Variety of it – there’s more in quantity and more kinds of data and it’s about the Velocity with which it comes at you. It’s coming at you in a live way, in streams and the arrival of mobile devices and tablets has been the biggest shift for most of us. The conditions for big data being possible are the ‘three V’s’.

You then need some way of seeing through the ‘snow’.

There’s just too much data for anyone to comprehend. I can recommend Nate Silver’s book; *The Signal and the Noise*

in which he talks about crunching computing techniques; analytics to understand some of this stuff but in the end there’s no replacement for good-humoured judgement on top of great data and I do subscribe to that. I was attacked on a platform for suggesting that analytics should be programming the arts sector and I don’t actually believe that analytics should be programming the arts sector but I don’t know many artistic directors whose decision-making process would actually be worse if they were a little bit more aware of what was going on in their own audience and more broadly.

Also, I don’t know many great artistic directors who don’t already have a feel for this already – certainly the ones that I work with feel it and they have to. The need for judgment is an important part of this and that comes through in data-driven decision making – how you can use data to think better but then you quite often are going to end up with value judgment because it is just too complicated. There is a mind-set shift here; the design theorist Donald Norman says that one way to think about this type of environment is to understand that the Universe and the way we live it is just by its nature complex but it’s only complicated when we make it that way. If you can come to terms with the fact that it is just complex and start looking for signals in the noise rather than trying to believe that you can understand it, it becomes more relaxing, because you cannot control it. The potential is incredible and my favourite example of big data is *Google Flu Trends*.

### What is Big Data?

- [Volume](#)
- [Variety](#)
- [Velocity](#)
- [The power of analytics](#)
- [The need for judgment](#)
- [Google Flu Trends](#)
- [A/B Testing](#)
- [Why might it matter to the arts?](#)

What Google is able to see by mining its data with analytics are patterns. Google Flu Trends is a couple of years old now. There is a site that you can 'Google' for it and it is genuinely the case that Google is able to spot and predict spikes in flu by the number of people querying online in Google the symptoms of flu. They then compare their locations and it has been used to provision and provide flu vaccines into doctor's surgeries because people generally start querying the symptoms about 36 – 48 hours before they think about going to see the doctor and that's just long enough to see the pattern starting to emerge. That's big data really showing itself.

The other great example is something that I'd recommend you do any time that you make a digital product – the notion of A/B testing. Instead of hypothesising if people are going to like the 'green header on your web page' or the 'red header on your web page', you put both up and see what happens and learn from the data. That only really works if you've got a lot of traffic. Google are running A/B tests every day on their products, sometimes 30 or 40+ a day, and testing very small changes and alternative arrangements in the interface from which they learn the best way to lay out their pages and products. At ENO we've been doing it with email mailings, trying to test and compare what open rate you get if it's say, a red header to a gold header and just experimenting and learning. It's live research in the field as you have that kind of data and it matters in the arts because it saves costs, time and helps us to learn more about the impact of what we are doing.

The benefits of big data come out of what I've just been saying and this is work that the Audience Agency and other organisations including as ticket suppliers have been looking at; segmenting audiences. I was on the board of the holding company for *Top Gear* for a few years and we had to deal with trying to find patterns in the vast amount of traffic and the noise that *Top Gear* created all around the world. There was a great belief that it was all because of the TV programme, and 30% of traffic was triggered by Jeremy Clarkson saying 'something that Jeremy would say'. It would spike and be busy and one of the things about Jeremy Clarkson as a digital media asset is that people go towards him whether they agree or disagree with him. We analysed the data and discovered that within it there were very distinct segmented audiences. We needed to know what they responded to and when. It wasn't that they were CACI and they lived in a certain postcode category it's that they responded to the sort of things that Subaru drivers respond to. And we knew, because we had 45,000 Subaru drivers that would respond to a certain sort of thing. It's the notion of segmenting that takes you beyond the geographic. It's not always helpful as geography is the strongest segment that most of us have – especially when it comes to attending live events – but that sort of segmentation has been going on for a while and so approaches to big data such as bringing people together around the sector is really a better approach to segmenting audiences.

## The Benefits

With that comes an element of transparency – you can't hide as easily behind making grandiose statements about who is coming because if it turns out they're not, they're not. It might be that it turns out you've been mailing 4,000 dead people as with one organisation I interviewed at the start of *Counting what Counts*. It's about supporting human decision making, not replacing it. There's a very tech-y led view that we really need all these decisions to be made by computers and that goes through to Google's belief, as an organisation, that ultimately everything can be organised.

I happen to believe that human society and human beings are more complicated than that but I don't think there are many commercial decisions that affect the business side of things that aren't at least improved by a consideration of the data. I don't think that you should be too driven by it but a consideration of the data is interesting. I've just read a great book called *The Numbers Game* about how the data revolution is going to change football – turns out that defenders are worth more than strikers but they're not as high profile because defenders save you losing games and losing games loses you more points than winning them. This is coming to sports already but it is supporting human decision making because how would you ever know 'which defender' until you try? It enables experimentation in the way that we present work but also potentially in the kind of work that we do. I was involved in the Space process of assessing applications last year and I would have liked to have seen more data-enabled artistic experimentation.

The last bit is to do with the innovation of our business models. The more we know, the more we can play into the real landscape of cultural marketing which is the wider leisure-spend market and the wider spare-time market. I hear a lot about how we are all in competition with each other but the feeling in my bones is that we're mostly in competition with restaurants and cinemas etc. than we are with each other. Collaborating on new business models and new ways to raise funding; philanthropy, crowd-funding, have great potential for us. Because of mobile and cloud computing there is a big phase shift. Back when you bought your first digital box office or when you had your first Mac, data started as something that you could control in your own system, its solid phase. It then became more liquid as you began to have digital products such as websites. It's now gone gaseous, gone into its completely random, running-around-like-mad phase. It's an open, complex and complicated system. I don't think many people are trying to bury their heads against that. That's probably not very wise and I don't think it's likely to bring you positive benefits.

## The Benefits:

- **Segmenting audiences**
- **Creating transparency**
- **Supporting human decision-making**
- **Enabling experimentation**
- **Innovating new business models**

It doesn't have to be very big data in the Google Analytics sense. In the arts organisations that I talk to and am on the board of, our bigger data is changing sufficiently in the way that we run our

organisations. It doesn't suddenly have to become Google Analytics and it's enough that we are able to track consumer behaviour in a number of ways; what they do, what they buy, what they might say on Twitter, what they might say to their friends, who they might recommend etc.

We've been doing a thing at the ENO on 'rest-of-party data'. It's traditionally very difficult to get data from the people who didn't buy the ticket but it turns out that if you ask them and they have a way to respond it's not as difficult as everybody thought it was. They used to not have a response mechanism but if you say to the person who booked it; 'would you like to offer something to your friend who came along with you?' in return for a little piece of data, 40-50% will say 'yes'.

That's bigger data, not big data in the technical definitional sense, but it is because we have more data, more velocity, more variety and more volume that we can start to behave in those ways. I think that's also creating a shift problem for the technology in the cultural sector including my role in public service broadcasting, because we've gone through and are going through what I would call the data maturity story. I presented it in *Counting what Counts* as a simplified continuum between having initially digitised the core business to ending up with digital products added on to what you already have; websites creating different kinds of data you've never heard of ... hits and unique page views, click throughs etc. In my experience across sectors in banking and television and publishing this often happens with little connection between the two phases, between your digitised first-generation product and your digital media product – and this is broadly the case across the board.

Then, just as we're trying to catch up with that and integrate web with our e-box office and ticketing we get hit by the 3.0 part which is the explosion of social media. Suddenly we're getting to grips with the new 'handles' and Twitter tags, 'likes' and Facebook groups etc. along with the fact that people communicate among themselves across their networks much more than they communicate with institutions. These things all add another layer of complexity and that is what I think I've characterised very roughly as the data 3.0 moment – where we are now.

The problem, if we're not careful, is that at each step it becomes ten times more difficult to get the benefits from it. It doesn't get twice as hard ... it scales because the systems aren't very integrated. I don't know if anybody in the room can tell me of a person with a specific handle who said something positively about a show on Twitter last night by looking at just one system. I've not seen a system like this but people are talking about it. I know that Amazon can tell me that and as a consumer I expect to know that. We're being benchmarked as a sector against what we do as real ordinary people in our daily lives. This is not because anybody's done anything wrong or are trying to hold on to the past. It's because it is hard and because it is a different mind set to shift

suddenly and to be taking a consumer-centric, user-centric point of view. That's not to abdicate responsibility for the art, it's to understand that empowerment to consumers is a potential massive

benefit for us as organisations and institutions. But, the first thing that we need to work out is where you are on that story. From my experience over the last year or so, the answer is very different in different sectors, different parts of organisations and in different parts of the cultural sector as well. Usually you'll get a different view from the CEO, board chair about the strategic imperative about how wonderfully it is all going because they're probably getting two bits of data about their web traffic and those numbers are going up – which they haven't yet worked out is a problem and not an advantage. If they're going up and nothing is changing in the bottom line of the organisation then what is happening is they're getting more costly and more difficult to maintain. The audience's expectations are also getting higher and that's not feeding through into the bottom line. I've been involved in this at the *guardian* and as a consultancy client at BBC Worldwide. This can break you because very quickly you can start to fail in the thing that the consumer is expecting of you. But more importantly we're not taking advantage of the opportunity by thinking in that consumer-centred way. We're thinking in a digital-process way about ticketing and in a digital-capture way about websites and bringing those together a bit. The consumer is thinking; how do I relate to this organisation? What's my journey through this organisation? Why can't this organisation simply send me the tailored information that I want – like I get from Amazon? Why does this organisation spam me with too much email?

I don't believe either that you should only give people what they want. There's a great book by Eli Pariser called *The Filter Bubble* about the problem of what happens if cultures just feed on things they already know they are interested in. If I only talk to people a bit like me and they only talk to people a bit like them I think that's one of the great public arguments in favour of cultural investment into breaking down the silos when that happens. We have to prove that we can do it because that's not the prevailing narrative of our times. The prevailing narrative of our times is 'consumer choice and money' not; 'there might be something that might not be good going on in here', if we all just talk to people like ourselves.

The data maturity story has a practical response to it but the context of that is 'how do you think about data?' Those of us who can see the benefits of data need to really drive a mind-set of seeing data as an asset, seeing what we can understand about our audiences and their behaviours as a key part of how we make decisions, as a return on investment. I believe that one of the reasons the cultural sector doesn't do that is because data has been used as a sort of keeping you down accountability thing. It's a requirement of 'some people' and it's difficult because the systems aren't great and quite frankly, some of those institutions don't use data very well

themselves. I have had that conversation with our new Arts Council England chairman at Great Peter Street and I think that maybe some things are starting to change – because they have to. I shamelessly borrowed the title of the report *Counting What Counts* from two people; one, because you can't go wrong borrowing from Albert Einstein who said (and I'm paraphrasing) that '...not everything that counts can be counted and not everything that can be counted, counts ...' That was my notion about public value but actually there's a great book about using data as a corporate asset called *Counting What Counts* by some American consultants who were driving it in the CSR (corporate social responsibility) revolution – they were saying that if you can prove these things in companies about the data using data then you'll get over this notion that CSR is simply spending money to 'look nice'. Believe what you want to believe about that but that was their point of view.

You start with a philosophical positioning which I think has to run through from leadership and will hopefully be met 'bottom up' by marketers who are saying 'oh, thank god for that – somebody's listening at that level'. Then you need to add to that perspective a customer-centric perspective. We all 'talk' this but the notion of customer empowerment has gone a long way recently because of digital technology and mobile technology and just because of a maturing generation of people who have grown up around the notion of consumer choice. Being customer-centric in the way you think about it is essential but then that needs to be taken into the process. Many organisations pay lip service to this sort of data either because senior decision makers don't believe this story that I'm telling and that's fine, we can carry on telling it until more of them believe it or because of their 'hidden secret'; they're not very good at numbers.

I came across a great acronym during this process; HIPPO – Highest Paid Person's Opinion, Highest Paid Person's Opinion trumps data. It doesn't or shouldn't in public organisations. Taking data-driven decision making into organisations is a part of the process. There are a lot of purest views of this, mainly coming from tech companies who want to sell us something. My general view of tech companies is that they are always selling you a vision of the future which involves them getting rich. A really good way of thinking about them is to think about them as you would used-car sales people. I can say this because I've been one, I've done it and that is the way that this works. That's not to denigrate the benefits that come from it but that's the way it works and that's important to understand. You want to be bringing data into your decision-making process because it's for you, not because it's the latest cool thing or because somebody is trying to sell it to you. That's common sense but many of us, me included, have bought technology because it felt like the sort of thing that we needed or that we should do because we didn't want to get left behind. You know more about your audience and what you want to do with it than any tech company does and that's a good thing in my view.

If I were working as a consultant for tech companies in this field then I'd be talking about customer-centric integrated approaches that might involve quite a lot of the existing stuff being scrapped. I don't know if you can continue innovating old client server models or desk-top box offices that aren't integrated with patron databases and I know that you can't lock them straight onto a Twitter feed and make sense of it easily – because I've tried. Maybe that's a conversation that the sector should be having with its suppliers. But I think it's important that something is being led from there. I also think it's important that the public funding institutions are aware of the need to get aggregated data coming out of systems that they pay for and that that's a legitimate exercise.

### **Where are you on the Data Maturity Spectrum?**

So, going back to the data maturity spectrum for a moment – where are you on the spectrum? Are you at a point where you've got your computers and box office but it's all a bit old and you are simply doing your best with it but it's all a bit difficult? Most of us, I think, are in Data 2.0, where you've got digital things that operate separately and you connect them using your own knowledge and wisdom and maybe Excel or Fire Maker or other software. If you do a lot of de-duping; you are Data 2.0 – if you spend time worrying that your databases don't intersect very cleanly then you're probably Data 2.0.

Think about Twitter as a litmus test ... how do you *do* Twitter?

If you do Twitter separately through something like HootSuite and you're really good at it but it's starting to take up a lot of time and you need to bring somebody in to look after it all the time then you are Data 2.0 and everybody is broadly in that category.

It would be a great thing to know what the 'drive back' to ticketing is. If you can integrate Twitter handles onto your database and know what the booking history of somebody who Tweeted you was, even theoretically, you can draw the map of what you'd have to do to do that and it's not just one step – you're Data 2.0. The only people I know who are Data 3.0 are probably Twitter and Facebook and the other organisations who are actually making these services. That's a massive opportunity for the commercial guys and it's a huge opportunity for us in the sector to make them move along from one to the other. It used to be really expensive to make the leap from one phase to the next but because of Cloud technology etc. it's getting cheaper all the time

### **Where are you on the Data Maturity Spectrum?**

- **Data 1.0: digital core operations**
- **Data 2.0: added digital domain**
- **Data 3.0: integrated approach**
- **Think about Twitter as a litmus test**

## Honest-to-goodness big data

We've talked about A/B testing but bringing it in as a way of life is really significant. One of the organisations that I'm on the board of is launching a new website and for the first time we can A/B test. It's been built into the content management system. You *can* A/B test anyway, by putting two different web pages up and seeing what happens but while it is a really valuable way to do it, it can be quite difficult. There is a mind-set that says that websites are never finished and that they are organic and grow – it's a really good idea to think about constantly testing, refining and reiterating.

Large-scale shared data is something that can only happen at sector level and I think that the work of The Audience Agency, Arts Council England etc. are heading in that direction and I urge co-operation. It might not be clear now as to why it is important but getting that level of better-aggregated data will help make the policy and strategic arguments much easier and that takes us into the notion of 'semantic analysis' or 'sentiment analysis'.

Brands want to know what you think about them and particularly at the moment what groups such as ['Generation C'](#) are thinking about them. It's a big generation and it is growing. They like to communicate, contribute, collaborate and curate. Brands are spending lots of money mining into the vast numbers of Tweets etc. trying to find out the semantics and the meaning of what people are saying in Tweets etc. to understand what this generation are saying about them on social networks. The 'sentiment' is one way of doing that. Are they broadly expressing good feelings about their brand / product, or bad things? There's a TED Talk by MIT Professor Deb Roy who's been doing some work on the analysis of how children learn to speak and using technology to understand how words form. They worked out that they now had some software they could use to work out what people are saying in the content of Tweets etc. They ran an experiment with Obama's State of the Union address to see how the *ideas* that he was talking about spread across social media and to where they went. That is semantic analysis and they can map those reactions but they don't know if anybody changed their behaviours which is what brands *do* want to know. I believe that there's something in there that can help us measure the value of what we do in the cultural sector. Whether that's learning and education or simply that someone has had a great experience, they're feeling great, or feeling thoughtful. These are the things that bond us together as a society – social value and cultural capital. One of the things we've been looking at is; can we

## Honest-to-goodness big data

- [A/B Testing as a way of life](#)
- [Large-scale shared data and analytics](#)
- [Semantic Analysis](#)
- [Measuring cultural value and impact](#)

increasingly measure the impact of what happens with cultural spend through semantic and sentiment analysis on social networks?

### **Being ready for Big Data**

That's the really big data bit of what we've been doing but to make that even possible we had to go into the practical stuff. The first thing we do is to suggest that people audit themselves on the Data Maturity Spectrum. Where is your organisation? Where do people think your organisation sits on that spectrum? Then you need a plan to get to where you want to be and what you might want to de-prioritise – strategically you need to focus on the goal and drop away some of the possibilities. All of that needs to be carried out in the context of a changing mind set about the possibilities this brings to the armoury of our organisations. I think it is a key part to being resilient whether that's increasing box office takings, removing costs, understanding crowd-sourcing funding. It has to be driven by a culture of data driven decision making down the line.

It's a slow process; it is capacity building and about overcoming our fear of the data and the numbers and what we could do with them. It's about patterns and the stories that data tells us and it doesn't matter how many but what matters is that they can see the 'flag' that tells us to 'do something'. Most of us know about telling stories and there are some really wonderful ways to tell stories about data. Tate, who are listed in *Counting what Counts*, did a really nice example of a dash board which steered away from spread sheets of numbers that people wouldn't read but instead presented change. It shows the story of what's happening, the risks and the opportunities but doesn't simply hand over the log files – they'll never get opened. You need to allow a culture of feeling comfortable with data and bringing data into decision making and that can be helped by capacity building and training. Getting the story to be heard is very important and you need to do it with credibility – testing in a small way with a strategic approach is going to be the best way. I hope also that there will be a shift in thinking in this area from the funders and from a slightly fractured approach to data towards a more cohesive and collaborative approach.

Keep your eye on 'big data' and keep up with the developments. Today is the launch of [Audience Finder](#) from the Audience Agency which is going to be an incredible resource for

### **Being ready for Big Data**

- **Audit against data maturity spectrum**
- **Timed strategic action plan**
- **Mindset change**
- **Data-driven decision-making**
- **Capacity-building and training**
- **Deploy approaches in limited way (A/B)**
- **Be ready for when funders shift their assumptions on data**

benchmarking. I would encourage you to sign up to help develop tools whether that's with the Audience Agency or box office suppliers or whoever is working in this area because the only way is to get in and test in practical term.

We think that Arts Council England and NESTA might do a high-level, board / chair-level, event in the autumn to talk about some of the issues and try to think about what might be done in this context. It's encouraging to me that this conference mostly feels about the very practical approaches to digital media and digital data because it has been too long that there've been people standing up here saying that the world's about to change and selling us a vision of that. It has already changed in large parts of what we are doing and we should stop talking about digital as if it is 'different'. Because it isn't, it's just a mode or a context, and it is already real life and the connection between what we do in real life and digital is so total. I saw some OfCom research recently with Generation C and they were asked if 'they spend more time online or 'in the real world'?' A significant number of the people asked that question, genuinely didn't know the meaning of it. I think that's a really important way of thinking about these topics and Big Data is one of the expressions of that. Big opportunity and big challenges, but I think that we were actually saying the same things 20 years' ago.

## Questions

**Tim Wood, The Place:** The other thing that we hear about and talk about as much as 'big data' is 'open data'. If, I think one of the things you're saying is that there are great things we can learn about our business, about its potential and its weaknesses, through this data. Is it advisable for us to be open about it? Do we need to think very carefully about confidentiality? How do we balance that?

**Anthony Lilley:** I think that, like many things in this area, the answer is probably 'both'. Many people have come from a background where data is closed and 'in a machine' and we think of it as being a 'closed in thing' as a result. The born-digital businesses such as Facebook and Twitter come at it from the point of view that everything is open unless it's closed which I think is more helpful. But the question is; where do you draw the line? I would argue that a large amount of the benefit that comes from genuine big data is from aggregating together data about anonymous behaviour in the same way that Facebook does. There's a phrase at the moment; 'if you're not paying for a digital product then you are the product' and there's a guy on Kickstarter who's fed up with that and he's not going to let the companies such as Google or Facebook sell his data anymore so he's recording all his data and put it up for offer on Kickstarter where he's made something like \$2,000.

I would try to avoid an over-dogmatic view of either open or closed data. There are many privacy issues, there are lots of data protection and privacy rules and clearly everything shouldn't be open and we don't benefit from everything being open. There's a fairly clean area in aggregated behaviour – I would love, for instance, to know that a funding agency could tell a politician who enquired, precisely how many people attended an NPO (National Portfolio Organisation) event last week. At a competitive level, I'm still to see evidence that there is more to be lost from competition within the cultural sector than there is to be gained from co-operation. But that takes a confidence in the belief that people will choose to attend your organisation or show than something else but I think that collaboration in that area would be more helpful – you can collaborate without it automatically becoming open. It comes back to a customer-centric approach and what you can be sure of is that someone else will be gathering that analytical data anyway – if we're not doing it, we're giving it to Facebook, Twitter or somebody else and they're making money out of it. Who knows more about you – the government or Tesco? Tesco.

**Delegate:** [unclear on the recording but ... ] a question about something to do with 'organisations already started on this process?

**AL:** I think that mostly they have. My experience is that people are trying to work out how to get their Data 2.0 bits, their web bits, to talk to their Data 1.0 bits. People are trying to re-engineer web office onto box office systems etc. but I think that needs to accelerate. As a sector I think you have good purchasing power at getting suppliers to provide those things for you.

It's an odd thing for a digital person to say but I would reign in your social media until you know what's working because it can consume you and I'm not sure where the benefit of it is yet. It depends what you want it to do and different sectors think very differently about it. If you are in the business of spreading ideas, maybe a literary festival or a museum then you should be 'social media-ing the bits out of it' but if you are a live-performing organisation I think you should be measuring the impact of what you achieve. The biggest social media success that we've had at ENO was 1.5 million views on a YouTube video that we made for an opera called [Two Boys by Nico Mulhy](#). It is an entertaining video where they took social media behaviours such as 'friending', 'poking' and sharing photos out on to the streets of London. 1.5 million YouTube views and yet we probably sold about 9 tickets! In public benefit terms the piece was getting people to talk about the effect of the internet on daily life and culture, but it wasn't measurable by Arts Council England or measurable for the bottom line. It was a brilliantly important thing to do but it depends where your priorities are. It's also about how you integrate that into the organisation – at ENO we've got digital and participation as one piece within education and marketing.

**Roger Tomlinson, The Ticketing Institute:** I heard Jo (Taylor) say this morning that arts marketing was born 20 years after I starting practicing. I think you'd be pleased that the ticketing system suppliers are working on integrating deeply with Facebook and Twitter and other social media. If anything, a number of them are stating the shock about what comes down that Facebook connection and what they can do with it because most people don't seem to be managing their privacy or their relationships with their friends – you might find someone who posts or Tweets something and you find that you can reach say another 1,000 people through them fairly effortlessly. There's an intriguing debate that I've been witnessing recently during procurement processes and that's been used to say; can your system automate loads of the processes? I want to make the argument that what you are showing actually needs quite a bit of human intervention because at the end of the day, somebody has got to interpret the data and particularly the relevance of what people are Tweeting and posting. You've made the point that it needs to be put in context and it seems to me that's an interesting challenge but it's more of a challenge in these organisations operating the paper silo as opposed to the digital silo but it is something about resourcing that we just can't avoid addressing. If we can get the big data we have to have people who process it and handle the interaction. My colleague Ron Evans from the US talks all the time about the thing that he notices in the UK compared with the US is how few people we have actually engaging with talking to customers and dealing with them personally.

**AL:** I agree and think there's a structural thing about what we think 'marketing' is in this country. I chair the artistic committee at the ENO and we're trying to merge that with the marketing committee so that we understand that it's not two things and that neither of them are sales. They're obvious things to say but these distinctions are built into the way that we've thought about these issues. Unequivocally, the best things that you can get onto social media are to do with the authenticity, experience of the people talking. So, somebody straight out of university Tweeting out press releases isn't going to work at all but a moment where the senior artistic team are talking about something interesting on Twitter will be much more engaging. We *know* that's how twitter works but then you've got to map the conversations. In the report there's a section about 'network value analysis' which is about how your users amplify messages, how bridges are made from one community to another, who your 'spreaders' are and why. In arts organisations, the people who know about those things are the people who are dealing with funding and donors because that's what they do all the time. They are looking for the sort of people who will move up the pyramid, which is not stepped, it's a continuum, and from a consumers point of view it is a relationship. I'm trying to understand arts venues and institutions are clubs in which you have levels of relationship, passion and engagement. In a club there are the people who make sure the basics work, that the

lights are on, there are drinks available, but there's also probably a door policy, there's someone dealing with fights – which are all ways of thinking about your social media. I wrote *Ten Reasons Why Social Media is like throwing a Dinner Party* for Arts Council – there will always be elements that need managing and you can't do that by 'throwing human beings at them all the time'. You need structures and then human beings to make them brilliant and for people to know what the rules are. For a time we ran a football club social network and we had to set some rules. There were a couple of days where people were causing trouble so we brutally ejected those people and then everything was fine. I couldn't agree more that talking is a big part of this and I know that Owen Hughes from Wolff Olins was talking about it this morning talking but brands are clubs that want your money in one form or another and cultural organisations have a better stance with their audiences in relation to that – they like us more.

**Delegate:** It was really interesting what you were saying about data, the benefit and the accountability and you've been talking about it giving us positive stories but what if better data gives us back negative stories. What we don't want to go to is the fact that our stakeholders see the old metrics which are based on bad data ... and if we're still in a situation where, if, as arts organisations ... if we are not competing, if we are ... as arts organisations across the country are going to gravitate towards metrics which are older and more crude. I've got an example of this about cultural diversity and how difficult it is to get that metric together and how some arts organisations gravitate towards a really crude metric which could be perceived as being a bit racist and there are methods of doing it that are reflective which will probably show percentages that are a bit skewed.

**AL:** We know that people play to the data and it depends which of my hats I've got on as to how I would answer that question. At the big-policy, Arts Council, OfCom- level, they've got no choice but to find out because we know what's going to happen in the next funding round so they should be making those decisions based on something additional to the decision criteria that they've got so far because there won't be more or even the same money. I'd rather there was more than less data in that but I'm a pragmatist about that and I know that who you talk to and how you make your case are very important. I think that Arts Council, even at a macro-level, has to have more as its funding agreement continues under pressure.

**Delegate:** one of the things that I've always thought would be a good idea would be a 'bad data amnesty' – get to Ground Zero where everyone agrees that you're not being reported on against last year's data.

**AL:** That's a brilliant idea and it's set me thinking now! It's pragmatic isn't it? Open data theorists, data purists, would probably say that all data is, by definition, better than less but that might be because they're often not operating in a practical set of circumstances where things are already happening. There is a bit of a brutalist about me when it comes to data and people get away with it, not necessarily in the cultural sector but people do get away with not delivering what they promise to deliver. Sometimes there are good reasons for that and we should learn from that and sometimes there aren't. To some degree this is a rationing system, whether they are rationing public money or the money out of their own pockets. And in those circumstances you have to have ways of making choices. In practice, more tools are better for those sorts of decisions. I would rather that we had enough money to treat everybody on the NHS but that's a rationing system too. I think that practical choices are better made with more data.

Thank you.