CONVERSATIONSWITH AI

How Generative AI and qualitative research will benefit each other

research will benefit each other

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IPS0S VIEWS

GAME CHANGERS Ipsos



Every conversation starts with a single question, and sometimes when the question isn't good, it ends with a single, uninformative response. At Ipsos, we know that the questions we ask can greatly impact our understanding of the world and our actions. A poorly crafted question can lead to a distorted perception of reality and misguided actions. Conversely, a well-crafted question can lead to accurate, insightful, and just answers. This sentiment applies not only to human conversations, but also to prompts in the context of Generative AI.

In the first paper in our series on Generative AI,

we highlighted what we should expect during the coming period, as well as a few topline thoughts on limits, risks, and threats and how we should evaluate these tools using the criteria of truth, beauty, and justice.¹

In this paper, Ipsos will take these points one step further and argue for the need to align with experts in the art of the question that can get the most out of AI solutions, including quality and accuracy, while defending data privacy.

For qualitative researchers, the promise of Generative AI, and its ability to write like a human, is compelling. That said, what AI claims to be fact can sometimes be far from the truth.² Clearly a human is still needed for their thinking, judgement, and expertise in querying the AI, training models, and applying the output. However, we believe that AI could be a powerful enabler to deliver faster, cheaper, and better research results.

We see a host of immediate and obvious usecases for Generative AI, ranging from automating simple tasks to transcription, translation, summarization, pattern detection, etc.

More importantly, we see Al playing a role in accelerating the activation of brainstorming and ideation. With these tools, we can uncover needs and take initial, ground-level concept ideas, then refine them into polished and

At Ipsos we evaluate AI tools using the criteria of Truth, Beauty, and Justice.

TRUTH

This domain focuses on the accuracy of the models and their outputs; examining their quality and avoiding hallucinations or false fabrications.

BEAUTY

The most important aspect of beauty in AI focuses on the explainability of its output.

Some use cases also include a model's ability to surprise and generate new insights.

JUSTICE

This domain encompasses multiple important areas – Al ethics, algorithmic fairness, data security, privacy, alongside the rights and responsibilities of creators of data used for training and users of the models.



Title: Cost-of-living crisis. Prompt: High quality shot | Genre Horror | Emotion Tense | Surreal scene of a 36-year-old mother drowning in water surrounded by paper utility bills. She is struggling to stay afloat and has a terrified expression on her face. | 4K | shot from a movie camera | Professional colour grading | Kodak film pro | volumetric lighting | danger | suspense | Time: 2023 | Location type: Kitchen filled with paper bills

testable solutions. The qualitative researcher is enabled, more than ever before, to focus on raising the bar on impactful insights. But this is only the beginning. Imagine constructing compelling visual metaphors that bring qualitative personas or verbatims to life in

minutes. After which, consider leveraging tools like Ipsos.Digital to uncover insights and validate in hours, not days. Innovation will be improved, cycle times will be dramatically reduced, and those that get to market first will be more likely to win.

THE POWER OF INSIGHTFUL QUESTIONS

Whether moderating groups, conducting indepth interviews, or distilling hours or days of observation, asking questions is fundamental to qualitative research. In fact, the superpower of great interviewers and moderators is not only planning effective discussion guides but knowing how to read people so that probes and follow-ups are effective for individuals who respond very differently to questions. This

power of qualitative researchers carries over directly to Generative AI.

The focus on prompts in Generative AI refers to the natural language input that tells the AI model what to do. In working with Generative AI, the ability to ask effective and relevant questions is essential for generating meaningful and useful outputs. By crafting better prompts and questions, researchers can ensure that

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the output from Generative AI is aligned with their goals and objectives and that it provides valuable insights and solutions. As such, when working with Generative AI, the ability to ask effective and insightful questions is not only a valuable skill, but also a key factor in driving successful outcomes. In creating prompts, there are best practices similar to the creation of discussion guides. Providing a combination of instructions, questions, input data (qualitative or quantitative) and examples is key.3 Additionally, some clear guidelines for effective questions should also be considered. These include:

Clear & Specific - To ensure that Generative Al models produce the desired outputs, it is critical to provide clear and specific prompts across the categories of instructions, questions, input data and examples. Do not sacrifice clarity at the altar of brevity. Longer prompts that provide additional context can often lead to more detailed and relevant outputs. One effective technique for crafting clear and specific prompts is to use delimiters to clearly indicate distinct parts of the input. Delimiters can take the form

of any clear punctuation that separates specific pieces of text from the rest of the prompt, such as angle brackets, triple backticks or quotation marks. Using delimiters can also help prevent prompt injections, a situation where a user's input conflicts with the desired instructions and leads the model astray.

In the context of text-to-image models, such as Midjourney and Stable Diffusion, crafting clear and specific prompts is of utmost importance to ensure that the generated output aligns with the intended objective. These models can manipulate various aspects of an image, including lighting, foreground and background elements, emotions, demographics, and more. By providing detailed and specific prompts, you can effectively guide the model towards producing images that closely align with your vision.

The non-obvious question: Simply asking Generative AI for insights is unlikely to yield the desired results. While we may be seeking insights to unlock growth, we need to understand that the



HOW TO CRAFT CLEAR AND SPECIFIC PROMPTS

COMPOSITION STYLE

- Photo realism Steampunk Cyberpunk
- Pop art Minimalism Abstract Surrealism
- Rococo Gothic Baroque

CAMERA ANGLE

- Eye level Low angle High angle
- Bird's-eye view Worm's-eye view
- Close-up Wide-angle Point-of-view
- Over-the-shoulder Portrait

AMBIANCE

- Professional Sophisticated Edgy
- Tech-savvy Artistic Glamorous Hipster
- Romantic Rustic Industrial

EMOTIONAL CONSTRUCT

- Pleasant Excited Fun Shock Anger
- Happy Proud Nostalgic Thoughtful
- Disgust

TYPE OF LIGHT

- Overcast Golden hour Back lighting
- Reflected Dappled light Harsh light
- Twilight Window light North light
- Side lighting

LOCATION

- Urban Street market
- Public Transport, airport etc
- Festival, Parade, Mardi Gras
- Café, restaurant Beaches, boardwalks
- Residential neighborhood Industrial park
- Urban streets Club. discotheque and more

DEMOGRAPHIC

• Ethnicity, nationality, age, life stage etc. E.g., 25-year-old, African American, CEO. Thai teenager, fashion model

DEFINING FEATURES

- Pink hair Bald head Moustache
- Pierced septum Grey hair Colorful tattoos
- Nose piercing
 Eye patch
 Bowler hat
- Denim jacket

CAMERA

- Sony Alpha 7 Leica M
- Hasselblad H6D-400C Multi-Shot
- Canon EOS R GoPro Digital Cinema camera • Drone • Polaroid camera
- Fujifilm GFX50S II Canon DSLR

FILM

- Agfa Vista 200 Kodak Tri-X 400
- Fujifilm Velvia Kodak Portra 400
- Fujifilm Neopan Across Ilford HP5 Plus
- Kodak Ektar 100 Ilford Delta 3200
- Polaroid SX-70: Kodak Gold 200

OTHER TRICKS

- A as B. e.g., Turtle as Ninja warrior
- (Subject) out of (material)
- No/negative prompting e.g., no plants
- Style e.g., Layered paper
- Inspired by e.g., Inspired by Hindu mythology
- Anthropomorphic object
- Chaos < number 0-100>
- Stop <between 10-100>
- Niji <model focused on anime styles>

quality of the prompt plays a critical role in the quality of the insights generated.

Just as there is some value in identifying the main themes in large corpuses of text or long interviews, there is similar value with groups and communities. However, going beyond the commonalities, probing on the outlier positions and views often provides new insights to explore and consider.

A non-obvious question might be developed as paradoxical associations or counterintuitive uses or unifying concepts/themes that go beyond the commonalities. Structured prompts help to detect patterns, as well as identify the anomalies. By inserting instances that are contrary to the common discourse, it will help to identify the uncommon truth, what Ipsos refers

to as the 'Power of One,' a story that may not be very loud but could ultimately change the way our audience thinks about a product or service.

Specify the output's structure: Your prompt should include your expectations of the output. Thus, you could include:

- A specific number, e.g., ten ideas
- Desired format, e.g., Paragraph, Line, Haiku, Poem, Table
- Sequence, e.g., give me three made-up book titles, with their author and genre
- Structure, e.g., rewrite this insight statement in an 'I Because
 But" format
- Reflect a specific tone, style, etc
- Data format JSON, Avro, XML, CVS, etc



Lexica - Prompt – High quality shot | realistic | wide angle shot | UHD Image | indoor | natural lighting | 12-year-old boy, with a big smile on his face, an expression of rebellious confidence and impish joy | sitting on a kitchen table | in his hand is a pizza and a dollop of strawberry jam on it | bottle of strawberry jam clearly visible on the table near him | shot on Agfa Vista 200



ITERATIVE SCIENCES: 'CONVERSATIONS WITH AI' LEVERAGING PROVEN FRAMEWORKS

Jobs are already evolving to include new skillsets associated with Al.4 Being capable of posing an initial insightful prompt will be a basic job requirement. More critically, the development of effective prompts requires iterating through subsequent prompts with additional context and examples to deliver increasingly accurate and 'better answers.' It is the specialists who master these skills and understand how platforms respond to the different prompts who will be relied upon to succeed. Just as understanding how to engage different people with probes and follow-ups is a key human skill in qualitative research today, understanding how to build on past prompts and the effect of order on different platforms translates directly to the Al world. It is unlikely that you'd find a prompt that works and provides you exactly with what you were looking for the first time. However, by reviewing the errors, refining the parameters and iterating, you'd get

closer to what you were expecting, whether for simple queries or writing new code.⁵

After an initial analysis of a research data set and iterating upon it with non-obvious questions leveraging the larger Al platform's data corpus, those who want a competitive edge will apply scientific interpretive frameworks to make the data more actionable. That said, Ipsos will be careful with what is allowed to be placed into the public domain. Most Generative Al platforms include closed-loop or private access that allows a company's preferred Al partner to be trained for that company's use, while not training the overall Al algorithm. In short, this model allows for all the benefits of Generative Al while protecting an organization's intellectual property. This will empower companies like Ipsos, who have proprietary data as well as research frameworks designed to systematically organize and conceptualize the research

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process, including the research question, data collection methods, analysis techniques, and interpretation of findings. Ipsos is already exploring AI platforms and how to train them on our frameworks like <u>Censydiam</u>.

Creating quality prompts is an art that requires substantive domain knowledge, as well as

understanding the nature of questions alongside knowledge of the different AI platforms. Ipsos believes that the combination of prompt engineering with domain knowledge, high-quality data, and AI models trained on research frameworks will birth a new scientific approach: *Iterative Sciences*.

FINDING AI JUSTICE THROUGH DATA ACCURACY AND PRIVACY

As we consider the potential benefits of Generative AI in various applications, including research, it is important to approach this technology with a critical eye. While there is certainly value to be gained from leveraging Generative AI solutions, it is also essential to acknowledge and evaluate the potential limitations and risks associated with these tools. Thus, before potentially outsourcing research departments to Generative AI solutions it is important to take a step back and carefully evaluate the positive and negative implications, as well as any inherent limitations or risks associated with such technology.

Given the extent that these AI tools are being incorporated into products and services and their practical implications, the ethical issues are greater in many research areas than in the past, and focusing on algorithmic fairness, AI ethics, and data dignity continues to grow in importance. Knowing you have reliable and accurate information continues to be a struggle in today's information age. And with LLMs/AI, sifting through what is 'quality' information

will not get easier... at least in the short term. Thus, while not the only consideration, truth and accuracy is an important component of driving for ethical use of models.

An interesting shift in how we define 'quality information' is coming. 'Trusting the source' will remain critical. Al platforms have made significant strides in speech recognition, transcription, and translation quality, making these tasks faster and more efficient. However, several problems, which affect the accuracy and quality of the results produced by Al platforms remain. Some of the significant problems with Al platforms in transcription and translation quality include an inability to understand the context in which the text or speech is used, being unable to identify the correct speaker or understand an accent or colloquialisms accurately, and the effect background noise can have on precision. These, along with traditional research questions of representativeness, measurement, and generalizability, continue to be important for accurate and just implications of models.

Given the rapid advance of tools and platforms, lpsos will continue to test numerous options for different practical use cases. For example, we want to know which platform performs well in transcriptions and translations. If they don't perform well in these basic functions and across many languages, how can we trust any sentiment or thematic analysis outputs from these platforms? For those that score well in transcription and translation quality, we will test sentiment and thematic (topline summary) analysis and compare the outputs against those of a human. This is only one example of how lpsos is systematically testing options and use cases using our criteria of truth, beauty and justice.

In short, our message in this paper is: work with experts who are upskilling to write a more **insightful question** and employ *Iterative Sciences* to uncover elegant, impactful, accurate and unbiased insights that ensure ethical use of data and effects from the results. The road is evolving and complex, and Ipsos stands ready to help its clients **BE SURE**, as it has already started employing Generative Al and has a clear roadmap for its validation and global adoption.

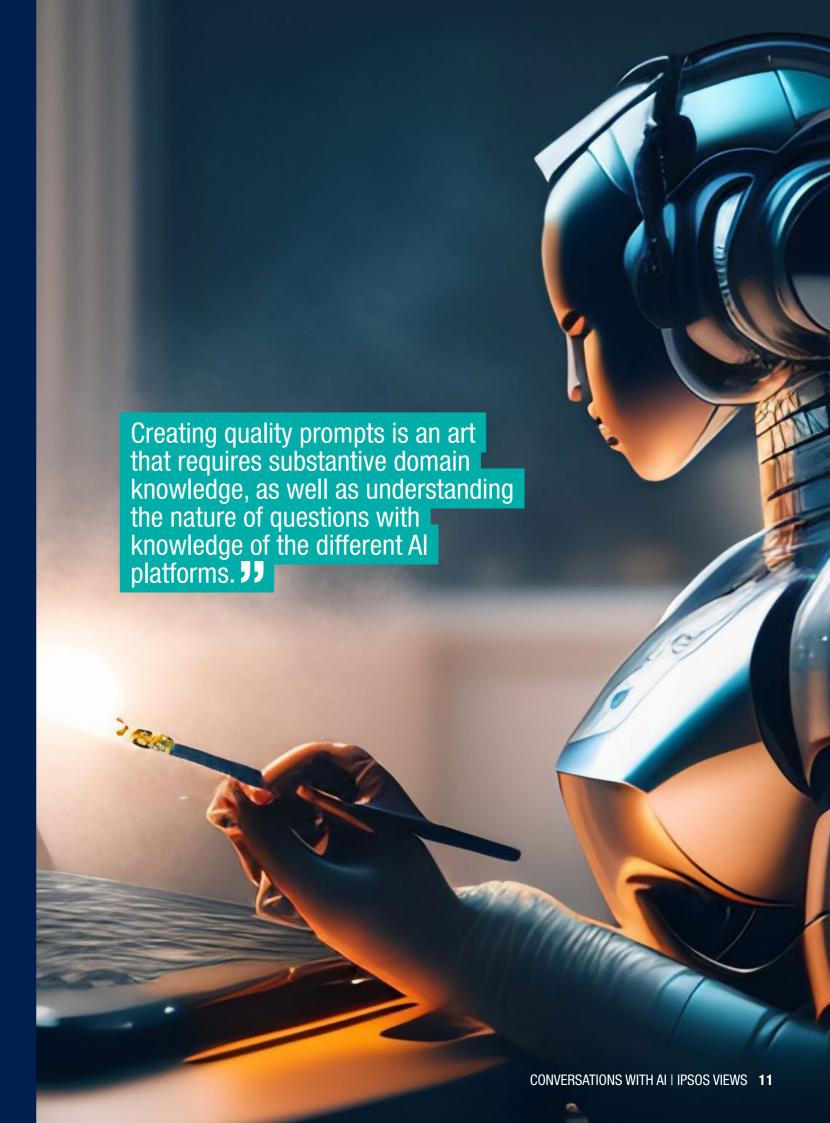
Ipsos believes that the combination of prompt engineering with domain knowledge and Al model(s) trained on research frameworks will birth a new scientific approach: *Iterative Sciences*.



REFERENCES

Cover: This imperfect image was generated by Ipsos with the assistance of Lexica.art. Prompt: 4K | Ultra-HD | Cyberpunk | Sleek steel robot sitting next to man | man and robot sitting on a yellow couch | in Deep Conversation | mood warm, friendly, pensive | Artistic | Camera angle - Wide angle | shot on a Hasselblad H6D - 400C Multi-shot | Back Lighting | AR 9:16

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