

INDUSTRY FORUM

The Science of Observation

By Andrew Stokes

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All forms of marketing communications, from advertisements to detail aids, packaging to product websites, seek to meet the same fundamental objectives:

1. Develop a compelling message...
2. With high impact and stand out
3. That offers immediate brand recognition

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When testing whether materials meet these criteria, market researchers often use questionnaires as the “tried and tested” method of finding out how the target audience is likely to respond. The only drawback of this method is that it can be subjective, since it relies on respondents saying what they think of the media, rather than letting their behaviour demonstrate how they really feel about it. This means that if respondents don’t answer honestly for any reason, or simply aren’t able to explain why they favour one thing over another, the results of pre-testing can be misleading and even inaccurate.

Consequently, researchers have sought to find more objective methods of evaluation. The pharmaceutical industry was one of the first to try an innovative method called eye-tracking, which has its origins in the scientific community. Eye-tracking, which involves tracking movements of the eye as it looks at an object, was introduced as early as the 1800s in an attempt to understand, quite simply, the science of how we observe. In the 1950s, a Russian psychologist called Alfred L. Yarbus was one of the first scientists to study eye-tracking in detail, conducting intensive research into the relationship between fixations of the eye and interest in what is being viewed.

In a widely read publication, he noted, “Eye movements reflect the human thought processes; so the observer’s thought may be followed to some extent from records of eye movements (the thought accompanying the examination of the particular object). It is easy to determine from these records which elements attract the observer’s eye (and, consequently, his thought), in what order, and how often.”

So what is eye-tracking and what role does it have to play in pharmaceutical market research? Andrew Stokes, Director of

The Research Partnership, spoke to **A. Client** of **ABC Pharmaceuticals** to explain how it works:

A. Client: I’ve heard of eye-tracking, but doesn’t it involve respondents wearing some hideous headgear that looks like it belongs in a B-rated horror movie?

Andrew: In the 1970s, eye-tracking was adopted by the market research industry, particularly by the pharmaceutical sector. The trouble was that at this time, the equipment used to track eye movements wasn’t very sophisticated and could be intrusive and bulky, which meant that tests weren’t undertaken in the most natural environment. Today fortunately, technology has moved on and the equipment allows the respondent the freedom to look at things without the need for headwear or glasses, so they no longer look as though they are taking part in a scientific experiment!

A. Client: How does the technology work?

Andrew: The eye tracker bathes the subject’s face in infrared light invisible to the naked eye and the subject’s pupil and retina are locked on to the eye-tracker whilst the location of the gaze is calculated. Eyes can be calibrated within seconds (even if the subject wears glasses).

A. Client: How does it add value in market research?

Andrew: The Research Partnership undertakes eye-tracking as part of its communications research services because it can offer a more rigorous form of testing than surveying alone.

Eye-tracking can help answer important questions on behalf of our clients, such as:

- Are my customers looking at the key information I want to communicate about the product on the detail aid page?
- Why is an advert not communicating what it should?
- Which execution is most impactful?
- Are customers remembering my brand?"

A. Client: How does it do that?

Andrew: Eye-tracking helps answer these questions by measuring a number of indicators, including **'fixations'**—the moment when the eyes are still and taking in information and **'saccades'**—the rapid eye movement between elements. Analysis of the data helps reveal the order in which information is processed and identify whether the story flow of the communication is being followed as intended or if key information is being missed out. This information can help inform where design changes would optimise the impact of the communication.

A. Client: Which negates the need for a traditional survey?

Andrew: Absolutely not. We don't recommend that eye-tracking is used on its own as an evaluation tool. A limitation of the technique is that it can't provide answers to the questions why—why did you only look at this area of the document for 3 seconds, why did you look at this first and this section last, etc. So in order to properly interpret and qualify the findings, you need to follow each eye-tracking phase with an in-depth qualitative interview, which allows the data to be properly understood and generates true insight. For example, if "fixation frequency" is extremely high on a specific page of a detail aid—what does this mean? Does it mean the data is very interesting or simply too confusing? More in-depth follow-up research helps us qualify the observation stage of the process.

A. Client: I see. So how do you decide what is the right amount of time to be spending looking at something? How quickly should customers spend on an advert or how long should it take to process information in a detail aid? It is all well and good to have conducted 400 interviews with PCPs and discovered that they spend, on average 5 seconds to reach the brand in an advert, but ultimately, what does that mean? Is 5 seconds good, bad or indifferent?

Andrew: That is an interesting question. It is difficult to establish 'norms' but this issue can be resolved in a number of ways. An example of how this could be approached is as follows. Say we want to know whether 5 seconds to reach the brand is good or bad. We can show the advert within a mock-up journal and compare the amount of time taken with the other adverts within the journal. The questionnaire would

also be used to measure awareness of the brands remembered from the journal, thus providing comparative data from which to draw conclusions. 'Norms' are often considered an issue with traditional methods of testing as well (e.g. is "5.4/7 for memorability good?"), and ultimately, it is up to the market researcher to evaluate the story and interpret the data in a way that should provide insight, rather than an artificial 'mean score' of what is 'normal'.

A. Client: So what do you see for the future of eye-tracking?

Andrew: Effective communication is becoming invaluable in the pharmaceutical industry, as healthcare professionals and patients use a broad range of channels to get information on products, including websites and the internet. Whilst traditional web usability techniques can provide information on clicking and navigation patterns, they don't explain what is happening to the browser between clicks. Eye-tracking can be used to give insight into which features are the most eye-catching, which are causing the most confusion and which are ignored altogether. Web usability studies utilising eye-tracking could become as important as the traditional detail-aid test at ensuring the salient messages are understood and the call to action is clear.

A. Client: Any other uses?

Andrew: It does also lend itself to offering new ways of evaluating medical devices such as blood glucose monitors in order to see how easily patients can learn how to use increasingly sophisticated and complex technology and equipment.

A. Client: Are you sure its not just a fad that's currently "en vogue" again and will be out of fashion next season?

Andrew: That's a good point and my reply comes with another question—can it offer something better and different to how we conduct market research now? Truthfully, I don't believe eye-tracking will take over from traditional methods of data collection—mainly because it cannot answer the question "why?" as a technique by itself. However, the pharmaceutical industry is no stranger to adapting to new technologies—the exponential growth of Internet methodologies has shown how research can be done differently when we move out of the comfort zone of traditional methods.

I think that now the technology has evolved and is far better than it used to be, eye-tracking is an excellent tool for evaluating a range of new multi-media communications, such as websites and other online media. I think it is becoming more and more an essential part of the pre-launch research programme, rather than a 'nice-to-have' add-on.

As more studies are being conducted and market researchers users and buyers are becoming more confident in using it and in applying the insight, then yes, soon I think it could become "de rigueur". After all, eye-tracking is used for a broad range of social and commercial applications outside of market research testing, such as automotive design, medical research and sports training. And if there is something out there that improves my golf swing, I am all for it! 🏌️‍♂️