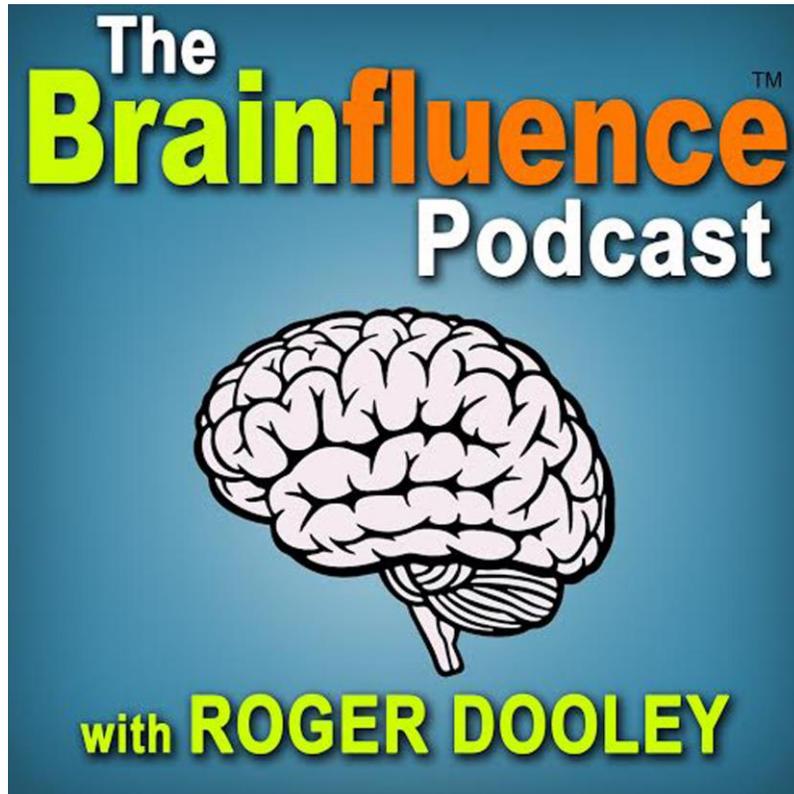


Ep #26 - Optimizing the Cognitive Funnel with Kyle Henderson



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Roger Dooley

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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 and with me today, we have Kyle Henderson. He's the founder and chief product officer at YouEye, Inc. and he's a 15 year veteran of product management research and design. Before YouEye, he had senior product management roles at companies such as Nokia, FortiusOne and NAVTEQ.

My first encounter with YouEye and came a few years ago when I was running a few video usability test on a website that I was working on. This is probably a couple of years ago. I had recently spoken at a conversion conference in San Francisco and one of my co-keynoters was usability expert Steve Krug.

One of the points that Steve makes is that usability testing should be fast and frequent, not something that is a big project at the end of the design effort just to be sure that all the kinks have been worked out. Instead, it should be an iterative part of the process so that the promise may be identified very quickly and if necessary have even the basic structure of a website can be changed as opposed to trying to tweak things at the last minute the week before it launch.

One of Steve's point was that you could usability testing very simply in a morning with just a few people, very

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simple hardware setup and so on. YouEye at that point made the process even easier by doing video recordings of panelists that were located remotely. Perhaps not quite as much of controls you have in your in-house usability lab, but certainly quick and easy.

For starters Kyle, why don't you tell me just a little bit about what YouEye is up to now? I think that you do a lot more than the simple usability recordings that I experienced.

Kyle Henderson: Roger, first thanks for having me today. I appreciate you making the time. To answer your question, YouEye, as we're able to recall, we did really start in the usability space in very much on Steve's idea of quick, iterative usability testing.

In the last few years we've extended beyond that mostly because we recognized that the capabilities we built this idea of being able to remotely and automatically interview someone anywhere in the world landed itself to doing more than just usability and landed itself to doing in-depth interviews, focus groups, research on competitors and in general, being able to connect to your customer base or a specific audience allowed a much more insightful understanding of your audience to be embedded in the design process of whether that's a website or a digital product, media or even the physical products.

Much of what YouEye does today is around conducting automatic interviews that have a variety of used cases and then turning that video data into analytics data sets.

Roger Dooley: Kyle, when you say an automatic interview, what does that mean exactly?

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Kyle Henderson: Simply it's the idea that instead of interviews traditionally being one human speaking to another human, now I can have a device interviewing. An example of that would be some of the technology we built for smart phones and tablets where we have panel members all over the world who get a vibration in their pocket and they pull out their device and their invited to answer a few questions about a shopping or a retail experience they had recently or what do they think of this new app that hasn't been released yet.

We literally use the smart phone, the front-facing camera, the microphone and we either record the screen, the device while we're asking questions of this person and those questions again, the interview questions or we can present survey questions and we have videos of people thinking through and showing us why they chose what answers to survey questions or if we're doing product testing.

Example is that app. We can actually show someone an app that hasn't been released yet, ask them to complete a few tests and be able to essentially remotely capture and then observe later what they were doing and how they responded to the app.

Roger Dooley: Are you capturing a video at the same time that you're capturing what they're doing in the screen?

Kyle Henderson: Yup. On the very same camera and the screen are recorded.

Roger Dooley: That's really interesting because mobile usability I think is still a perplexing issue for a lot of companies. I think usability overall is perhaps perplexing for a lot of

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companies but in particular, there's so many different mobile experiences and it's growing so quickly.

I've been saying mobile usage is really growing quickly for the last few years but it seems like the month-on-month growth isn't slowing down very much and now we're seeing so much stuff done on mobile that really a few years ago you've said, "Well, they're probably not going to really do that on mobile. Maybe they'll check something out, but if we're going to read a long document they'll do that by some other mechanism."

In fact, I just saw some statistics that people are reading incredibly long documents and posts via mobile and that we're seeing engagement periods of 20 minutes or something if the content was interesting despite the fact that it's a mobile screen. I think a lot of businesses haven't fully adopted to that reality that people are doing absolutely everything on mobile or they're trying to.

Kyle Henderson: That's definitely a challenge for businesses nowadays to literally wrap their business mind around not just being desktop or web-oriented anymore. You really have to care about all the screens and even diving into mobile a bit more.

I would say nowadays there's actually four screens you have to pay attention to: smart phone experience, the tablet experience, the desktop and having the television nowadays with the rise of smart TVs. It's become a very interesting space in trying to understand how people and humans engage and react to different literally physical experiences with devices and what's the appropriate content.

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On the note of the rise in mobile, I was reading an article just the other day talking about the number of devices that are out in the world today and there are more than 10 billion mobile devices out in the world today but there's only 2 billion desktop devices out in the world. This growth is just astronomically rapid and companies are struggling to deal with it.

One more comment, even the separation between smart phone experiences and tablet experiences is a topic many companies, especially e-commerce companies, are going to have to deal with the next few years because the usage and attachment behaviors for consumers between these devices that's rapidly changing.

You mentioned how reading longer articles, longer documents has become a newer trend in mobile and I've been seeing in data specifically for tablets as well and even how e-commerce experiences what people do for e-commerce is different on a tablet device than on a smart phone device.

Roger Dooley: That's interesting. I know that one statistic I saw a while ago was at least using phones, consumers would often complete an e-commerce order by a voice call initiated from the e-commerce websites. They get to the point where they have the product picked out but rather than go through a complex form-filling process and so on the small screen, they just then click an 800 number to complete the order that way.

I'm sure that's changing as well and of course, you've got people like Amazon that make it trivially simple. If you order from them once, they'll keep you logged in. If you're

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a prime member you'll have that one-click order button and they make it very simple to complete the order on the web. For first time order at a new company, obviously it's a slow process to fill out a 20-field form.

Kyle Henderson: I will admit, I've definitely been a very happy victim of one-click ordering with Amazon. It's a very satisfying and simple experience once you've gotten into the Amazon ecosystem via Prime.

On this topic of tablet and smart phone, I gave a presentation at a mobile developer conference in Seattle at the end of last year and one of the interesting behavior patterns we're seeing emerging was that smart phones were specifically being used for either rapid research review information and price checking and then tablets were used for e-commerce experienced browsing, doing comparative shopping and really filling out the shopping cart.

The purchases are happening more often on the tablet than on the smart phone device. There is this cross-screen relationship where purchasing activity may start on the smart phone and then migrate created over to the tablet and then finalize on the tablet. It would be very interesting to learn more about this in the coming years.

Roger Dooley: Yeah. I think too it's partly generational thing where the generation that is growing up using smart phones can be more comfortably doing absolutely everything there even it involves entering information.

The other day I was in an event and this was a bizarre little experience. There was a young couple with a baby in the stroller and this baby I think was 18 months old and

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weirdly in front of that child in the stroller they had an iPhone and a little custom iPhone holder. This baby who, as far as I could tell, couldn't even speak was there swiping up and down and across on the iPhone, not sure what she was doing but seemed to be very engaged with that. I think that by the time she's ready to start placing e-commerce orders, there will not be any fear at all of doing it by phone.

Kyle Henderson: Yeah. I very much agree with you. I'm 31 years old but I find myself pulling out my smart phone and using Google slides to rapidly make edits to a presentation back on my phone prior to going to a meeting. That is something three or four years ago I would never consider doing on my phone because of how clunky I expected it to be.

These new experiences and these traditional thoughts about - it's even funny that we say traditional. We're only really living with computers for the last 20 or 30 years as consumers but these paradigms that we thought were established I think all can be broken or recast in the next five to eight years with the rise of mobile.

Roger Dooley: For sure. I think that companies in general are getting better. We're talking about Amazon's Prime which to me is a great example of how do we eliminate friction in the process. That's something that I talk about quite a bit. It's the final ... in my persuasion slide model. Sadly, friction, for most people, is higher in the mobile experience than on the desktop experience where you've got a full keyboard, you've got a mouse perhaps and alternate ways of moving around and easy flipping between windows and so on.

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I think that companies are getting smarter about identifying those elements of friction and I would guess that your various testing processes helped identify those friction points whether it's a desktop or mobile experience.

Kyle Henderson: Very much so. In evaluating and testing and researching e-commerce experiences, the section of the funnel that you are referring to with your key usability issues being identified or how Amazon solved or removed friction with one click, we separate the funnel in our mindset in two sections.

The lower funnel we just called a functional funnel, which is literally when the consumer or the purchaser has decided they are going to buy the experience that I'll point for them should be as few barriers and as few friction points as possible to allow the item to show up at their door. That's why one-click is so wonderful. The moment someone decided to buy they only tap once and the order is in the system.

I'm going to use that to segue a little bit here. We focused well on the functional and that's very much about usability testing. We're moving as many issues or barriers filling all the potholes in the customer journey once they had decided to buy. What's very, very meaningful, and we found we also captured in our remote testing methodology with video, was being able to learn and understand the patterns and thought processes people go through when they're trying to make a decision to purchase.

We call that upper portion of the funnel the cognitive funnel. We call it that because there's a number of

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cognition processes that a person goes through when engaging with the advertising, the presentation of the items, additional content that are really trying to win their head and their heart to make the decision to buy.

That's why we call the upper half of the funnel the cognitive funnel and quite often, it's where our customers at the YouEye want to focus the most because work in the functional funnel is very direct. It's quite measurable. It's been getting worked on for the last 20 years in this industry so people are very familiar with optimizing usability and in that regard and they value it.

The space of understanding how this content, presentation, concepts really market and essentially help guide or offer a compelling story to a consumer to consider one product or one item to purchase is the most valuable part of the work we do for our customers.

Roger Dooley: Can you give me an example of cognitive funnel project or how somebody might analyze what's going on?

Kyle Henderson: Certainly. We conducted a study here at YouEye that evaluated the e-commerce experiences of a dozen different companies, comparatively analyzed them.

What we were finding with this project and the details where we give remote interviews with 3,000 participants over a 3-month period and then we had all the video sessions people analyzed by our platform, we were finding items that were very meaningful to the e-commerce cognitive funnel such as confirmation of free shipping very early in terms of their e-commerce experience really led to additional confidence and

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eagerness to purchase from a vendor that was no longer in question.

We also found that social content around product quality and product stories was also very beneficial to encouraging a consumer to make the purchasing decision. In website that does that very well. Part of the study was backcountry.com and we found that they had a wonderful combination of assuring messaging, social content generated around the products and items you could purchase. When it got to the purchase moment they then moved everything out of the way and had a two-step checkout process. Their functional funnel was also very optimized.

Roger Dooley: How would you determine that this social content was important or that free shipping early on makes the difference? Is this by testing outcomes or by getting user feedback or aggregating user feedback? How did you know that?

Kyle Henderson: It was a combination of three different data points. One, we were very objective oriented in understanding the outcome. These 3,000 participants they were all making purchases so we're able to see what the purchases were and how successful were they in completing the purchase in terms of stats.

The second is we used the speak aloud methodology which have the person answering interview questions or sharing their thoughts and feelings while moving to the parts of the e-commerce experience.

The third is we had them, immediately after the purchase, recount their decision making process. Interestingly, the

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final data set we had the hard figures, the web analytic site figures about how people move through the funnel on these different sites.

We also had the in the moment observational data about seeing objects and messages that people were reacting to or engaging with and then we were able to collect after the fact the objects and contents that these consumers were called responding to and do a comparative contrast across all these.

We'd associate items such as sentiments with these different objects and content or elements of the site people were engaging with and we'd also associate different experience events such as frustration, critical statement, usability issues. We have a number of different event codes that we track through.

Then we do an analysis over the final data set to assess which objects were present on which e-commerce sites, which e-commerce sites have the most effective web analytics, which e-commerce sites were creating the strongest sentiment levels whether positive or negative and then which e-commerce sites were creating higher volumes of different types of events such as usability issue or frustration traits, confusion, critical statement. All these types of elements.

Roger Dooley: I guess that brings two questions up. One is these people are placing orders but presumably they are your panelists or do you interrupt real people placing orders and say, "Hey, do you want to be part of this?" How do you get video of people actually placing orders?

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Kyle Henderson: We have the capability of doing both the scenarios but for this situation we were finding individuals who had either been customers of competitive e-commerce sites or had previously been a customer of this e-commerce site. We're offering them a gift certificate to participate to purchase an item within the next week that they're interested in. We didn't tell them what they needed to purchase.

We just gave them between \$25 and \$50 to make a purchase at a site or a retailer that they were familiar shopping with either in that category of retailers or specifically that retailer. We were able to remove any kind of biasing from the perspective of forcing someone to go through and use a fake credit card number or find this item.

We knew this person, for example, was into outdoor gear and they'd identify they usually purchase something from outdoor gear site once a month and we're just offering them free \$50 to make their next purchase some time in the next 7 days and buy the item that they're interested in and just tell us why you're looking for that item and how you decided that was the right item for you.

Roger Dooley: Interesting approach. How do you analyze the video and the audio that you get in the commentary? Do you have an automated process or do human scores these?

Kyle Henderson: We have a hybrid process that's part computer automation and part crowd sourcing. One of the first steps we do in our analysis and processing is every video is through a transcription process that is very, very quick. It can be as quickly as four hours and as slow as the next

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day. It's guaranteed to be 98% accurate because it's been machine transcribed and then human verified by two individual humans.

Once we have that transcript information we run it through natural language processing. The core technology was developed at Stanford but was created in data set training the machine learning algorithms over different types of content associated with usability and e-commerce experiences to then go through an identify every single sentence and the sentiment that should be associated with it whether it's a positive statement or a negative statement.

We've also trained the data set that identify certain phrase combinations that are associated with issues such as usability, confusion, frustration, et cetera, et cetera. Then moments that our system has identified that should fall to these categories but doesn't have enough confidence in.

We have a crowd sourced panel of what we call micro researchers here in the US who get to see brief snippets and moments of these videos, get to see what the computer thought was happening and then correct the computer. We have several people look at those moments and we democratically come up with what actually happened.

To do this over 250 recordings may only take about 48 hours of the entire processing. For our in-customers they did nothing other than say the types of prompts interview questions they wanted to have and then have a full rich analyzed statistically rolled up and data set back 48 hours later. That's all captured up its core with video.

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There's some interesting tech there. There's one more I didn't mention. We didn't use this so much for e-commerce but for media testing, doing facial expression analysis.

Roger Dooley: I was just about to ask about that.

Kyle Henderson: Micro expression recognition. We work with partners to implement the technology. This kind of tech works best when you have a participant watching an experience of some sort, whether it's a video advertisement or a collateral or something that they're not having to speak over and just be able to respond too quickly. Then you aggregate those micro expression recognitions over 100 to 200 individuals to see the patterns and what they were responding to.

Roger Dooley: Have you come up with any interesting insights from the facial coding or expression analysis?

Kyle Henderson: We've published a few different reports about how you can associate frustration and confusion with pop up ads on websites and associate that with creating negative sentiment as well as fake metrics that come out of it. If you're familiar with news websites that will give you a large pop out that make you wait 15 seconds to move onto the next, we are able to show that 50% of what the analytics analyst thinks are successful click-throughs on those ads are actually mistakes or moments of frustration that were improperly captured with the web analytics. The pop-ups is not as good as you think it is.

Roger Dooley: I know that we had a similar experience in mobile in a project that I was working on where mobile ads were getting what appeared to be a decent number of clicks. It

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was perplexing because various advertisers were all seeing nearly identical click-through rates which really makes no sense because some were clearly be more appealing than others.

Finally, what we concluded was that whatever legitimate clicks were occurring was likely overwhelmed by the number of people who were trying to do something and accidentally clicked the ad. Hence, no difference. The ad content didn't make any difference in the click-through rate.

Kyle Henderson: We also did some additional research on that topic with KISSmetrics around identifying what the proper ad size should be and what element should be included in those types of pop up advertisements right now since we are recognizing especially for e-commerce that it's some of the first time visitor encouraging them to share some contact information in exchange for say a 20% off coupon for their first purchase from the website was a proper use of that ad space and also appropriate size for different site screens, which the ad doesn't have to be that large. It could take the type of engagement that you want.

Roger Dooley: Interesting stuff. If you could generalize like clearly call you, I've looked at a lot of studies related e-commerce sites looking in particular at the cognitive funnel space, is there any general advice that you could give running e-commerce sites to perhaps avoid some of the problems that you've encountered?

Kyle Henderson: I think the core is prioritizing listening to your customers as part of your design process because we found in working with great e-commerce customers over the last

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two years is that quite often, the consumer or the audience really isn't baked into the design process and it leads to design by committee situations or trying to optimize the best idea you have.

My recommendation is when you prioritize your customer and your design process, you're able to get the right ideas to the next generation of your website much faster.

A convincing statistical reason why you should prioritize this, the IEEE Association did a study a few years ago that audited 2,000 or 3,000 different software projects mostly focused on web and when these projects prioritize research usability testing and connecting with customers in multiple design iterations before ever building the software or the website, they were able to reduce the cost of engineering net by 50%, which means in short if you got through three or four iterations with your design team and testing with prototypes with your customers before you hand your requirements over to the engineering team, your engineering team will spend half as much time building it.

The engineering team, I'm out here in Silicon Valley, that's one of the most expensive teams in your business. That type of reduction is a very good value added to the business.

Roger Dooley: Definitely. My friend Chris Goward, past guest on the show, is a conversion expert and he focuses on AB testing primarily or multi-varied testing as oppose to other methods. I think he makes pretty much the exact same point that all too often you have a committee deciding on a design and often it's the highest paid person in the room

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that gets to pick which design is chosen, totally leaving the user out of the equation or website performance of the equation rather than doing that you test frequently.

One key point that Chris makes is it is not such a great idea to roll out massive website redesigns but rather let the design evolve much as Amazon has done over the years through testing. Anytime you change a whole bunch of stuff without testing is very risky.

Kyle Henderson: You no longer have a control state. You're not conducting a good scientific method experiment in that situation. We're big fans of AB testing. It's very, very effective way of optimizing those individual elements or quick iterations on websites. What we found is that the companies that are the most successful are the ones that combined web analytics, insights and analysis with AB optimization to understand what is happening and what variations create the highest conversion rate or the most desirable business metrics.

These successful companies really prioritize connecting with customers and involving customers in the design process and idea generation process and allows them to understand why those metrics are being driven as they are and it's part of where YouEye focuses as well.

One of our pitch lines to customers is we'll tell you the why behind your KPIs or your web analytics because we're able to connect directly with the customers at a large enough scale and measure all of their responses and feedback while they're directly engaging with your e-commerce experience and associate their motivations and behaviors, their whys with the what is happening on

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your website and conversion rates and additional metrics. That holistic approach we find to be present in the most successful e-commerce companies we work with.

Roger Dooley: Kyle, we're just about out of time here. Let me remind our audience that we're talking with Kyle Henderson, the founder and chief product officer at YouEye, Inc. One thing I failed to point out since this is audio is not letter U, letter I but it is rather YouEye, Inc. Kyle, if our listeners want to connect with you, where will be the best place to find you and your stuff on the web?

Kyle Henderson: The best place to find me is on Twitter @kylehenderson or you can reach me directly via email. I'm the letter k@youeye.com.

Roger Dooley: Very good. Kyle, thanks very much for being with us. Also one more reminder for our audience, you can find links to all of the things we've talked about at rogerdooley.com on the podcast show notes page. Kyle, thanks a lot for being here.

Kyle Henderson: Pleasure. Thank you Roger.

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.