

The background of the slide is an underwater photograph. It shows a deep blue environment with a strong light source from the right, creating a bright, hazy column of light that filters through the water. Numerous small, white bubbles are visible, particularly concentrated in the upper half of the image, suggesting a diver's presence or movement. The overall mood is mysterious and serene.

Extreme Sport and Information: Initial Findings of Technical Cave Diver's Information-Seeking Behaviours

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Introduction

Stebbins (2009) defines serious leisure as the term given to niche activities, "which involve significant personal effort based on specially acquired knowledge, training, experience or skill" (p. 625).



Sheck Exley, pioneer of safe cave diving practices.

Image [source](#).



**NORMAL
CONVERSATION**

**ANY EXCUSE
TO TALK
ABOUT CAVE DIVING**

**CAVE
DIVERS**

**Why Cave
Diving?**

Why Cave Diving? (Really)

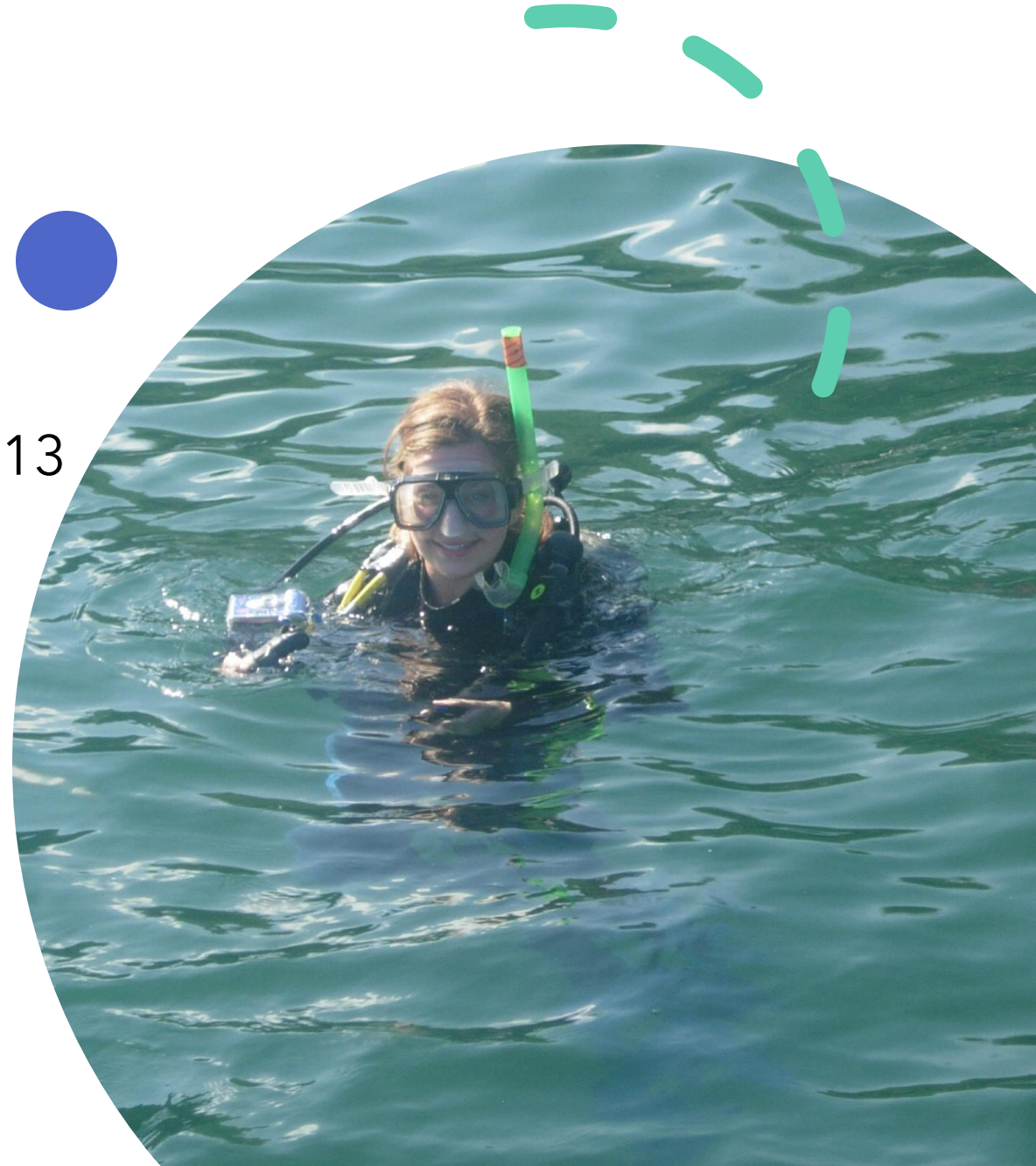
Extreme or high-risk sports are defined by Breivik (1999) as, "all sports where you have to reckon with the possibility of serious injury or death as an inherent part of the activity."

Laviolette (2007) explains an appeal of high-risk sports derives from "individually confronting risk" (p. 2) by pitting an individual against a risky environment and overcoming fear.



My Diving Background

- PADI "Scuba Diver" - 2007
- PADI Open Water Diver - 2011
- PADI Advanced Open Water Diver - 2013
- PADI Enriched Air Diver - 2014
- PADI Rescue Diver - 2014



Welcome to the Dark Side...

- TDI Cavern Diver - 2017
- TDI Tech Diver - 2017
- TDI Intro to Cave - 2018
- TDI Full Cave - 2018





Human Information Interaction

Contemporary HII scholars, including Kari and Hartel, have advocated for research in serious leisure to increase, "...because of the importance of these pleasurable activities to everyday life experience" (as cited in Robinson & Yerbury, 2015, p. 591).





Sport & Information Behaviour Research

Interpersonal relationships and social media are important sources of information in sport and active leisure.

- Hungenberg, Ouyang, and Gray (2019): "Adventure tourism"
- Bergstrom and Neo (2020): Hai'kū Stairs
- Gorichanaz (2017): Ultramarathon runners
- Yamashita (2022): "Sports tourists"

Research Methodology

The study uses the Information World Mapping technique developed by Greyson, O'Brien and Shoveller. This methodology uses a participatory art-based technique for conducting information behaviour interviews. The technique encourages participants to both draw their information seeking pathways and at the same time talk through their process.

Greyson, D., O'Brien, H., & Shoveller, J. (2017). Information world mapping: A participatory arts-based elicitation device for information behavior interviews. *Library & Information Science Research*, 39(2), 149-157.



Call for Volunteers!

PARTICIPANTS NEEDED FOR RESEARCH IN THE INFORMATION-SEEKING BEHAVIORS OF CAVE DIVERS

ARE YOU A FULL-CAVE CERTIFIED CAVE DIVER OVER 18 YEARS OF AGE? IS CAVE DIVING A HOBBY OR A PASSION OF YOURS? WE'D LOVE TO HEAR FROM YOU!

If you volunteer to be in this study, your participation will consist of a one-hour long arts-based interview held virtually to learn about the information-seeking behaviors of cave divers. These interviews will be conducted in English.

To participate in this study, you must have completed a Full Cave certification, such as with TDI or an equivalent company, and provide proof of completion (such as a certificate or membership card). You should be a "recreational" or amateur cave diver, not a professional.

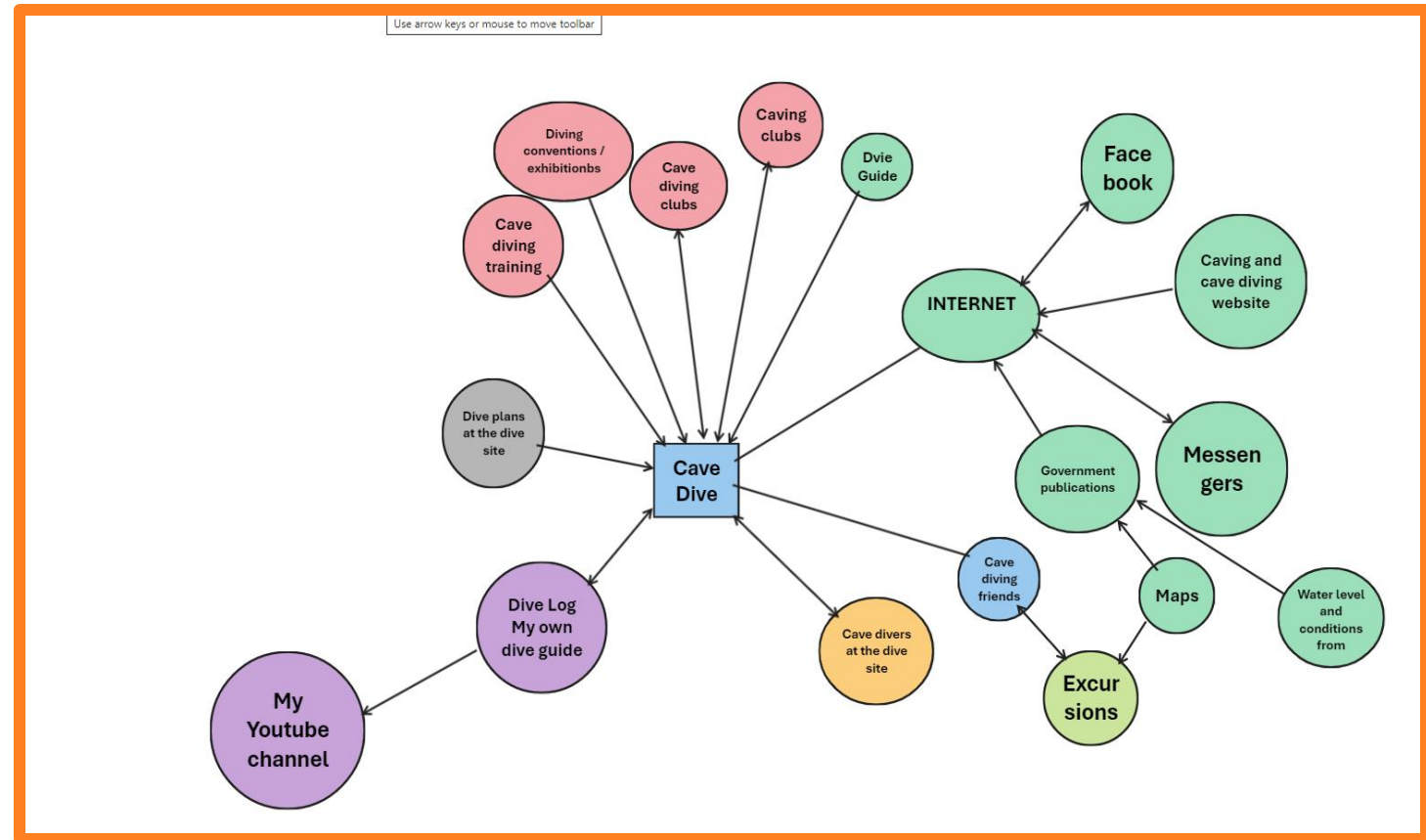
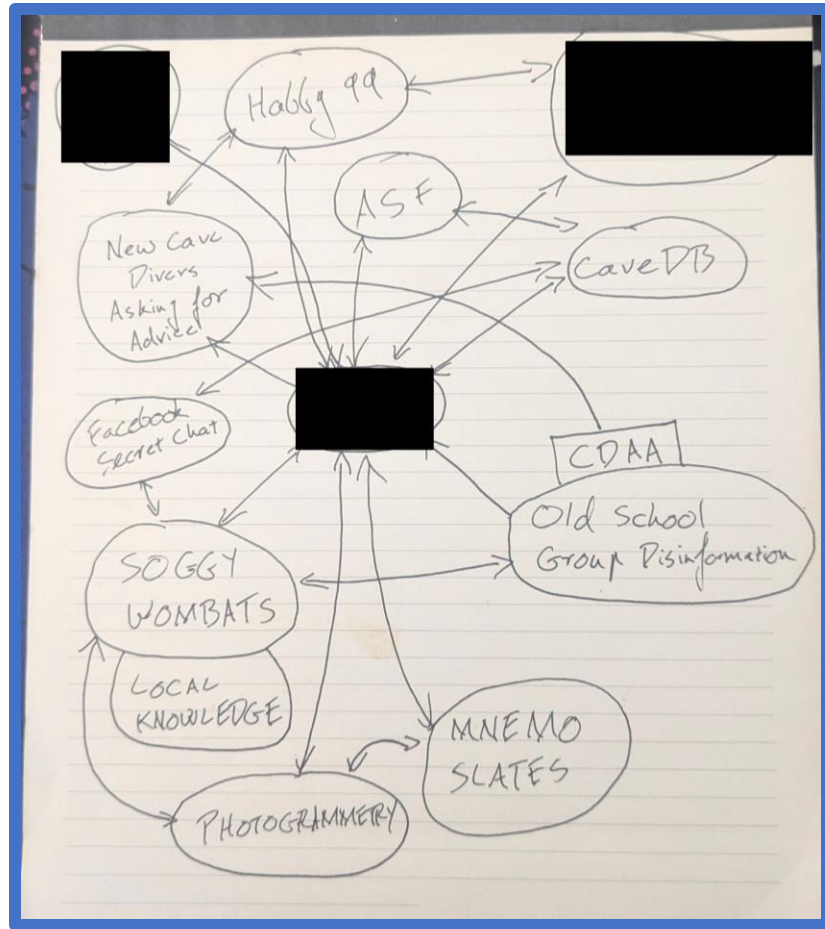
MORE INFORMATION:
Contact: Toni Beaton
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Recruitment & Participant Criteria

- 20 participants
 - 6 female-presenting
 - 14 male-presenting
- International representation
 - Australia
 - Canada
 - Denmark
 - Germany
 - Mexico
 - Switzerland
 - The United States

Data Collection



Data Analysis

used this method, take it quite literally and draw a picture. Some people just use words and make it more of like a mind map or a word cloud sort of thing with lots of arrows here or there. So, no right way or wrong way, no prescriptive way to do it.

Participant 1

Alright, well I could probably describe to you, like, how I plan a dive.

Lead Researcher

Yeah. Perfect.

Participant 1

That's probably the best way to go about it. Probably the best way is I'm looking on the Internet as far as sites like, you know, YouTube. You know, what's it called? Uh, you know, Facebook. You know, they typically show pictures, "Hey, here's a cool place to go," and you know, it gives you a good idea of what's out there.

And then my next resource for that is I look for maps. You know Florida, you know we we're not quite as you know, we don't have too many.... What's it called? Caves to dive. So, we have, you know, it's a lot easier for us to get maps! Uh, and from there that gives me a good idea. OK. You know, I'm taking a left here, right here, jump here. You know, it's all kinds of stupid stuff. And then I actually go back to YouTube. You know, I go back to sites like YouTube and all that to get a general idea of what that area of the cave is like, is it a backmount area? Is it sidemount area? Is it silty? Is it flow? You know, what type of concerns would I have?

And then also I will ask locals. Yeah, you know, like [NAME] at Cave Country [dive shop], he's very helpful for that kind of information because he's been here since the beginning. You know, the joke is, you know, [NAME] made [NAME]'s sidemount rig for \$2000 [laughs]. So and then, you know, go locals like [NAME] in or that, you know NSS-CDS [National Speleological Society-Cave Diving Section].

And so then, from there, I dive it. You know, I'll go through if there's multiple jumps, you know, I will go into the water and... what's it called. Legs. Fins... And I'll just dive it and see. OK, do one jump, another jump. And basically, you know, do it as safely as possible.

Yeah, it's typically how I get most of my cave dive information. You do get some tips, I don't get as much because I dive during the week so we don't have... it's not as busy. I also set up an area that's pretty far away from most other people [laughs]. And so, I don't really talk to people. It's both a blessing and a curse. It's, you know, lately while I was doing the DPV class, I had to set up in an area where the instructor is first... being where everyone is. And I did some dives with people and it's like... you spend like 2

person-to-person
collaborative
info seeking

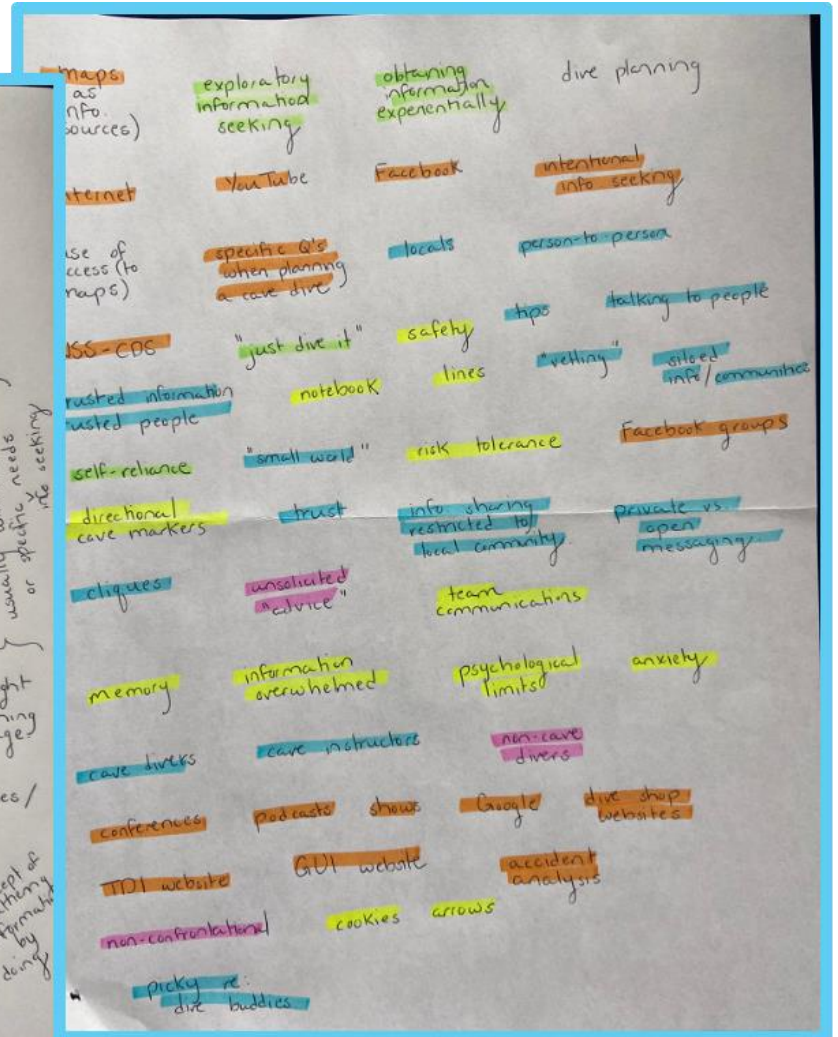
web-based
information
seeking

usually with intentionality
needs
or specific
info seeking

types of information
after in
the planning
stages

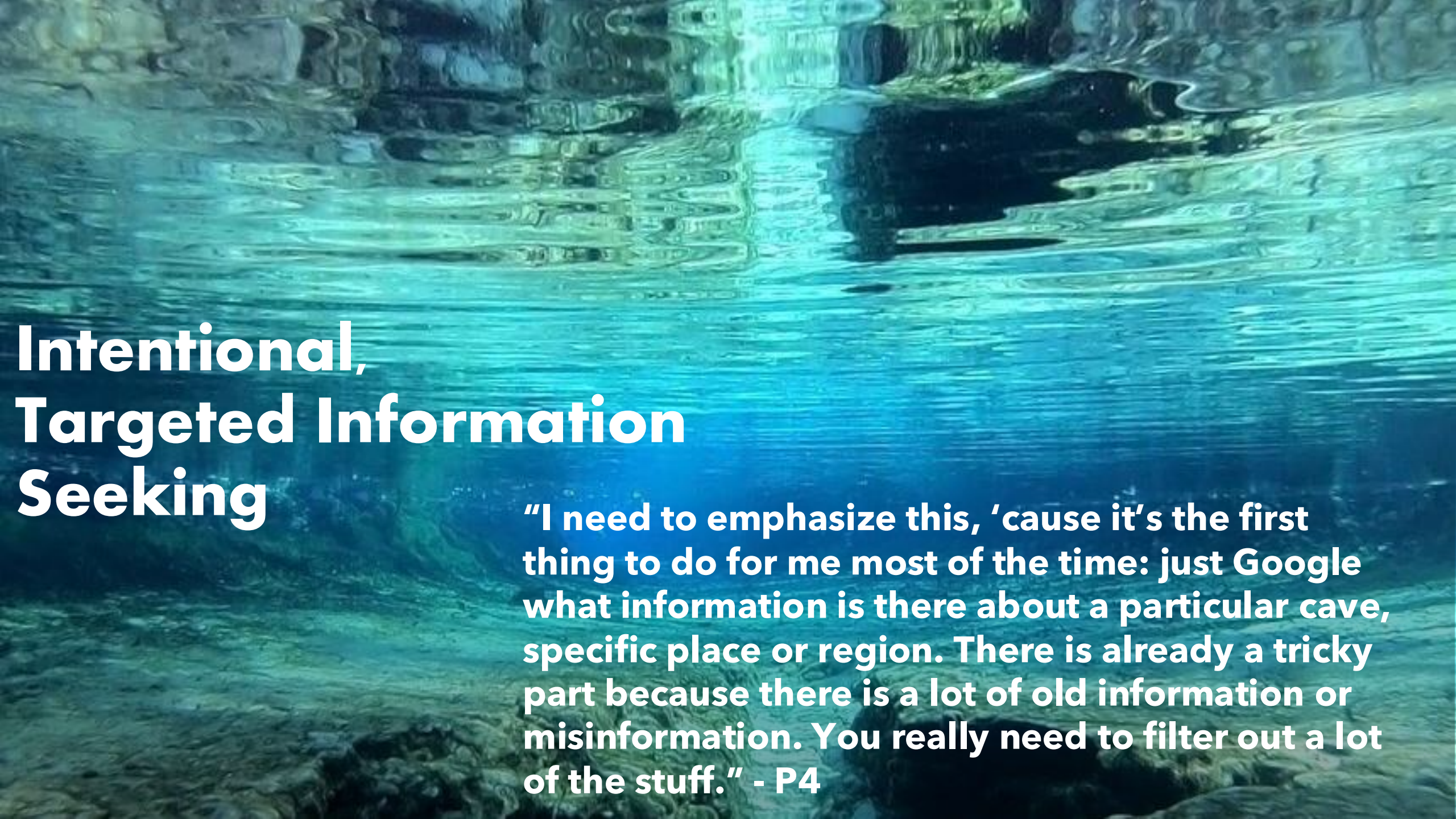
concept of
gathering
information
by
doing

select time to ask
locals for information;
more of an urgency to
start diving at the site





Identified Themes and Early Results

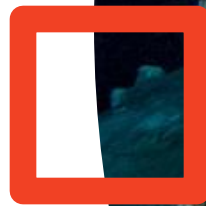
An underwater photograph showing a coral reef with various types of coral and a diver visible in the background. The water is clear and blue, with sunlight filtering through the surface.

Intentional, Targeted Information Seeking

"I need to emphasize this, 'cause it's the first thing to do for me most of the time: just Google what information is there about a particular cave, specific place or region. There is already a tricky part because there is a lot of old information or misinformation. You really need to filter out a lot of the stuff." - P4

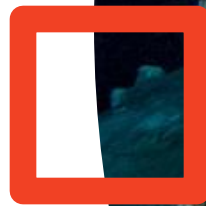
Person-to-Person Information Exchanges

"At this level of cave diving, you're generally going to be vetting anyone that you come in contact with. It will become very apparent very quickly through verbal and nonverbal vetting, whether or not that's someone that I would feel comfortable at least doing some initial exploratory, see-how-the-dynamic-works type dive." - P11



Person-to-Person Information Exchanges: Vetting

"If I haven't dove with a person before, I'm way more conservative about how far we go in and what we do. If you and I were doing a dive right now, I wouldn't want to do jumps. I would want to stay mainline. I would communicate that." - P15





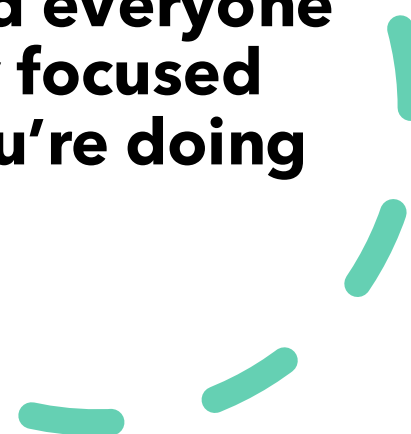
Experiential Information Gathering



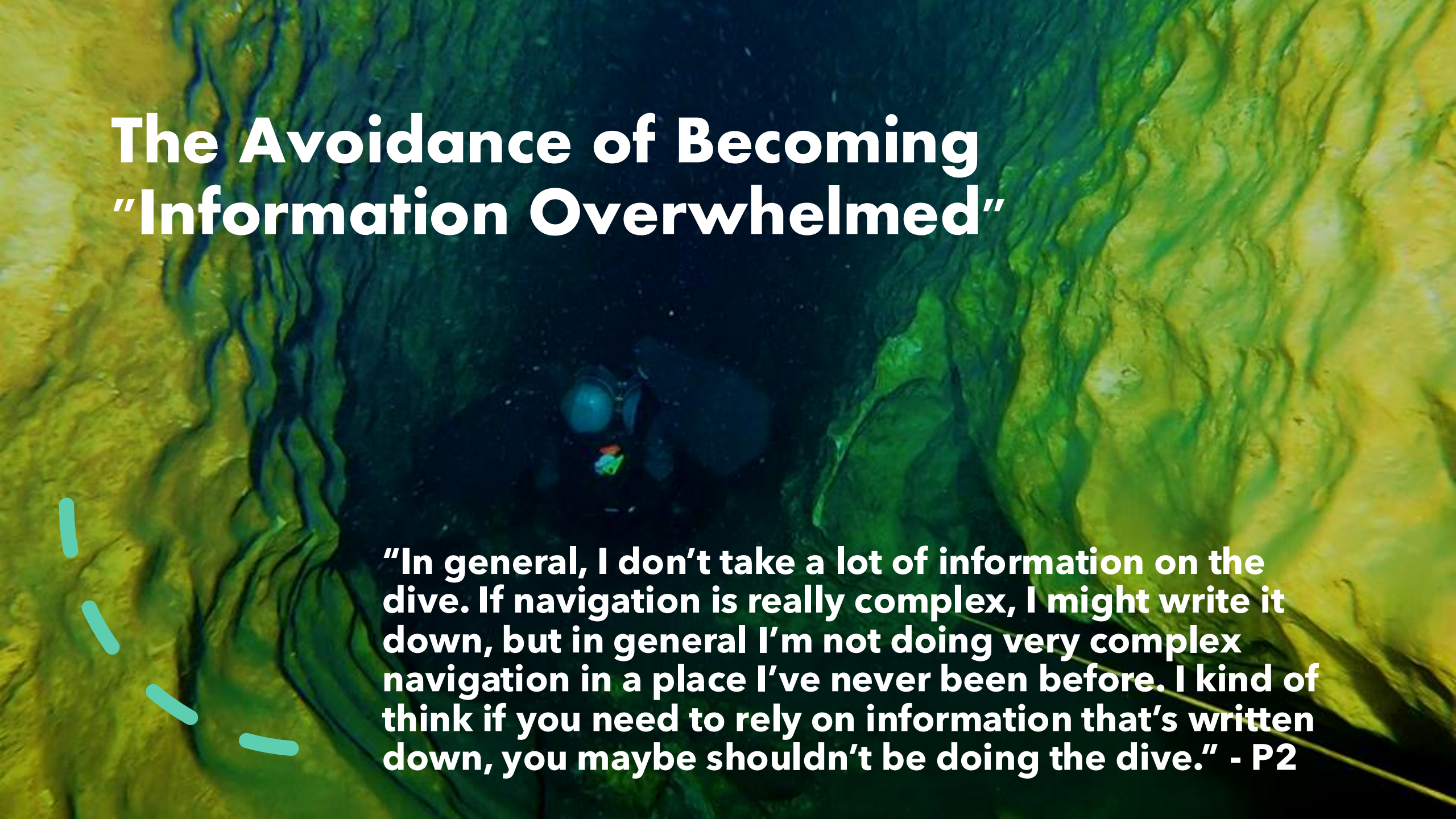


Embodied Information Gathering

"When you're actually in a cave, if you're not in the moment, you're potentially in deep trouble. For that... [time] you're in that cave, you are doing that thing because if you're not, you're potentially putting yourself and everyone else at risk. It's very focused for the time that you're doing it." - P17



The Avoidance of Becoming "Information Overwhelmed"

The background is a photograph of a diver in a dark cave, illuminated by a blue light. The cave walls are covered in green and yellowish mineral deposits. On the left side, there are four teal-colored dashed lines of varying lengths.

"In general, I don't take a lot of information on the dive. If navigation is really complex, I might write it down, but in general I'm not doing very complex navigation in a place I've never been before. I kind of think if you need to rely on information that's written down, you maybe shouldn't be doing the dive." - P2

Information as a Safety-Oriented Practice

"I don't do it for high risk. I do it for low risk, and it's extremely meditative for me. Everyone has to evaluate their own risk-reward decisions profile, and what you're comfortable with doing. I don't think in all my years of diving I've ever done something for the excitement of it. Not once. Doesn't even enter my mind." - P11



STOP

**PREVENT YOUR DEATH!
GO NO FARTHER.**

FACT: More than 300 divers, including open water scuba instructors, have died in caves just like this one.

FACT: You needed training to dive. You need cave training and cave equipment to cave dive.

FACT: Without cave training and cave equipment, divers can die here.

FACT: It CAN happen to YOU!

**THERE'S NOTHING IN THIS CAVE WORTH DYING FOR!
DO NOT GO BEYOND THIS POINT.**

A Diver Safety Message From:
NACD • NSS-CDS • PADI

This and other signs have been installed in
caves for your safety. Please Heed them!

Printing Courtesy of the:
National Speleological Society - Cave Diving Section, P.O. Box 950, Branford, Florida 32008-0950

Image [source](#).

Information is integral to the sport of cave diving, acting as an indispensable part of the equipment and critical to the relationship between divers and the environment.



Interesting “Cookies” to Follow...

- Gender imbalances
- Geographic differences
- Generational differences
- Public perception



Extending our Results Beyond the Cave

**"There's old mountaineers
and there's bold
mountaineers. There's no old,
bold mountaineers. That
works the same for cave
diving." - P15**



- Bergstrom, K., & Neo, R. (2020). Searching for the stairway to heaven: Information seeking about an illegal hiking trail in Hawai'i. *Leisure Studies*, 39(5), 751-764. <https://doi.org/10.1080/02614367.2020.1770844>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/14733158706qp063oa>
- Breivik, G. (1999). Empirical studies of risk sport. Oslo: Norges idrettshøgskole, Institutt for samfunnsfag.
- Chatman, E. A. (1999). A theory of life in the round. *JASIS*, 50(3), 207-217. <https://www.proquest.com/docview/231397230?sourcetype=Scholarly%20Journals>
- Cohen, R., Baluch, B., & Duffy, L. J. (2018). Defining extreme sport: Conceptions and misconceptions. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2018.01974>
- Dervin, B. (1998). Sense-making theory and practice: An overview of user interests in knowledge seeking and use. *Journal of Knowledge Management*, 2(2), 26-46. <http://doi.org/10.1103/13673279810249369>
- Given, L. M., Opryshko, A., Julien, H., & Smith, J. (2011). Photovoice: A participatory method for information science. *Proceedings of the American Society for Information Science and Technology*, 48. <http://dx.doi.org/10.1002/meet.2011.14504801209>
- Gorichanaz, T. (2017). The information of story: The genre and information activities of ultrarunning race reports. *Aslib Journal of Information Management*, 69(4), 460-474. <https://doi.org/10.1108/AJIM-03-2017-0071>
- Greyson, D., O'Brien, H., & Shoveller, J. (2017). Information world mapping: A participatory arts-based elicitation device for information behavior interviews. *Library & Information Science Research*, 39(2), 149-157. <https://doi.org/10.1016/j.lisr.2017.03.003>
- Hertzum, M. (2016). Collaborative information seeking and expertise seeking: Different discourses about similar issues. *Journal of Documentation*, 73(5), 858-876. <https://doi.org/10.1108/JD-04-2016-0053>
- Hungenberg, E., Ouyang, L., & Gray, D. (2019). Measuring the information search behaviors of adventure sport tourists. *Event Management*, 23, 75-91. <https://doi.org/10.1080/10413209808406392>
- Lavolette, P. (2007). Hazardous sport? *Anthropology Today*, 23(6), 1-2. <https://doi.org/10.1111/j.1467-8322.2007.00545.x>
- Narayan, B., Case, D., & Edwards, S. L. (2011). The role of information avoidance in everyday life information behaviors. *Proceedings of the American Society for Information Science & Technology*, 48(1), 1-9. <https://doi.org/10.1002/meet.2011.14504801085>
- Robinson, J., & Yerbury, H. (2015). Re-enactment and its information practices; Tensions between the individual and the collective. *Journal of Documentation*, 71(3), 591-608. <https://doi.org/10.1108/JD-03-2014-0051>
- Ryan, G. W., & Bernard, R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85-109. <https://doi.org/10.1177/1525822X02239569>
- Savolainen, R. (2020). Manifestations of expert power in gatekeeping: A conceptual study. *Journal of Documentation*, 76(6), 1215-1232. <https://doi.org/10.1108/JD-01-2020-0010>
- Stebbins, R. (2009). Leisure and its relationship to library and information science: Bridging the gap. *Library Trends*, 57(4), 618-631. <https://doi.org/10.1353/lib.0.0064>
- Yamashita, R. (2022). A quantitative scoping review of information search behaviour in sport tourism. *The Journal of Sport Tourism*, 26(4), 363-386. <https://doi.org/10.1080/14775085.2022.2098807>



Questions?

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