Print, Digital, and Your Brain

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Print, Digital, and Your Brain

Welcome to the Brainfluence Podcast with Roger Dooley, author, speaker and educator on neuromarketing and the psychology of persuasion. Every week, we talk with thought leaders that will help you improve your influence with factual evidence and concrete research. Introducing your host, Roger Dooley.

Roger Dooley: Welcome to the Brainfluence Podcast I'm Roger Dooley. Try something a little bit different this week. It's just me no guest and what I wanted to do was share some information from a recent speech I did in Beirut. It was at an event sponsored by the International Advertising Association and the topic was print vs digital and how perhaps print has been written off as dead, but it's really not.

This really fits into my interest because many years ago in the early days of palm computers I got my start as a marketer in print. I co-founded a direct marketing business aimed at the earliest owners of home computers and at the time this was a very appealing sort of marketing, it was very quantitative. We could do square inch analysis on our catalogs. We could do A B testing, which was kind of rudimentary by today's standards but still we could do it.

So we actually had a pretty good idea of what was working. And we printed, actually, millions of these paper catalogs and had a, really pretty good, understanding of which parts of our marketing are working and which weren't. And also as part of that business there was another print component. We started a magazine called Electronic House that we initially thought would be sort of a direct marketing play but it had turned out that publishing a magazine was a little bit more difficult, at

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least publishing it and making a profit it was more difficult than we expected and we sold that business.

But that particular magazine was aimed at the early adopters of home automation and it turned out we were probably 30 years ahead of our time because it's only in the last year or two, with Amazon Alexa or the Echo and Google assistant so on, that the home automation is really becoming something that's mainstream. It's been a niche industry for years and years.

But I can report that magazine that we started so many years ago is still being published, it's Electronic House and you can find it on your local newsstand although we haven't owned it for many many years. Over time one of those businesses was called College Confidential. That is another business I co-founded back in 2001 and it was aimed to help students and parents in the college admission space. In the U.S. college admissions is a very perplexing topic. And back in those days there was much less information available online than there was today. And we built a community that ended up being very successful generating millions of pages per month and we sold that business to a unite of the Daily Mail group.

This was yet another exposure to the print business because this particular business was called Hobsons and they made most of their money by publishing these really, very nice, directories of college information. They were, for instance, directories of liberal arts colleges or Christian colleges or Hispanic MBA programs. These are really very nice books. This company saw the handwriting on the wall and decided to convert from print to digital. And we tended to be doing quite a bit better at the digital space than they were at the time. So they acquired us

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and it ended working out very well. Since that acquisition, I would estimate, that probably 10 billion plus ad impressions have been delivered on that website.

So my other exposure to print, of course, is my book wrinkle which while we go out a few years ago now it's in about 10 languages. Since this book has been published, both in print paper that is in digital form; that too, has provided some interesting information for me on how print and digital interact. An interesting little side note here is that print is actually becoming a little bit more interesting lately. The Atlantic just published an article about voting and how paper voting might actually be more legitimate than electronic voting, even though logically enough electronic voting is quick it's fast to tabulate and efficient.

This is actually a quite a serious article that posits that we should really go back to paper voting because there's no malware that can attack paper, paper can't be hacked can't be changed after the fact. For many reasons this article suggests that paper is better for that. Now voting is only one little niche market. But it's interesting that this is actually a serious proposition.

Another very practical aspect of paper is its size. I wish I had a visual for this but, if you compare, say two page spread in a high quality mail order catalog, with what you see on a mobile phone it's quite remarkably different. I looked at a Charles Tyrwhitt catalog, a very custom shirt maker, and they have some very good photography in their catalog. Often it takes up an entire page or even or spills across into two pages. And if you compare the size of that photograph, in resolution and what you see and what it looks like to what you see on an equivalent display, in a mobile phone, it really doesn't compare. The

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mobile phone shows you just a tiny little piece of what you're seeing on the paper version.

And of course then there are other very practical aspects to paper, paper does not become obsolete. Unlike many of the digital media that we have, that we can't read now, whether the floppy disks or other media, or were perhaps things that are stored in obsolete software like Word Perfect. By comparison, paper is very different. You go into a library and pick up a book that was written and printed hundreds of years ago and it's still perfectly usable. Essentially just as usable as the day that it was printed.

Now let's look at the New York Times who is certainly an authoritative source. Way back in June of 1992 they declared that print was dead. The article was titled The End of Books, and at that point the villain was hypertext. That is the ability to link something in the text that will take you to more information about whatever is linked. So then they thought, "Why would you want to read a paper book that's very static in nature. When you could read something electronically that would allow the writer to link to more information about that and basically connect all the information available."

Well as we know hypertext did not prove to be the end of books. And then 20 years later they wrote another article, The New York Times called, Dead Again. It had amusing illustrations showing a book, in what appeared to be sort of an electronic chair situation, and this time the villain was e-readers. Now why would you want to carry your own paper books when you could fit dozens or hundreds or even thousands of books on an e-reader that would weigh nothing. They have tremendous advantages in

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terms of searchability and so on. Now this all makes a huge amount of sense, except it didn't prove to be true.

I did a little bit of research on Google and I found that searches for the words ebook and Kindle peaked in the year 2012. You might say, "Well okay that's because books were rapidly becoming electronic in nature and therefore people wouldn't search for ebook or Kindle, they would just search for book." But that's not really what happened. Other data shows that electronic book sales peaked in 2013 and actually contracted, both in terms of absolute numbers and as a share of total book market, in the ensuing years.

More recent data, from March of 2017, shows that printed book sales were up, really a large amount. By 7%, while ebook sales fell 4%. That's from the Guardian. And yet another piece of information from CNN suggested that ebook sales plunged by nearly 20%. So now clearly these numbers vary because you can count ebook sales in terms of unit volume terms of revenue market geographic market and so on. But what it really shows is that ebooks are far from replacing real books or paper books.

My own experience, with Brainfluency, is that the hardcover version over the years has sold about 71% versus only 29% for ebooks. Really a tremendous difference considering that the ebook version has almost always been cheaper than the hardcover version. The conclusion that you have to arrive at, is that there is some kind of deep rooted preference in readers for paper and print. In fact there's a new concept called digital fatigue that is become sort of a buzzword. People are actually tired of digital media and using their devices and in many cases are trying to spend less time on them.

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Surprisingly enough this is not age related. The people that we associate most with being digital natives, say people in the 18 to 24 age group, are most likely to want to spend less time on digital devices. Picking up on this trend, The New York Times, once again, has declared that our love affair with digital is over. Now I'm guessing that their timing is just about as good as their timing of their previous prognostications. But I would say that digital is nowhere near dead. It's not dying. Nobody's gonna give up their phones or their devices. But the key point I think is that paper is nowhere near dead either.

So let's get into a little bit of the neuroscience and brain science of why people tend to prefer paper. There was a study done by Millward Brown in 2009 using FMRI, which produces these really nice 3D, almost real time images, of which areas of people's brains are activated when they are viewing content, or touching things, even tasting things. And they found some really interesting things when they compared paper to digital. First of all they found that visual and spatial integration areas of the brain were lit up more with paper, which made paper content, they thought, more real to people.

They found that there was more emotional processing involved with paper content and they found that there were more brain responses connected with internal feelings when people viewing content on paper. That to me, the key finding of that whole study was that, "Tangible materials leave a deeper footprint in the brain." and that's a quote from study. They are basically saying, that when you can touch something it ends up leaving a deeper footprint, it's more impactful for our brains.

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Now another group of organizations that are interested in print are the various post offices around the world and how the royal Royal Mail, which is the UK post office, did a study just a few years ago, 2013, about direct mail. They compared it to email and television and they found that for engagement, for emotional intensity, for memory encoding and attention, direct mail topped the other two media in every single case. And in fact a few areas where direct mail was really impactful, compared to email, was likely to grab a person's attention, how much time they would spend reading it, and whether that communication made them feel more valued.

Now there's something else called the endowment effect, and we've written about this at Neuromarketing before. But basically the endowment effect means that when you own something it is worth more to you. The same item owned by somebody else is worth less. Now one of the interesting things about the endowment effect is, that it can be triggered even if you don't own it. It can be triggered if you hold it or pick it up. And again going back to the Royal Mail report. They found that vision, compared to vision and touch, was not nearly as impactful. When somebody could touch something, in addition to seeing it, there was a 22% lift in psychological ownership and a 24% lift in valuation. In other words how much they felt that item was worth.

And yet another item in that report, showed that multisensory learning almost always topped, in a sensory learning, often by large amounts. And one kind of, not neuroscience, conclusion of this study reached, was that mail tends to stick around in people's homes for a long time, where e-mail tends to get deleted or we scrolled off the screen, mail lasts for an average of 17 days. Door

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drops, those things that people hang on your door knob, last for an average of 38 days. So mail is persistent. and what that means is, that it creates more brand impressions, it's lasting, and fundamentally different than a typical digital communication.

Another study that led to these topics, was done at the University College of London, which has been a major source of research for all kinds of neuromarketing related topics. They are great at brain imaging there and they did a study in conjunction with a couple of commercial companies on news works and PhD and they came to some really interesting conclusions. One of which was that when somebody touches a print ad, it improves brand trust. And the numbers are pretty amazing, a 41% lift in honesty and sincerity, a 30% lift in confidence and other similar scale lifts in reliability and customer satisfaction. And this is from touching a print ad versus viewing it. The same study shows that you are more willing to try, more interested in purchasing and more likely to recommend a product when they could touch the ad for that.

I think the fundamental conclusion of this study was that, when you could add touch to vision, when people could touch an ad versus merely seeing it, it reached their emotions that reached their heart and hence, made it much more impactful.

Now another topic that I've written about in the past is, how vivid print ads can change memory. This is kind of a sort of bizarre little thing. But you think your memories are reasonably accurate. But this study had people either, taste a new type of gourmet popcorn, or see a very high quality print ad for that gourmet popcorn that had vivid imagery in it or read a text description of this new

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popcorn. And then a week later, they went back and they asked three groups of people who had seen these various exposures to the gourmet popcorn whether they had tried it. And interestingly enough the people who had tasted it and the people who had merely seen the vivid imagery were equally likely to report that they had tasted it. So the conclusion that you have to draw is that the vivid images actually created a false memory of tasting this product. The text people meanwhile, the people that merely read about it, did not have that same effect. They did not report that they had actually tried the product.

Now, let's jump over to the topic of books for a moment. While, we all like books and I know when I talk to people almost all of them prefer paper books to books. But that isn't to discount the convenience of ebooks, or the searchability, or many of their are other advantages. Virtually everybody that I talked to says that they would prefer to read a book in paper format if they could. And there's an action actually some science behind why that's the case. When you read a book in paper format you form a mental map of the content. If you look at a book a paper book each page has four corners and those are spatial reference points. There might be other reference points, things like white space, breaks in the text or perhaps a bigger white space where there's a chapter break. There could be an image in the text, you can actually feel and see how much of the book you have read at a certain point. In other words, it's just a little bit, or you're halfway through or you're most of the way through.

I'm sure that we've all had that experience where you can visualize exactly where something was on a page when you read it, when you're trying to find it again. And compare that to the electronic version where,

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unfortunately, with a Kindle it's a great advantage to be able to change the font size, to be able to change the layout from horizontal to vertical, to go two column or one column. And this is great, but unfortunately it pretty much eliminates the possibility of creating those mental maps.

Now another topic that affects the way we process information from ebooks is, what scientists call haptic dissonance. And what that means is, what we're touching, what we're feeling does not really seem we correspond to reality. And let me give you an example you could put War and Peace on your Kindle, a massive book with many many hundreds of pages, or a short story. Your Kindle is not going to weigh any more, it's not going to look any different. When you look at the pages, those pages gonna look exactly the same either way. It might be a very small clue, saying a percent indicator that shows you where you are in the book. But ultimately the feedback that you're getting, the haptic feedback, does not really correspond to the content that you're seeing.

Now what I want to do next is, shift into how you can make your print a little bit more impactful. Because really, a print does have one disadvantage. It's more expensive than digital in most cases. So you really have to work to ensure that your print activity has a higher ROI than your digital activity. Now one way to do that, is by engaging more senses with your print.

My friend Brian Solis, wrote a book and published a book through Wiley a few years ago called, What's the Future of Business. It was kind of unique because the book was about customer experience, but the book itself was an experience. It was kind of an oddly shaped book, it was heavy, it was filled with really nice color illustrations, it

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was glossy, read or different than the usual business book. The whole idea was that in conjunction with Brian's ideas about how customer experience would change, this book was to show how the book experience itself could change.

Another really interesting example of engaging senses in a print book is Jonah Berger's book Invisible Influence. John was on the podcast a little while back and this book, it had a lenticular screen on the cover. And that's one of those things that when you move the cover from side to side and change the viewing angle a little bit, the image actually changes. So that you when you see this in bookstore shelves, say at Barnes and Noble, you really can't help but either pick it up and move back and forth to see what the two versions are or move your head back and forth to see the different versions. Of course there are much simpler ... That's that's a very costly way to create a sensory experience. But even things like die cut covers and different varnishes and so on, can create a fundamentally more sensory experience with a book.

Another paper product that many of us have experience with is business cards. A few years ago I decided that business cards were kind of passe and most of my ... I no longer used a Rolodex, instead I would connect with people on LinkedIn or somehow add them to my contact list I then tossed the business card and I then decided that probably most people were doing this and I would go digital. An astute marketing guy that I am, it only took about 25 people asking me, "Roger do you have a business card?" Before I decided that okay, I was a little bit too far ahead of the market. So I had some business cards printed up. The ones I had done were not really all that special. They did have rounded corners, so they had

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die cut corners, they had a very heavy glossy varnish on them and by a little bit heavier than most.

And what I found was, not only did people appreciate me being a heavier a business card for them but about half the time when I handed to somebody I would get a reaction that was, " Oh cool." So by making this card just a little bit more sensory, with the die cuts and the varnish and the weight, I ended up producing a more memorable reaction from the people who got it.

Now my favorite business card of all time is from a friend of mine in Moscow who has business cards that are fairly heavy stock. They're a little bit more, say, cardboardy than most business cards but the front side looks very normal. It's got his contact information on it as you might expect. But when he handed the business card your fingers feel something on the other side and this is a debossing, that's where there's a pattern that's imprinted on the back and sort of pressed into it. And in his case, he's in neuromarketing business. And there is a brain debossed on the back. And you can't see this from the front, so when you see the business card or are handed business card it looks totally normal. But your fingers feel that on the bottom and you cannot help but turn over and then see this embossed or debossed image of a brain.

So to me, that is a great way of using a sensory experience to make a business card more impactful and also emphasize your brand or what it is that you do. There's all sorts of things that you can do. There's embossing, debossing, you can use a really cool edges, coloring, foils, selective varnishing, die cuts. All these things can make a business card much more sensory than the little rectangular piece of paper that most people

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hand out. And I would highly recommend that ... One of my favorite card designs that I've seen, is one that incorporates a sort of sandpaper like finish in part of the area and it's just part of the design of the card. But it is for a company called Wildfire and you can actually strike a match on this area. It's rough enough that you can strike a match. So not only is it really memorable, I mean when somebody you hands a business card and a little match with it, you can help but remember that. But it also reinforces the company branding.

Now to me one of the best ways you can amp up the performance of your print, is by combining it with digital. Now, I was in the junk mail business, I didn't never called it that, I didn't like it when people call it that, but I was in the business for years. I think that one reason people consider direct mail, junk mail, is because it's undifferentiated. They feel like people are just sending out a bunch of junk. It's not personalized to them and as a result it is not useful. In fact people are individuals and the digital world gives us a lot of new ways to get even more personal with your customers.

There's a fairly classic study, back at the turn of the millennium, that looks at a black and white mailer that got only a little bit under a half a per cent response rate, which is a pretty bad response ready for direct mail, personalizing that black and white piece I added about 50% of the response rate. Making it color added about that same amount. Adding both of those factors, personalization and color, more than doubled the response rate. And then adding color and even more personal details caused almost a six fold increase in response rate. So now, that was sort of in the classic era,

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that was before we had all this great behavior data to make things even more personal.

Now today there are some really fascinating tools out there. One study, academic study, showed that you could accurately predict somebody's personality, and these would be the big five personality traits, from analyzing their Facebook posts. In fact analyzing just 10 likes was more accurate than asking your close friends, seems pretty remarkable, but if that's the case. Another analysis looked at people's Twitter activity and found that just 25 tweets were enough to develop an accurate portrait of their personality. And if you want to try this yourself, and if you say, "Well that can't possibly be." Go to a website, applymagicsauce.com. Give it a go.

That's a site that has been created by the University of Cambridge and it'll give you a chance to see how accurate these social media predictions are, at least in your case. And of course there's other online behaviors that you can overlay. You can look at whether somebody left something in a shopping cart to trigger a direct mail piece. You can look at products they viewed to determine what to mail them.

And to me the sort of ultimate goal of all this is to combine your actual customer behavior, in other words, what those people actually did in relation to your site and, where you can directly measure it, with big data. That might give you more information about their personality, their behavior on other sites and so on. Then using the tools of behavior science to create really well crafted messages that are going to match their needs, their personality and so on. Yet another area that I think is going to be really important in increasing the value of print, is augmented reality.

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Now we all saw what augmented reality could do a couple of years ago when the Pokemon Go craze was in full swing. But augmented reality can make paper come alive. There's some great apps out there. There's an app called sixteen hundred that you can try if you load that app onto your iPhone, your Android and pointed it at a US one dollar bill, that will create an interactive tour of the one house that you can both just enjoy and watch. But you can move your iPhone around and it changes the perspective of what you're seeing and so on, very powerful little tool. Ikea is using augmented reality to show what a piece of furniture might look like in your environment. And there are all kinds of other apps, one that will turn your business card into a 3-D image.

There it's Christmas time now and I played a little bit with an app that I just printed out an image from the web of what looked to be a regular Christmas scene. And then when I viewed that through an app on my phone, it turned into a little 3-D winter wonderland. But again as I moved my phone around I could view it from the left, from the right, from the top, and from the bottom, and so on. And all this time there was animation within the scene itself.

The exciting thing about augmented reality I think is that, it's going from these kind of gimmicky little applications that require installation and special apps and so on, to much more mainstream in the coming years. Apple has released their AR kit for developers that's going to make it much easier to develop augmented reality apps and Google, not to be outdone, has released AR core. In fact in 2017, it's projected that there will be one point five billion pieces of AR mail sent by the U.S. Post Office.

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Seems like a big number. But clearly this is becoming mainstream. And if you look at the projections over the next five years, augmented reality is going to skyrocket because everybody's app is going to embed AR. So you won't have to download some special little app to see something. It will be part of your Macy's app, or your Starbucks app, or whatever. Another aspect is virtual reality gets most of the press because it's so immersive and really cool. But probably, over the next five or so years, augmented reality is gonna be 80% or more of the revenue compared to virtual reality.

So just to sum up, if you want to amp up your print. First of all maximize the sensory appeal, use the size that print can allow you, use colors, coatings, die cuts, anything that creates a more sensory impression. Next, if you are using direct mail, overlay digital data to personalize much better. Not just in personalizing the mailing piece itself, but determining when to mail, what to mail and so on and to whom to mail of course. And lastly, get ready for augmented reality. It's going from gimmick to mainstream and it's really happening right now.

At this point I'll wrap up and hope that you've found some interesting information about how to make better use of print and also I guess to convey my basic message that print is not dead. And if you want links to some of the content mentioned and so on. Go to the show notes page at rogerdooley.com/podcast. Thanks for listening.

Thank you for joining me for this episode of the Brainfluence Podcast. To continue the discussion and to find your own path to brainy success, please visit us at RogerDooley.com.

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