



Leverage Research

Annual Report 2022

Executive Summary

Leverage Research is a non-profit research institute founded to identify and pursue high-value research opportunities. In recent years, our mission has been to pursue opportunities related to early stage science—research conducted during the earliest stages of discovery. Through our programs and public engagement, we study, conduct, and communicate lessons about early stage science.

Over the last three quarters of 2022,¹ the institute continued making progress with its programs and functions, including strategy, engagement, culture, and operations.

History of Science: The institute’s History of Science program is dedicated to illuminating the scientific process by conducting case studies on major discoveries in the history of science. This year we completed a draft of our sixth case study in the history of electricity and are approaching the halfway mark in our study of that field. We also received recognition for previous research, having three articles accepted for publication, one of which has now been [published](#).

Exploratory Psychology: The Exploratory Psychology program is dedicated to helping people and society achieve a greater understanding of the human mind and helping put psychological research on firm foundations through advances in introspective research. In 2022, we laid the basis for future work by publishing [three foundational pieces](#), the first about safety in introspection and the second two about our introspective methods. We then began teaching interested parties our in-house introspective methods: belief reporting and charting.

Bottlenecks in Science and Technology: The purpose of the Bottlenecks program is to help identify and overcome bottlenecks to progress in a variety of science and technological fields. This year we continued the Bottlenecks event series, holding [Bottlenecks 2022](#) in Iceland, where we learned about bottlenecks to building new fields, focusing on carbon capture, introspective psychology, and artificial intelligence safety.

With respect to institute functions, the organization made several steps forward strategically, grappled with its increased estimate of the complexity of engagement, and developed “culture” into a distinct institute function. Regarding operations, the organization made two key hires and important staffing changes, initiated a location search, and stayed within budget.

Next year, we expect to make further progress with our programs, hitting key milestones and clarifying and developing institute functions.

Read the 2022 Annual Report to learn more about our recent work and accomplishments, our challenges and next steps, and our plans for the institute over the next year.

¹ This report covers the three quarter period from Q2-Q4 2022. Q1 2022 was covered in the last [Annual Report](#), which covered the five quarter period Q1 2021-Q1 2022.

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A Message From Our Executive Director

The last year was one of growth. After putting to rest public concerns about the institute, we embarked on making progress on our programs, each of which we believe has the potential to contribute substantially to scientific and technological progress and, consequently, a flourishing and prosperous future.

From our perspective, the major assumptions of our History of Science research program have now been verified. The significant discoveries in the history of science can be studied, lessons can be drawn and applied, and many of the important truths in the history remain undiscovered. We ourselves can do the research, draw conclusions, and publish in top journals as warranted. It now remains to us to complete the study, starting with the history of electricity (which we are now nearly halfway through) and then moving on to other fields.

In doing this, we will face challenges. Near the end of the year, our History of Science program manager took a position elsewhere. Our initial projections for the total number of case studies are daunting—despite being eminently achievable when one takes into account team growth and the expected duration of the program. Relatedly, there is the question of how we will fund the study, especially given that few people seem to understand how important the history of science is and how science’s history will contribute to its future.

Our Exploratory Psychology program is now ready to break through. While it has taken time to figure out how to deliver the results to the public, and despite facing esoteric opposition to our doing so, we have now laid the foundation for people to understand the work we did from 2012-2019 in introspective psychology, and for researchers to begin testing and exploring similar avenues themselves.

The Bottlenecks event this year was exciting—seeing the world’s largest carbon capture installation in Iceland in an unusually warm winter was perfect for helping participants (and ourselves) understand concretely the importance of identifying and breaking bottlenecks to new science and technology. With two successful workshops under our belt, we’re ready to start publishing our findings and taking the lead on further events.

Though we were sad to see Evan go, we were pleased to have added two talented new people to the team: Oliver Carefull, returning to Leverage Research after several years, initially as Research Communicator and now Head of Culture, and Melinda Bradley, taking on the role of Events and Operations Manager. Though our team is small, I have full confidence that we’ve built the foundation necessary to succeed at our mission.

Looking forward to next year, it’s hard not to be optimistic. While we face key obstacles, our team is resourceful and able to learn, and the aims we support are worthy ones. With time, care, and unrelenting effort, we believe it is possible for everyone to contribute to a bright and excellent future.

Geoff Anders
Executive Director

Our Work in 2022

During the last three quarters of 2022, the institute made continued progress with its programs and developing various aspects of the institute. This part of our Annual Report covers our progress and achievements during that time and the challenges we face.

Programs

Leverage Research identifies neglected or struggling fields and attempts to help make progress in them, in some cases by running foundational research programs to rebuild those fields from the ground up, in others by helping other people with their research programs. Both rebuilding fields and helping others make progress often benefits from an understanding of early stage science—how scientific discoveries are made in the earliest stages of a field—and of the social and institutional aspects of science as well.

Our three primary programs are based on places where we believe we have identified a high-leverage opportunity to contribute to scientific and technological progress.

1. **History of Science program:** *Foundational research into how important discoveries were made in the early history of successful sciences (currently focused on the history of electricity) with the objective of understanding how science works in its earliest stages.*
2. **Exploratory Psychology program:** *Disseminating introspective research methods to catalyze a community studying introspective psychology. Based on almost a decade of basic research in psychology focused on refining, validating, and employing introspective methods.*
3. **Bottlenecks in Science and Technology program:** *Working with others to identify and break bottlenecks in scientific and technological fields. Involves research into bottlenecks and an event series held at iconic locations.*

Over the course of the year, we made progress on one History of Science case study and had three essays accepted for publication. We released three new pieces from our Exploratory Psychology program, as well as a new program description and updated history. Finally, we held our second Bottlenecks event, Bottlenecks 2022, at the ON Power geothermal exhibition in Iceland, on the topic of “field building.”

History of Science Program

In response to growing concern about scientific stagnation, some have suggested that studying science itself could be part of the solution. Leverage Research proposes that it may be possible to learn about science by examining the history of successful sciences. By conducting in-depth case studies on significant discoveries, we hope to better understand how science operates in its earliest stages and help researchers make new breakthroughs today.

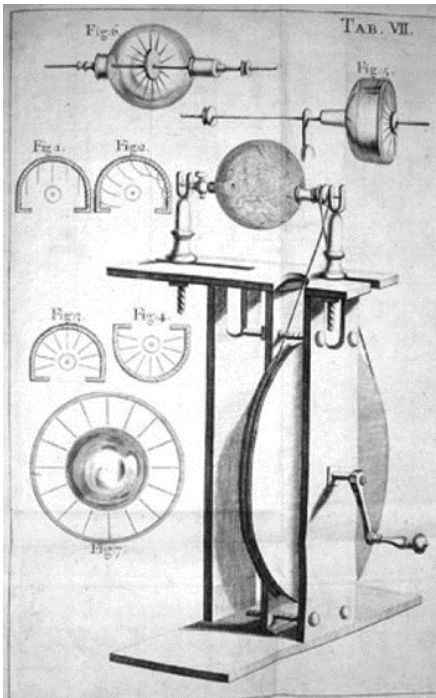
In 2022, we conducted research on Francis Hauksbee and the isolation of electric light, though the research was delayed due to the departure of our History of Science Program Manager.² When this case study is complete, we will be halfway through our research into the history of electricity. We also had three essays from the history of science accepted for publication, one of which has now been published.

Along the way, we shared fun tidbits from the history of science through Twitter threads on [how Franklin learned to be a great writer](#), the more [dramatic style of scientific writing](#) from the 18th century, and the risks of early modern natural philosophy, including [Bernoulli's experiments with mercury](#).

Case Studies in the History of Electricity

1) Making Light: Francis Hauksbee and the Isolation of Electric Fire

The production of sparks and light by means of friction is an early and significant development in the history of electrical research. Relative to the advent of Franklinian theory, the creation of the Leyden jar, and other famed discoveries, however, this development has received comparatively little study. Important



work has been done to locate the lines of personal influence and the theories engendered by the discoveries involved, however, the key figures, processes, and material foundations required to discover electric light (or to identify luminescence as an electrical phenomenon) have remained unclear.

Our study traces scientific interest in generating light from early descriptions of flashes emanating from broken sugar crystals to a controlled and widely reproduced electrical generator which converted friction into light. Sustained craft traditions surrounding glass, the professionalization of instrument production, and the spread of Baconian experimentalism were essential to differentiating electric light from other forms of luminous discharge. The study credits Francis Hauksbee, experimental demonstrator for the Royal Society from 1703 until his death in 1713, with the isolation of electric light — differentiated from all other forms of light and clearly established through experimental practice.

Through the development and refinement of key scientific instruments, Hauksbee was able to overcome several physical and technical constraints that faced earlier investigations and

reframe later thinking on electric phenomena.

Status: First internal draft paper completed and under revision.

² In Q1 2022, we also published a new case study (with accompanying [research highlights](#)) on [Franklinian theory](#). As noted above, Q1 2022 was covered in our [2021 Annual Report](#).

Planned Case Studies

Our objective is to conduct case studies on all the major discoveries made in the early history of successful sciences, which we anticipate will entail several hundred studies in total. In the short term, we remain focused on electricity. Our History of Electricity Roadmap showcases our most recent plan for case studies, highlighting which studies have been completed and which are currently underway.



History of Electricity

Roadmap v1.2

- #1 - William Gilbert and the discovery of 'electricks'
- ~~#2 - Exploring electrical substances~~
- #3 - Francis Hauksbee and the isolation of electric light
- #4 - Gray and Dufay's experiments in conduction and insulation
- #5 - The discovery of the Leyden jar
- #6 - Benjamin Franklin and the lightning rod
- #7 - Alessandro Volta and the electrophorous
- #8 - Alessandro Volta and the Voltaic pile
- #9 - Hans Christian Ørsted and magnetic deflection
- #10 - André-Marie Ampère on circuits
- #11 - George Ohm and Ohm's law
- #12 - Michael Faraday and the discovery of electromagnetic induction
- #13 - James Clerk Maxwell and the theory of electromagnetism

The roadmap has two important changes from last year. First, we have changed the tentative title of the Hauksbee study, from “The discovery of electric fire and light” to “Francis Hauksbee and the isolation of

electric light.” This came from our identification of Hauksbee as the first person to isolate electric light, experimentally distinguishable from ordinary fire.

Second, we have removed the “Exploring electrical substances” study, which was between the Gilbert and Hauksbee studies. We previously anticipated a need for a study of the period 1600-1700, when natural philosophers were refining the list of electricities. Our work on the Hauksbee study indicated that this was likely unnecessary, as we did not identify an important advance during that period that would not be naturally covered in the conclusion of the Gilbert study or as part of the Hauksbee study.

Journal Publications

In 2022, we had three academic papers accepted for publication in journals. The first paper, ‘[Closing the Loop: Ewald von Kleist and the Origins of the Leyden Jar](#),’ was published in December 2022 in *Isis*, a top history of science journal. The paper utilizes letters and other sources to offer an alternative account of the discovery of the Leyden jar, arguing that Ewald von Kleist did not simply stumble upon it by accident.

The second paper will be published in *Lias*, a respected journal specializing in early modern history and the analysis of unique and interesting sources. This paper transcribes and translates several previously unpublished letters from the Leyden jar's creator, Ewald von Kleist. These translations can also be found [on our website](#) as a supplement to our research into the discovery of the Leyden jar.

Finally, our piece "The Muscle-Readers: A Historical Sketch" was accepted for publication in *Seeds of Science*, a journal dedicated to nurturing promising ideas and non-traditional articles.³ The report covers a research tradition from the 1870s-1930s that explored the limits of nonverbal communication. You can find the report on our website as a supplement to our [intention research](#).

Challenges and Next Steps

The History of Science program is currently facing three challenges. The first challenge concerns personnel. In late 2022, our History of Science Program Manager left, which set the program back and left it understaffed.

The second challenge pertains to funding. We believe that this challenge is related to the first one. Our experience interviewing candidates for History of Science roles leads us to believe that if we can raise enough money for the program, we will be able to successfully staff it. However, we have not yet found donors who are interested in funding our History of Science program specifically, and we are still working on solidifying the base of supporters who will sustain the institute itself.

Third, we face the challenge of effectively communicating the importance of the history of science. Understanding and applying insights from the history of science is one of the most powerful ways to

³ [Muscle-Readers, a Historical Sketch](#) was published by *Seeds of Science* in February, 2023.

contribute to scientific progress. However, this idea remains surprisingly counterintuitive to a number of people.

We believe that progress on communication will help with funding, which in turn will help with staffing. Once those challenges are met, we will then face further challenges mentioned in our last [Annual Report](#), such as developing new ways to review our case studies, deciding on a format for our analytical studies, and selecting effective methods for disseminating our results.

Exploratory Psychology Research Program

Over the past decade, Leverage Research studied psychology, a field that has been mired in a replication crisis. Our hypothesis has been and continues to be that introspection is [promising as a research method](#) and can provide the foundation for fruitful efforts to understand the mind.

Although introspection has been used since psychology was established as a distinct discipline, it is no longer favored as a research method within the field. Indeed, a [common myth](#) surrounding the origins of modern cognitive psychology proposes that introspection was once the dominant method within psychological research but was rejected for being too unreliable. We believe that the field's move away from introspection was premature.

From 2012 to 2019, our institute conducted extensive research involving hundreds of individuals and thousands of hours of introspective work. These efforts resulted in the development of several introspection-based methods that can be used as instruments for studying the mind, as well as a wide variety of hypotheses about mental structure and cognitive function.

Our goal for the Exploratory Psychology program in the near future is to build a community of researchers who will test our research methods and use the best available introspective methods to advance the field of introspective psychology. To that end, we spent 2022 publishing information needed to put this community on a sound footing.

We published three foundational pieces during the year:

[Introspection Safety for Researchers](#)—While introspection can improve our understanding of the mind and help individuals become more self-aware, it is important to acknowledge that there are inherent risks involved in all introspective methods, including those developed or used by Leverage Research. This document includes a detailed discussion of the risks and side effects of belief reporting that Leverage's psychology researchers observed between 2012 and 2019 and is intended to serve as a research resource for understanding the risks associated with introspection.

[How to Belief Report](#)—A practical guide to belief reporting, a simple introspective tool for detecting one's beliefs on many topics. The guide provides step-by-step instructions and simple exercises to help the reader learn the basics of the belief reporting technique. It includes an appendix with common problems that people encounter in learning to belief report and how to solve them.

[Chart Logic & Core Mechanics](#)—A technical guide to *Charting*, a set of tools and techniques designed to allow researchers to (1) turn mental content into explicit statements, (2) represent the relationship between those explicit statements, and (3) help determine which areas of mental content to investigate next. *Chart Logic* was originally written as an internal reference in August 2018 but was published for general readership for the first time this year.

In addition, we also published a [new introduction](#) to our Exploratory Psychology program. This provides an overview of the core components of Leverage’s basic introspective research methods and a description of potential applications, as well as a summary of the [history](#) of our psychology research.

Finally, we began teaching our psychological techniques to interested parties. We primarily focused on teaching belief reporting and a related technique called “white chaining” to people who reached out to us through social media. We tried teaching around a dozen people the techniques during the year, and we expect to apply the lessons we learned in our plans for 2023.

Challenges and Next Steps

One of the major challenges we face with the Exploratory Psychology program is the need for faster progress. Since having a dedicated program manager, our focus has mainly been on documenting past research and introducing our approach to introspective psychology to the public. Although this work is crucial, it is time-consuming and may not be enough to establish a research community on its own.

To help make faster progress, our primary aim for 2023 is to take a more direct approach to creating the necessary research community. This will involve developing a workshop series or training course that we can use to teach introspection researchers all the skills they need for charting. We can then work to coordinate researchers who are interested in conducting original research in introspective psychology. We also anticipate that working directly with researchers to teach them the relevant skills and techniques will accelerate the process of writing up this content for publication.

As the research community grows, it will be essential for us to communicate with researchers about the appropriate standards and methods for this field of inquiry. This will include research and data-sharing norms and will need to safeguard people’s privacy while enabling researchers to make progress. As part of this, and befitting our focus on early stage science, it will be crucial to help researchers hold themselves and each other to appropriate research standards without sacrificing rigor or mistakenly applying standards from popular conceptions of late stage science.

Bottlenecks in Science and Technology Program

Our Bottlenecks in Science and Technology Program aims to identify and address social, institutional, and technical obstacles to progress in scientific and technological fields. The program launched in 2021 with [our inaugural workshop](#) at the headquarters of Boom Supersonic, centered on the general concept of identifying bottlenecks to progress.

The program continued this year with a second workshop, Bottlenecks 2022, focused on field building. Our hypothesis was that building new fields presents unique challenges and, as with the first workshop, examining several different fields simultaneously, in a topic-relevant context, would be especially illuminating. We announced both the [theme](#) and the [event location](#) on Twitter.

The workshop took place outside Reykjavík, Iceland, at the [ON Power Geothermal Exhibition](#). The twenty-seven participants spent the weekend discussing bottlenecks to building new fields. The presentations focused primarily on three fields, carbon dioxide removal, introspective psychology, and artificial intelligence safety, with presentations on several other areas as well, including keynotes (by video) by David Deutsch, Doug Lenat, and Peter Thiel.



The workshop included a tour of the nearby [ClimeWorks Orca](#) carbon capture facility. During the tour, participants were able to see the Orca collectors that capture CO₂ from the air, the plant that processes the CO₂, the [Carbfix](#) stations that permanently inject it into the ground, and the foundation for ClimeWorks' new Mammoth plant, which has the potential to remove nine times as much CO₂ annually as the Orca plant. Combining Iceland in winter, geothermal energy, and the reality of CO₂ removal made the possibility of a better future for climate palpable.

In addition to the striking location—including days with just 4 hours and 50 minutes from sunrise to sunset, the event provided a great context for learning about the bottlenecks to field building. It was easy to see the maturity of the fields on display, with carbon dioxide removal the most polished and artificial intelligence safety the least. It was also fascinating to see how these very different fields faced similar challenges, with a recurrent (and surprising) theme being the role ideology plays in the early stages of field building.

The event was successful, with positive feedback from participants (a Net Promoter Score of 36), despite tight timelines, a distant location, and last-minute cancellations (including overloaded co-organizers who had to bow out).

The main uncertainty surrounding the event is whether new partnerships or initiatives will arise from it. One funder proposed a joint initiative with Leverage Research to address bottlenecks in carbon capture, and we established promising connections with a member of the Focusing community, which pertains to our work in introspective psychology.



Bottlenecks 2022 venue: ON Power Geothermal Exhibition

Challenges and Next Steps

Regarding challenges, we have fallen behind in communicating the outcomes from our workshops and have yet to publish our conclusions about bottlenecks from previous workshops. We also may be able to post some videos of talks from Bottlenecks 2022, though we have not yet had a chance to assess them for quality and shareability.

Second, we succeeded only partially in communicating to presenters about the idea of “bottlenecks.” Bottlenecks are not merely challenges; all fields of research face a variety of challenges. The word “bottleneck” denotes that, in addition to the usual challenges, there is a particular challenge that people are stuck on, such that the real challenge is understanding why the people are stuck.

Third, we need to clarify the role of collaborators in the Bottlenecks series. In this case, we worked together fruitfully with our co-organizers and benefitted from their input on the selection of the event location and theme. However, we did not anticipate how busy their schedules would become, leading to our taking sole responsibility for the workshop in the final months.

Our next steps are to catch up on communication from previous events, publish our conclusions about bottlenecks so far, and organize Bottlenecks 2023. We expect that organizing more in advance and working more closely with workshop presenters will help us improve on what already has been an amazing series of events.

Institute

Over the past year, the institute has made significant progress in developing its strategy and building a strong team. We clarified some of our key commitments, improved our communication efforts, and returned to the idea of collaboration with other organizations. Following last year's misunderstandings about the institute, we updated our approach to engagement, focusing on explaining more of our work to the public and creating opportunities for our supporters to participate. Finally, we are proud to have hired excellent candidates for both our Events and Operations Manager and Research Communicator positions.

Strategy

During the last three quarters of 2022, the institute took important steps with respect to the development and communication of its strategy. This included a number of improvements and changes to our strategy, as well as conducting our first public strategy updates.

Strategic Advances

Three important challenges facing any non-profit are those of location, recruiting, and external collaboration. Location and recruiting, in particular, are linked, as where one's organization is located may impact one's prospects for hiring relevant talent.

With respect to location and recruiting, the institute made an important change. In its earlier years, the institute met the challenge of finding talented hires by offering unique, exciting work and delivering an optimistic, ideological pitch. The combination of these was sufficient to motivate potential hires to relocate from anywhere in the world while still offering affordable salaries. After completing the [Experiences Inquiry](#), in which we learned about some of the dangers of compelling ideological narratives (cf. "Strong Ideological or World Improvement Narratives," p. 18), we recognized the need for a new approach.

The new approach we developed involved (1) finding a desirable permanent location for the organization, and then (2) having a hybrid remote/in-person team, allowing us to hire globally, and (3) having quarterly retreats for the full team, allowing us to get some of the benefits of in-person. When it proved challenging

to find a permanent location, we switched to the plan of (1) having a remote team and (2) doing quarterly retreats in person until a suitable location for the organization is found.

On the topic of external collaboration, it has always seemed plausible that organizations with mutually supporting goals should be able to work together. Despite this, Leverage often met with failure, especially in its earlier years, in its pursuit of fruitful collaborations. With more experience, greater maturity as an organization, and additional knowledge, we returned to this question, seeking a new approach here as well.

In September 2022, our Executive Director developed a new way of thinking about external collaboration, centered around the idea of inter-organizational partnerships. He then proposed that Leverage seek to develop such partnerships, and some steps were taken in this direction.

Beyond these changes, there was also strategic progress as part of the institute's normal learning process, including helping to identify and tackle problems in engagement and contributing to the crystallization of our commitments. For more on these, see the sections "Finding Our Voice" and "Values & Commitments" below.

Public Strategy Updates

In order to help the public and other interested audiences better understand the institute, in 2022, we began holding [semi-annual strategy updates](#). These are open to the public and intended to present the institute's perspective on a variety of issues of public interest while answering questions people might have about the organization's strategy.

Our first public strategy update was held in June, covering key elements of our strategic picture, including trends, global risks, and assessments of institutions and fields ([prepared remarks](#), [audio](#) of the presentation, and related [internal document](#)). The second was held in December, centering on narratives and ideologies ([prepared remarks](#), [audio](#) of the presentation, related [internal document](#), and summary Twitter [thread](#)).

One important theme in our communication on strategy was the existence of an underlying pessimism about humanity, which we sought to recognize and begin to confront, including through Twitter threads on [differential technological development](#) and the belief that [humanity is \(basically, in general\) good](#).

Engagement

Engagement is the function of connecting the institute to the public for the benefit of both. We came to this formulation in 2022 after reflecting on earlier public discussion and engagement attempts, where we realized that institute communications had failed in a surprising manner to create an accurate, sticky impression of the organization with its various audiences.

As a consequence of reflecting on our approach to engagement, we realized that we needed to (1) better explain fundamental facts about the institute, (2) communicate better with supporters, (3) experiment with new approaches to engagement, and (4) better communicate the institute's values through engagement.

Starting with Fundamentals

Despite previous clear communication about our programs, in Q3 - Q4 2021, we observed a number of public discussions where participants seemed to misunderstand fundamental facts about the institute. This suggested to us the possibility that there were much more basic and fundamental assumptions we were making that were not shared by all of our audiences.

To address this possibility, we began seeking to publicly articulate and explain the more basic assumptions around our work, as well as making more comprehensive information available about the institute. To this end, we sought to hire a [Research Communicator](#) to work directly with the Executive Director to write essays communicating the institute's ideas and perspectives on a variety of topics. We wrote Medium pieces about [our work](#), [our programs](#), and the [challenges we face](#) for prospective hires and the public. We also compiled a [repository of links](#) to our research and institute communications and published a [draft FAQ](#).

Our public [strategy updates](#) (see "Strategy" above), also made available more information about the institute's perspective. For more information about the institute, we have an [information request form](#) and welcome direct inquiries (contact@leverageresearch.org).

Communicating with Supporters

Over the history of the project, Leverage Research has accumulated an appreciable number of strong supporters. While this support has been valuable, it has often been expressed privately rather than in public forums. There are two main problems with this: (1) our supporters, who are often passionate about the subjects we study, aren't able to meet one another, and (2) neither we nor our supporters benefit from the social backing that comes when public support is expressed.

To begin to address this issue, we decided to launch a [Discord server](#) where people could discuss topics pertaining to our work. The Discord, which is open to the public ([join here](#)), had 45 members by December and includes channels dedicated to each of our programs as well as others for topic-based discussion.



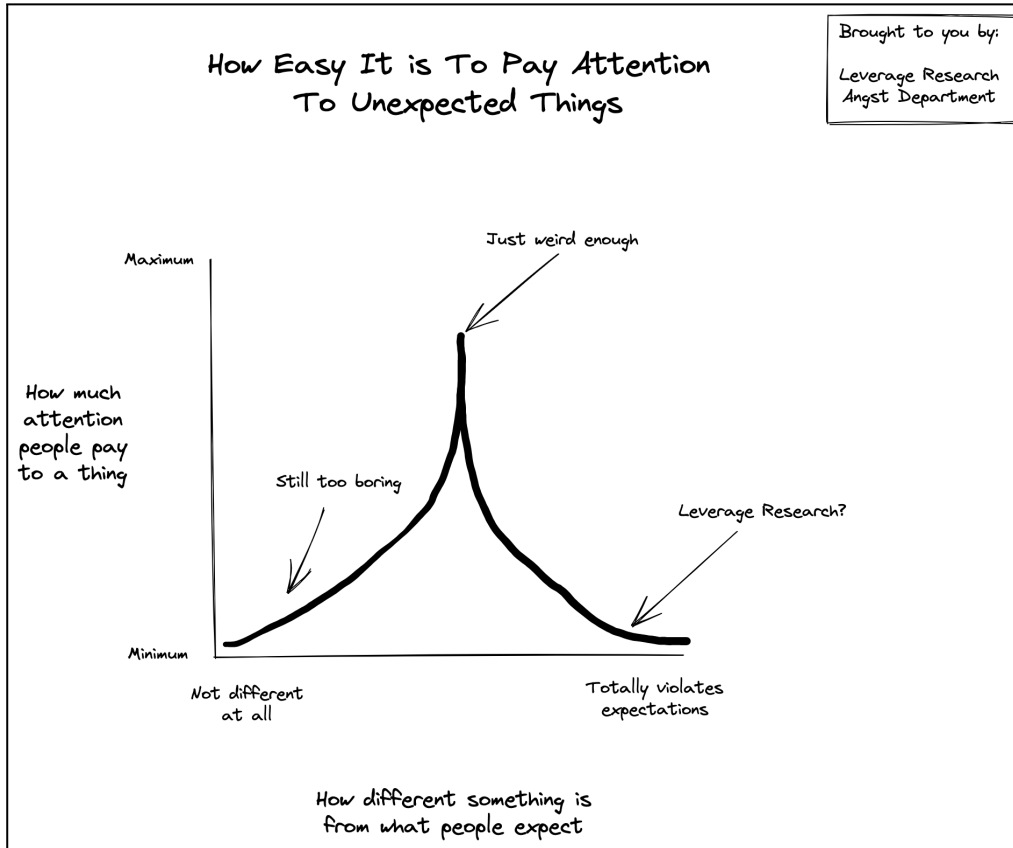
Image from a [Happy Holidays](#) message from Leverage Research.

Finally, we started a [Substack newsletter](#) dedicated to sharing [essays](#), work in progress, and new ideas in a less formal context.

Learning from Informal Experiments

In order to learn more about public engagement, which we now recognize to be much more complex than we thought, we began conducting small, informal experiments and reflecting on the results.

We tried a variety of approaches on Twitter, including a [more pointed approach](#) when describing strategy or using memes to respond to ill-motivated opposition. We also experimented with sharing back-of-the-napkin style diagrams and longer descriptions of our work on [our Discord](#). Finally, we also drew a number of lessons from observing the successful Twitter threads by Kerry Vaughan (written in his personal capacity) on the topic of AI, which we consider to be a [natural experiment](#).



Example back-of-the-napkin diagram from our Discord.

Finding Our Voice

Prior to 2019, the institute was poorly understood by the public. While we were aware of this circumstance, the consequences were not fully appreciated, in part because our research programs were making good and steady progress.

By 2019, we had come to appreciate the importance of public understanding and had furthermore recognized the value of organizing the institute in accordance with commonly understood and accepted forms. Following these realizations, we made the decision to professionalize and adopt more standard roles, policies, and modes of communication.

This was a very positive development for the organization. However, it was not until 2022 that we noticed members of the interested public perceiving us as less interesting or fun than we are. This is important because we believe our work is naturally interesting, and that the tenor of our approach to the work communicates important things about our values. We identified this as the “[Suit problem](#),” i.e., formal, credible modes of communication, making it easy to communicate some things but hard to communicate others, which we will aim to solve in the coming year.

Culture

In 2022, culture became a key focus for the organization. As part of this, we took steps to develop the culture, both through reflection and experimentation. Through reflection and discussion, the team made progress in clarifying its values and crystallizing key commitments. With respect to new practices, we experimented with a team retreat aimed at joint planning and discussing differences of opinion.

In concert with its renewed recognition of the importance of culture, in November, the institute created the Head of Culture position, which was filled by Oliver Carefull.

Values & Commitments

In a variety of meetings, members of our team have had discussions that help to clarify the values of the institute. Previously, we had identified “Lead by Example” as a key value. In the aftermath of the [Experiences Inquiry](#), we identified “Support for Individuals” as a key guiding light in [our response](#) to both hurt individuals and conflict with institute opponents. Further discussion led us to propose “Causing the Effect” as another potential value.

Internal discussions also lead to the clarification of our commitments. Through the spring and summer, the topic of “technocracy,” or “rule by technical experts,” came up repeatedly. Ultimately, the consensus was that while technical experts may play a valuable role, technocracy is inferior to democracy and should not be preferred; this was then adopted by the organization as a stable commitment.

Discussion with the Managing Director of [OP Branding](#), a design and branding agency with consonant values, also led us to identify our central commitment to the basic [goodness of humanity](#). This is a view the institute has held in some form since its inception, and which was sharpened and supported by our research but which we had difficulty articulating ourselves.

Team Retreats

In order to experiment with team retreats, and sparked by the departure of our History of Science program manager, the team decided to meet in person in October to discuss future institute direction. We planned to (a) review the past quarter, (b) bridge distance in perspectives, (c) boost motivation, (d) make progress on deeper questions, and (e) set goals for the next quarter. With several staff already in Austin, Texas, it made sense to make that the location for a five day, in-person retreat.

As might be expected from a first attempt, results were mixed. Planning discussions transitioned into discussion of more fundamental questions, which themselves frequently stalled due to communication issues. Slow progress affected morale, although important progress was still made. In particular, we generated several tools designed to help with communication.

During reflection after the retreat, and unsurprisingly given the aforementioned communication difficulties, the staff disagreed about how well it had gone. Specifically, there was disagreement about

whether the ding to morale had been worth the progress made. Either way, everyone did agree that there were many avenues of improvement for the next retreat at the beginning of Q1 2023.

Operations

Leverage Research increased its capacity in 2022 with two key hires, sought to fortify its History of Science program, made important staffing changes, and started a location search.

Staffing

Significant staff time in 2022 was dedicated to recruiting for three positions: a [Research Communicator](#), an [Events and Operations Manager](#), and a [History of Science Researcher](#). We successfully hired for the first two positions; these hires were both possible because we offer remote work, an initial success of our new approach to talent.

For the Research Communicator role, we're delighted to welcome back Oliver Carefull. As Research Communicator, his primary responsibility is to help us communicate key concepts from our research, and Oliver is now responsible for our new [Substack](#).

For the Events and Operations role, we're excited that Melinda Bradley has joined the team. Melinda is now responsible for the institute's day-to-day operations and providing logistics for internal and external events. She studied psychology at Western Michigan University and has a strong management and human resources background.

Regarding the History of Science Researcher role, we found a number of promising candidates but switched to hiring for the History of Science Program Manager role after our previous program manager departed in November. With respect to that role, we continued to pursue promising leads.

In addition to hiring, there were also several staffing changes. Larissa Hesketh-Rowe was promoted to Chief Operating Officer and Head of Engagement, Oliver became Head of Culture, Geoff became provisional Program Manager for the History of Science Program, and Larissa began transferring operation responsibilities to Melinda. The organization's leadership function, which is constituted by staff members in leadership roles, was also formalized into the Leadership team.

Location

As part of the decision to seek a hybrid in-person/remote setup, the institute embarked on the search for a new permanent physical location. The team visited Austin and Miami and had previous experience living in the Bay Area and visiting San Francisco. The Executive Director also visited Los Angeles, New Orleans, and San Diego.

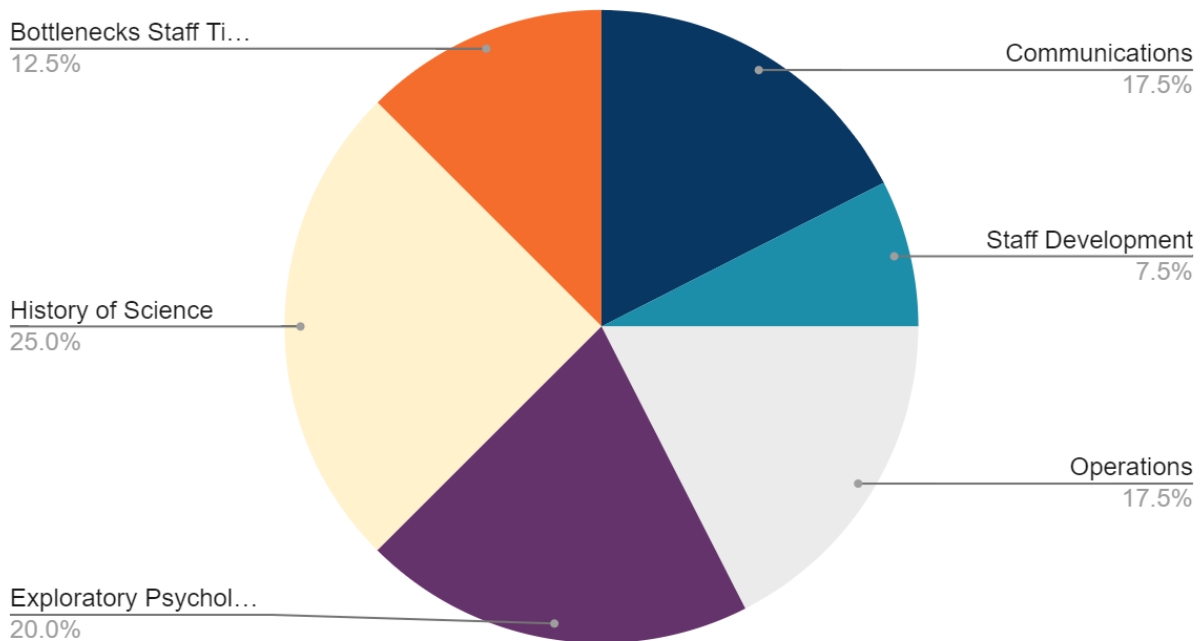
In assessing these locations, we considered culture, cost of living, networking opportunities, prevailing narratives, and personal preferences. Unfortunately, despite finding many of the cities desirable and attractive for many reasons, (1) none seemed to combine the optimism and focus on the future we were looking for with respect to culture, and (2) none appeared to have any special connection to the institute’s current programs. We thus decided that the institute would remain remote for the time being and that the location search would continue as part of the institute’s ongoing quarterly retreats.

Finances

In our [last annual report](#), we projected that our base costs for 2022 would be **\$385,000**, excluding the \$55,000 we set aside as runway. Having recently completed a successful fundraiser, we increased the base budget to include increasing our headcount from four to six full-time staff halfway through 2022 and a small pay increase for the team. These projections did not include an anticipated **\$65,000** for our Bottlenecks 2022 event; we raised funds for that separately.

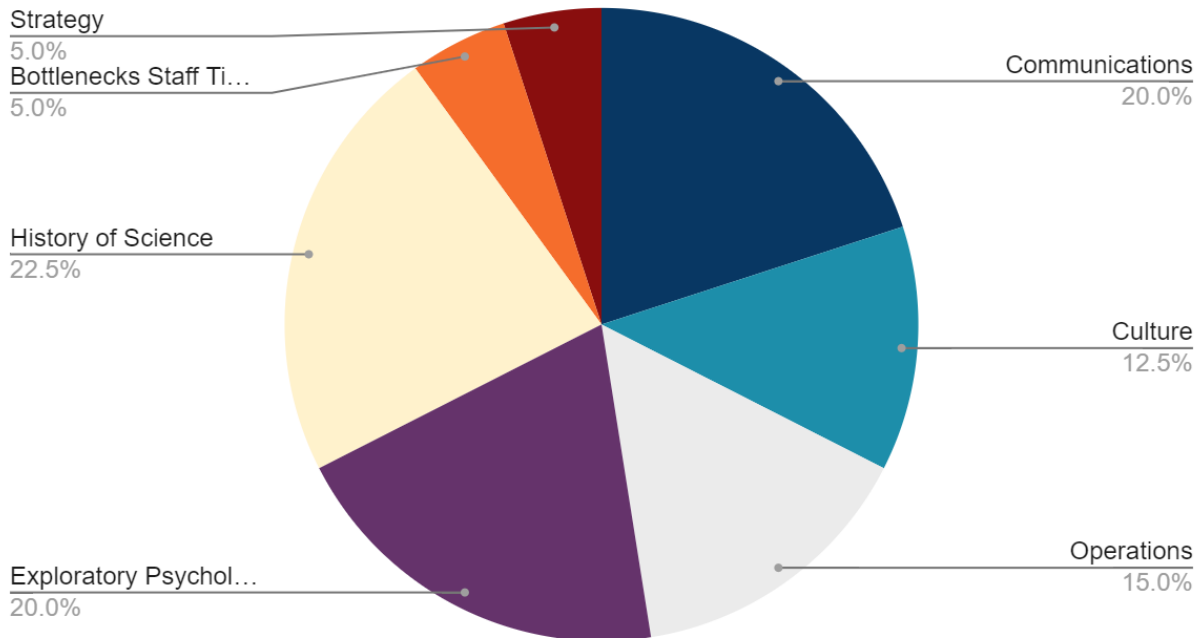
In terms of breakdown, our original projection was:

2022 Base Budget



Our actual spending in 2022 was **\$310,000**. The main reasons costs were lower than anticipated were that we hired for our full-time positions in Q3 and Q4 rather than mid-year, lost a staff member in Q4, and spent less on staff development than anticipated. This \$310,000 does not include **\$50,000** for the Bottlenecks 2022 workshop, which we fundraised for separately.

2022 Expenditures



This breakdown displays costs by program and institute function, with the bulk of spending on staff compensation and benefits, with the breakdown based on approximate estimates of time spent per area by each staff member. The institute’s operational expenses, apart from staff time, include software and equipment, recruiting expenses, and various legal, accounting, and other fees. Notably, culture consumed more staff time than expected, and organizing Bottlenecks 2022 took less.

Challenges and Next Steps

In 2023, the institute faces a number of challenges. The three most pertinent are highlighted here.

The first pertains to engagement. During our first decade (2011-2019), we focused on communication with vision-driven audiences, aiming primarily to maintain our ability to recruit and fundraise. This was largely successful, though we antagonized a variety of ideological groups in the process. We then switched to public communication, focusing on formal public communication (2019-2022). This year, we encountered the limitations of such communication. Succeeding at the organization’s mission will require us to communicate with much greater success with a much broader audience, and thus we will need to innovate.

The second pertains to culture. In our previous annual report, we stated that a key challenge for the organization would be being able to respond rapidly in the face of unanticipated events. Our Q4 retreat this

year revealed a more basic challenge, which involves being able to communicate effectively internally while maintaining team morale. It is our hope that team retreats in 2023 will enable us to sync up better, reinvigorate the team, and make the key decisions the institute needs to make.

Finally, the institute faces a challenge around fundraising and support. In 2023, we will receive our last year of funding from the Thiel Organization. In order to continue to exist and effectively pursue our mission, it will be necessary for us to build a solid supporter base and find committed donors who understand our mission and are willing to support us. We intend to do this within the [donation limits](#) (see “Donor Policy”) we have set for ourselves, which will require us to communicate much better why Leverage Research should be supported.

Plans for 2023

Leverage Research’s focus in 2023 is on making continued progress with all of our programs and continuing to develop institute functions.

We have covered many present and upcoming challenges in the preceding sections of this report. In this part, we briefly summarize our plans and give budget projections for the upcoming year.

Programs

Next year, we plan to continue making progress with our programs. We expect to reach exciting milestones in a number of cases, including the halfway mark in our study of the history of electricity and the first experiments run by the external community of introspection researchers we build.

History of Science

We have several key priorities in 2023 for the History of Science program. First, we plan to continue producing case studies in the history of electricity, which will likely require us to hire a researcher.⁴ Second, we plan to hire a full-time program manager. Third, we intend to create a more compelling explanation of our history of science research for the public; the program is in fact exciting, and we expect we should be able to communicate that.

During 2023, we expect to complete our sixth case study in the history of electricity out of an anticipated total of twelve. Once that study is complete, we are likely to publish a progress report detailing the findings and hypotheses we have developed from our research so far.

⁴ We hired Dan Graham as a part-time History of Science researcher in February 2023.

Exploratory Psychology

Having now published several foundational documents, in 2023, we plan to begin building an external research community for introspection researchers. This may involve creating a workshop series or training course to give researchers familiarity and a degree of facility with our research methods. If successful, next year should see the first exploratory experiments run by members of this new community, which should both garner further interest and point to new, useful hypotheses.

Among the possibilities we may explore next year include academic collaboration or partnerships with other introspection-oriented research communities.

Bottlenecks in Science and Technology

In 2023, we plan to continue our Bottlenecks in Science and Technology event series, ideally making Bottlenecks 2023 both productive and uniquely excellent. For that, we intend to choose another timely theme and iconic location, aiming to capture the zeitgeist as well as we did in 2021 while taking the same leadership role we did in 2022.

Most importantly, we intend to commence the concerted research aspect of the Bottlenecks program. This may include publishing some of our findings so far on the topic of bottlenecks in science and technology or finding researchers to write up analyses of bottlenecks in key areas.

Institute

With respect to institute function, we expect to further clarify and develop each of the functions, making steps forward with respect to strategy, engagement, culture, and operations.

Strategy

In 2023, we will continue to improve our strategy, learning more about how to succeed as an independent non-profit research institute and assessing new opportunities as they arise. We will also continue our semi-annual strategy updates, aiming to make them more valuable overall for the institute, its supporters, and the interested public.

Engagement

Our priorities for engagement in 2023 involve building a stronger base of support for the institute, focusing on three key audiences: our core supporters, groups that care about science and technology while being optimistic about the future, and the public. Of these, we will pay special attention to our core supporters, as the success of the institute depends importantly on them and their support. We also plan to reassess which

audiences are most relevant to our work and our strategy for how insights from our research will reach the public.

Culture

Next year, we plan to use team retreats as a way to build a culture of reflection and decision making, choosing memorable locations for the retreats (while continuing our location search) and focusing the retreats on choice points. We also plan to identify and try to solve the most important cultural issues or problems that arise each quarter; these efforts will be led by our new Head of Culture.

Operations

Next year, we will aim to make key hires, continue our location search, and raise money to fund continued operations. Below we describe in greater detail the positions we would like to hire for, touch on our location search, and give our projected finances for 2023.

Staffing

Our main hiring priorities for 2023 are for positions in History of Science. We will aim to hire a full-time Program Manager and may hire a full or part-time Researcher. If we encounter qualified candidates, we will also aim to hire a full- or part-time Researcher for our Exploratory Psychology program and a full-time program manager for the Bottlenecks program.

If you, or someone you know, might be a good fit for any of the following roles, please contact us at jobs@leverageresearch.org or via [Twitter](#), and see our [website](#) and [newsletter](#) for further announcements:

- History of Science, Program Manager
- History of Science, Researcher (full or part-time)
- Exploratory Psychology, Researcher (full or part-time)
- Bottlenecks in Science and Technology, Program Manager

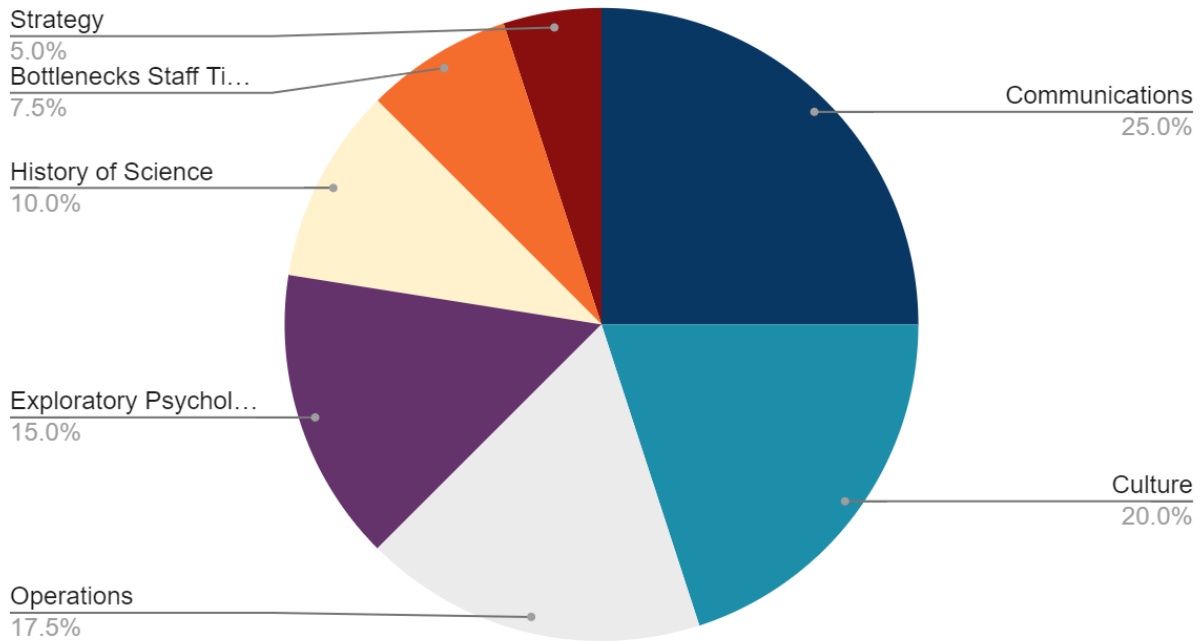
Location

We expect that during 2023, Leverage will remain a remote team, meeting quarterly in different cities for team retreats. In addition to the primary aims of the retreats, our plan is to use them as an opportunity to assess new cities as potential permanent homes for the institute.

Finances

Leverage Research's baseline budget projection for 2023 is approximately **\$425,000**, which we would expect to spend as follows:

2023 Base Budget

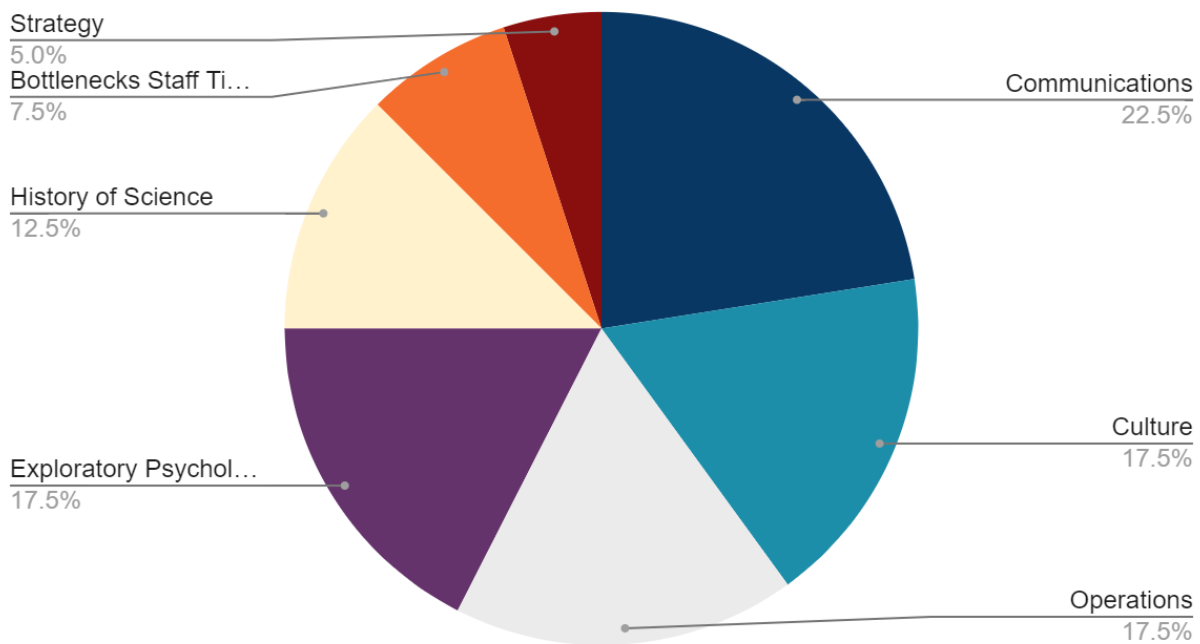


This projection breaks down costs by program and function, assuming that we retain current staff and hire a part-time History of Science Researcher at the beginning of Q2.⁵ The largest increases in spend are with respect to culture, which includes staff time as well as the new cost of in-person quarterly team retreats, and communications, due to our now having two staff members with important communication responsibilities.

The organization may spend more than its base budget, especially if we are able to make additional important hires. Our expanded budget is approximately **\$460,000** and includes provision for hiring a part-time Exploratory Psychology Researcher in Q3 and a History of Science Program Manager in Q4.

⁵ See footnote 4.

2023 Expanded Budget



The above budgets do not include the **\$65,000** we expect to spend on Bottlenecks 2023, for which we will fundraise independently. The budgets also do not include provision for runway; to develop runway, we will aim to raise 120% of our budget during 2023.

To raise funds for 2023, we expect to complete our 2022 Winter fundraiser, find a number of new mid-sized donors, and find sponsors or organizational partners who will contribute. 2023 is also the last year in which we anticipate receiving money from the Thiel Foundation. The institute currently limits donations from individuals (\$10,000 per year) and organizations (\$50,000), except in the case of extraordinary alignment, in order to help ensure we build a broad base of support for our work.

Projects

While we may have our hands full with the programs and priorities described above, it is possible that we will also find time and resources for other projects. Possibilities we have discussed include support for new movements and an event series on the future of philanthropy. We also expect to spend some time in 2023 pursuing and developing partnerships.

Support Our Work

We greatly value engagement and encouragement from our supporters, and there are many ways to get involved: [donate](#) to support our programs, [read our research](#), provide feedback on early drafts of our work in our [Discord community](#), or support us on [Twitter](#). Our work is important but challenging. We continue to face serious obstacles, and your support meaningfully improves our chances of success.

Donate

Leverage Research is supported by donations from organizations and individuals who believe in us and share our mission of bringing greater prosperity through responsible scientific advance. Apart from exceptional cases, we accept a maximum of \$50,000 per year from organizations and \$10,000 per year from individuals to ensure that we build a broad base of support for our work.

Our preferred donation method is wire transfer due to the convenience and lower fees, but we accept donations via [PayPal](#) and also accept [cryptocurrency](#). See our [donation page](#) for other ways to donate, or reach out to us at contact@leverageresearch.org.

Learn More

To learn more about our work, visit our [website](#), where you can find all of our [history of science case studies](#), our [introspection research](#), information on our [Bottlenecks events](#), and more, or find a list of all of our public materials on [Medium](#). For more regular updates, subscribe to our [newsletter](#), follow us on [Twitter](#), subscribe to our [Substack](#), or join our community on [Discord](#).

Contact Us

If you have any questions about this annual report, or would like to get in touch with us for any reason, please contact us at contact@leverageresearch.org, come to one of our events at our virtual office, or connect with us on [Twitter](#).