TRANSLATING LIGHTNING IN A BOTTLE: IDEALISTS, PRAGMATISTS, AND THE REORIENTATION OF TRANSLATORS AT THE INTERSECTION OF BLOCKCHAIN AND CLIMATE

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ABSTRACT

The travel of ideas is a ubiquitous part of social and organizational life. People and organizations are constantly exposed to ideas and often incorporate them into their lives in some way, including adopting them to create new ventures or solutions to grand societal challenges. Grounded in the translation perspective (i.e., Scandinavian institutionalism), this dissertation explores the notion of within organization translator heterogeneity and the microfoundations of the incipient process of new venture ideation predicated on the translation of an idea to a new setting or what I call "ideational translation." To explore such underpinnings of the emergence of a new organizational entity and the travel of ideas, I draw on insights from a 24-month ethnography of life behind the creation of Blockset, one of the world's first blockchain-based carbon offset platforms. Through a detailed ethnographic account, I tell the story of the set of blockchain experts and climate experts contributing to Blockset's formative creation and explore their diverse lived experiences as translators facilitating the travel of the idea of a blockchain platform to the field of climate. Notably, in doing so, I pay attention to the tensions that ensued, how people navigated them, and to what avail. Yet, what lies at the heart of this dissertation is my finding that a key microfoundational aspect of ideational translation is within organization translator heterogeneity delineated by "translation orientations" – a term I use to capture a person's general beliefs with regards to the appropriate way to implement an idea. Overall, based on my findings, I present an orientation-based model of ideational translation that is centered around a translation orientation spectrum anchored on idealism and pragmatism – which stress translators' preferences for conforming to the norms of an idea's origin and destination, respectively – and specifies why translators embrace specific orientations, their impacts on the dynamics and outcomes of translation, and reorientation pathways that translators can follow.

DEDICATION

To my mom and dad,

who were forced to seek refuge from chaos

and sacrificed everything to build a life for my brothers and me.

To my life partner Nanae and dearest Parker,

who are my everything

and for whom I live.

To the coming generations,

who will unjustly live with the consequences of the climate emergency

and the actions and inactions of societies today.

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PREFACE

Sitting in the lobby waiting for the meeting room to free up, Leo – the founder of Blockset – turns to me and says, “Hey Kam – I’ve got a question for you. How crypto do you feel you are?” Caught a little off guard by the question, I respond, “I’ve never actually thought about that. I mean… I’ve got my crypto wallet on my phone here with the CryptoKitties that you sent me a while ago, but I’m not really sure. Why do you ask?” Leo is an award-winning carbon market expert, and he explains that he has been thinking about the topic lately and at one point says:

> I’m not a libertarian like the hardcore crypto anarchists, but I do think I’m a bit of an idealist in that I think the blockchain and crypto community – Ethereum especially – is doing the things that we need to be doing to create a better world. They have the right spirit and ethos of not waiting around for permission to do things, and it is something that climate folks could benefit from.

Several months later, Leo turns to me again after a typical weekly meeting with the team at Blockset and asks me, “Do you know the phrase, to catch lightning in a bottle?” I respond, “I’m actually the worst person in the world with sayings, so not so much, does it mean something that is exciting or terrifying?” Leo laughs and explains:

> It means, that you’ve found something that is hard to… actually, let me look this up to make sure that I’ve got it right. Yeah, okay, so according to Urban Dictionary, “lightning in a bottle: capturing something powerful and elusive and then being able to hold it and show it to the world.” Yeah, and this site says, “a nearly impossible task, to trap something elusive or fleeting… usually in reference to something creative.” Anyway, so someone once told me that is what we’ve got with Blockset. There’s this really amazing thing – like really bleeding edge shit – that can solve really important problems and we’re trying to introduce it to climate folks. We’ve got lightning in a bottle.

This dissertation is entitled “translating lightning in a bottle” and it is based on 24 months of ethnographic fieldwork that I conducted at the pseudonymous Blockset, one of the world’s first blockchain-based carbon offset platforms. Welcomed into the organization during the formative stages of its life shortly after it was founded, I was given unrestricted access to the organization and its members, who invited me to join them every step of the way, even beyond the immediate context of Blockset. To this regard, this dissertation is not about the merits of

blockchain or its potential to address climate-related issues. Instead, as an ethnographic account, it is about the perspectives and lived experiences of a diverse set of experts working at the confluence of blockchain and climate, peering into their lives, and the dynamics of social and organizational life underpinning a concerted effort to introduce a novel idea based on the emerging digital technology of blockchain to a new area of application, the field of climate.

However, before we begin, I ask of you one thing, read the following statement by Latour (1999: 185) on black boxes:

> Consider how many black boxes there are in the room. Open the black boxes; examine the assemblies inside. Each of the parts inside the black box is itself a black box full of parts. If any part were to break, how many humans would immediately materialize around each? How far back in time, away in space, should we retrace our steps to follow all those silent entities that contribute peacefully to your reading this chapter at your desk?

Now, consider it in the context of the digital technologies you use, and maybe even open a browser on your computer, right click anywhere on any page, and click on “view source page” or “inspect” to have a glimpse of some of the code powering your life. In part, this dissertation tells the story of a new era of coders and technologists, those working with blockchain and the black boxes of digital emerging technologies. Yet, it also tells the story of experts working to address the most pressing issue of our time, climate change.

"Our house is on fire.
I am here to say, our house is on fire."

Greta Thunberg
Climate Activist and 2019 TIME Person of the Year

"Some Bitcoin users see the hard fork as in some ways violating their most fundamental values.
I personally think these fundamental values, pushed to such extremes, are silly."

Vitalik Buterin
Co-Founder of Ethereum

INTRODUCTION

Ξ

This dissertation is about the diverse lived experiences of translators underpinning what I call ideational translation, the incipient process of new venture ideation predicated on the travel and translation of a novel idea to a new setting. In this introduction, I set the scene in terms of what to expect in this dissertation. To begin, I introduce background information about how ideas travel and concepts that lie at the heart of this dissertation – namely translation – as understood within the Scandinavian school of institutional theory or Scandinavian institutionalism.[*] Then, I proceed to present the purpose of this dissertation, which is to explore translator heterogeneity within rather than across organizations and the diverse lived experiences of translators during ideational translation, as well as the research questions that this dissertation seeks to answer. From there, I offer an overview of the empirical context, the adoption of the emerging technology of blockchain in the field of climate, and the research methods deployed, a 24-month ethnography of organizational life behind the formative creation of one of the world's first blockchain-based carbon offset platforms. Next, I preview key findings and the broad contributions to the literature that the dissertation offers. Lastly, I provide an outline of the overall dissertation and the organization of the chapters to follow.

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[*] It should be recognized that several conceptualizations of "translation" exist. While many overlap in their meaning, in this dissertation, I focus on translation as conceptualized within Scandinavian institutionalism rather than other areas of such as actor-network theory and the knowledge-based view (see Spyridonidis, Currie, Heusinkveld, Strauss, & Sturdy, 2016), as well as organizational and management research (Anteby & Holm, 2021; Augustine, 2021; Bechky, 2021) and science and technology studies (Akrich, Callon, Latour, & Monaghan, 2002; Bijker, Hughes, & Pinch, 1989) more broadly.

SETTING THE SCENE

The travel of ideas – old and new – through time and space is a ubiquitous part of social and organizational life (Abrahamson & Piazza, 2019; Piazza & Abrahamson, 2020), and as a topic, it has long been at the forefront of organizational scholarship and the broader social sciences (Naumovska, Gaba, & Greve, 2021). Indeed, it seems impossible to deny that the movement of ideas between people, organizations, industries, fields, and any other entity or setting is a part of everyday life. From the persistence of traditions such as formal dining at the University of Cambridge (Dacin, Munir, & Tracey, 2010) to the introduction of cutting-edge innovations like electric lighting to society (Hargadon & Douglas, 2001), the spreading of the taken-for-granted practice of presenting a PowerPoint (Kaplan, 2011), and the very production of knowledge underpinning scholarship (Latour & Woolgar, 1986), the travel of ideas is a part of our lives in more ways than we likely care to recognize. Yet, it is an important part of organizational and social life. People and organizations are constantly exposed to ideas and often incorporate them into their lives in some way, including the adoption of novel ideas to create new ventures (Claus, Greenwood, & Mgoo, 2021; Lawrence, 2017; Tracey, Dalpiaz, & Phillips, 2018).

To paint a more vivid picture, let us explore a real-world example from the relatively recent past. In March 2009, the company Uber was founded with the creation of a smartphone app that enabled people to hail a ride with a tap of a button to modernize the process of getting a taxicab with a "digital hail," matching riders with available drivers who sign up to offer rides with their own vehicles (Garud, Kumaraswamy, Roberts, & Xu, 2020; Karanović, Berends, & Engel, 2021). In July 2010, the first ever Uber ride was completed in San Francisco, and within a matter of a few years, Uber spread to what seemed like every corner of society, launching in city after city and country after country (Aversa, Huyghe, & Bonadio, 2021; Phung, Buchanan,

Toubiana, Ruebottom, & Turchick-Hakak, 2021), amassing 91 million monthly active riders and 3.9 million drivers in 63 countries and 700+ cities by the end of 2018 as reported on the Uber website. In doing so, it became the poster child of the gig, platform, and sharing economies (Markman, Lieberman, Leiblein, Wei, & Wang, 2021; Rosenblat, 2018; Schor & Vallas, 2021) as well as on-demand and algorithmic work (Cameron, 2020; Roberts & Zietsma, 2018) as the idea underlying Uber traveled within the realm of personal transportation to other companies (Lyft, Gett) and then beyond to food delivery (DoorDash, SkipTheDishes), cleaning and handywork services (TaskRabbit, Handy), and more. Impressively, in what seemed like the blink of an eye, "Uber" became a household name and "Uberization" became a newly recognized form of organizing (Davis & Sinha, 2021; Faraj & Pachidi, 2021) – "Uberization of everything is happening … Take the power of Uber and apply it to X" (Huffpost, 2015) – despite contestation.

While the idea of Uber is merely one example of the movement of an idea through time and space, it has an important purpose in introducing this dissertation: to vividly illustrate that, ideas travel near and far and that they change for various reasons as actors adopt and adapt them to their new settings (Ansari, Fiss, & Zajac, 2010; Czarniawska & Sevón, 2005; Gondo & Amis, 2013). There is no denying that the Uberization organizational model traveled within and across the proximal and distal boundaries of Uber and became a highly circulated idea within the span of a decade. Yet, as Davis and Sinha (2021) highlight by unpacking ridehailing in China, Germany, India, Indonesia, Nigeria, Sweden, and the United States, "varieties of Uberization" exist and "a seemingly basic concept… can be implemented in wildly diverse ways depending on the context of national institutions." As Naumovaska et al. (2021) emphasize in their review of 20 years of diffusion research from an array of traditions, however, ideas diffuse for both technical and social-symbolic reasons and future scholarship on the travel of ideas needs to

recognize both "homogeneity *and* heterogeneity across organizations." Overall, while several perspectives to understand organizations and the travel of ideas exist, this dissertation embraces the translation perspective (Boxenbaum & Strandgaard Pedersen, 2009; Czarniawska, 2007; Czarniawska & Sevón, 1996, 2005; Sahlin & Wedlin, 2007; Wedlin & Sahlin, 2017), also referred to as Scandinavian institutionalism and the Scandinavian school of neo-institutionalism.

All in all, the translation perspective is concerned with the movement of ideas across boundaries and stresses that ideas transform when they travel because actors translate – that is, modify or edit (Sahlin-Andersson, 1996) – them to meet the local conditions of their destinations (Morris & Lancaster, 2006; Özen & Berkman, 2007; Saka, 2004; Zilber, 2006). This is because their successful implementation or "transformation from ideas into practice" (Reay et al., 2013: 973) is argued to be dependent on them being deemed "legitimate and meaningful" (Boxenbaum, 2006: 946) by actors within the locality of their destinations, which can necessitate representational and material transformations (Lawrence, 2017; van Grinsven, Heusinkveld, & Cornelissen, 2016). Thus, while ideas may circulate or "diffuse" in society – even becoming institutions – they travel "imperfectly… over time and across people, organizations, and industries," and are reconstructed and often recombined with other ideas in ways that make them appear "new and creative" (Hargadon & Sutton, 1997: 716). Meanwhile, complex ideas can be "converted into the mundane and comfortable" ones (Wright & Nyberg, 2017: 1633).

Ultimately, the "diffusion of differences" (Naumovska, Gaba, & Greve, 2021: 6) is the precise interest of the translation perspective, which focuses on the "mundane" agentic underpinnings of heterogeneity amongst homogeneity (Wedlin & Sahlin, 2017: 119) and continues to be embraced in the latest research on the travel of ideas (Arnold & Loconto, 2021; Brüggemann, 2020; Claus et al. , 2021; Hultin, Introna, & Mahring, 2021; Nielsen, Mathiassen,

& Newell, 2021; Outila, Piekkari, Mihailova, & Angouri, 2021; van Grinsven, Sturdy, & Heusinkveld, 2020; Westney & Piekkari, 2020). As Greenwood et al. (2007: 24) highlight, the translation model "offers the promise of more rich and detailed insights into how institutional practices and processes migrate and diffuse across fields and over time."

To this end, with the translation perspective in mind, let us revisit the case of Uber. While I stated that the example was to illustrate that ideas travel and change as they enter new settings, it is important to recognize that the variations of Uberization that have emerged could be because of both technical and social-symbolic reasons, as explained by Greenwood et al. (2007: 11-12):

> Even if the institutional context is very clear and uniform in its demands, it is not clear that diffusion of any practice per se signifies an institutional effect. If a firm believes another to have superior knowledge and to have acted rationally, copying that firm is an act of vicarious learning, and, arguably, a purposely 'rational' decision. In contrast, if a firm adopts an innovation because it believes that doing so provides legitimacy, that behaviour is an institutional effect.

Thus, while Davis and Sinha (2021) show through their analysis of ridehailing in a diverse range of countries that national institutions have shaped how the idea was adopted locally, it is crucial to remember that when it comes to the travel of ideas, the translation perspective is concerned with the pursuit of local legitimacy, defined as: "generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995: 574). Yet, as research and theory has also argued, although actors often change ideas that they implement them to fit the setting, in some cases, they change the setting to fit ideas and/or decouple ideas from activities (Ansari et al., 2010; Gondo & Amis, 2013; Sasaki, Nummela, & Ravasi, 2020). Nonetheless, what is important to recognize but rarely clarified about the translation perspective is that although the focal idea traveling into a new setting has often been viewed as an institutionalized practice when dealing with a highly circulated idea, an idea undergoes change because of the broader institutions guiding social and organizational life in the destination of the idea.

PURPOSE AND RESEARCH QUESTION

This dissertation treats ideas as social-symbolic objects that are "meaningfully situated in social systems" (Lawrence & Phillips, 2019: 25) and recognizes that the travel of ideas can be shaped by diverse actors that embrace divergent views, expectations, practices, and roles in society and organizations (Nielsen et al., 2021; Tracey et al., 2018; Westney & Piekkari, 2020). More specifically, however, it embraces the translation perspective and is about the travel of ideas underpinning the formative establishment of a new venture – namely the stage of new venture ideation, which concerns the incipient generation, elaboration, championing, and implementation of an idea for a new venture (Kier & Mcmullen, 2018; Kier & McMullen, 2020; Perry-smith & Mannucci, 2017). Since coming to fruition, the translation perspective has formed the bedrock of a body of literature that offers much insight into the travel of ideas (e.g., Battilana, Anteby, & Sengul, 2010; Cassell & Lee, 2016; Heinze, Soderstrom, & Heinze, 2016; Teulier & Rouleau, 2013; Zilber, 2006) and how the pursuit of legitimacy transforms ideas heterogeneously (Boxenbaum, 2006; Gond & Boxenbaum, 2013; Lawrence, 2017; Özen & Berkman, 2007; Surachaikulwattana & Phillips, 2019). Yet, most research tends to assume that translators in a translation effort are homogeneous and treat them as a unitary set of actors. Meanwhile, scholars have noted (Tracey et al., 2018) that studies tend to focus on translation in established organizations rather than translation underpinning the establishment of new ones. Thus, our understanding of translator heterogeneity within rather than across organizations during the formative establishment of organizations predicated on the translation of ideas remains limited.

Tending to such an assumption and gaps, however, is important as "every organization is a mosaic of groups" (Greenwood & Hinings, 1996: 1033). It has also increasingly been recognized that many pressing societal challenges that we face require the convening of diverse

and specialized actors around novel ideas to establish new organizations and initiatives (Ferraro, Etzion, & Gehman, 2015; George, Howard-Grenville, Joshi, & Tihanyi, 2016). Crucially, by assuming that translators are homogenous and experience translation similarly, we risk oversimplifying the complexities of social and organizational life that shape and are shaped by phenomenon such as the travel and translation of ideas. Indeed, lower level individual factors or what scholar refer to as "microfoundational" factors shape higher level organizational and institutional phenomena.[†] Yet, without a detailed understanding of who translators are and how they may perceive, approach, and experience translation underpinning the critical but underexplored process of new venture ideation differently, we lack insights that enables us to explain translation during the formative stages of new venture creation when survival is particularly vulnerable and decisions have profound effects on organizations (Cardon, Zietsma, Saparito, Matherne, & Davis, 2005).

To date, a select few translation studies illustrate that translators have different preferences, identities, and experiences that shape how they approach translation (Boxenbaum, 2006; Powell, Gammal, & Simard, 2005; van Grinsven et al., 2020), and studies are increasingly emphasizing that translation involves dynamic interactions amongst diverse actors and their environments (Nielsen et al., 2021; Wedlin & Sahlin, 2017; Westney & Piekkari, 2020). It has also been theorized that responses within organizations to the adoption of ideas can vary depending on factors such as an actor's acceptance of an idea and their conscious engagement with it (Gondo & Amis, 2013). Nonetheless, despite growing evidence that studying the lived experiences of individuals can be a powerful means to bringing much needed nuance about human agency to our understanding of institutional problematics (Creed, DeJordy, & Lok, 2010;

[†] The term "microfoundations" has increasingly embraced by organizational scholars over the past few decades and while it is conceptualized in many different ways (Felin, Foss, & Ployhart, 2015; Haack, Sieweke, & Wessel, 2020; Powell & Colyvas, 2008; Zilber, 2020), at the heart of all is a concern for how the lower level individual or "micro" aspects of life impact the higher level collective and organizational or "macro" aspects.

Jarvis, 2017; Sadeh & Zilber, 2019), research has yet to examine in detail the lived experiences of translators, how and why they differ and change, and their impacts on translation, which limits our understanding of translators and the microfoundations of translation (Gutierrez-Huerte O, Moon, Gold, & Chapple, 2020; Parolin & Mattozzi, 2013; Surachaikulwattana & Phillips, 2019).

All in all, considering the state of the literature, this dissertation's purpose is to explore the diverse lived experiences of translators facilitating ideational translation – which, to reiterate, is the process of new venture ideation predicated on the travel and translation of a novel idea to a new setting. My aim in doing so is to advance our understanding of translator heterogeneity within emergent organizations and the microfoundations of the nascent stages of new venture creation through translation. Accordingly, this dissertation is guided by the questions:

> Who are translators and what invokes heterogeneity amongst their approaches to ideational translation – that is, new venture ideation predicated on the travel and translation of a novel idea to a new setting? How does the presence of heterogeneous translators shape the dynamics and outcome of ideational translation?

To address these questions and broaden the basis of our understanding of the travel and translation of ideas, this dissertation focuses on a common type of idea that has received little attention in translation research: emerging technologies, defined as technologies that are characterized by radical novelty, relatively fast growth, coherence, prominent impact, and uncertainty and ambiguity (Rotolo, Hicks, & Martin, 2015). More specifically, it deals with digital emerging technologies that underpin digital entrepreneurship, "whereby new social and economic practices are produced and reproduced using digital artefacts" (Ingram Bogusz, 2018: 5). As Ingram Bogusz (2018) argues, "digital entrepreneuring differs from its non-digital counterpart when it comes to legitimacy-building" for several reasons, including the reality that "practices cannot be severed from the digital artefacts upon which they rely."

When dealing with novel ideas such as emerging technologies, actors encounter a set of conditions that differ from those presented by mature technologies and well-travelled ideas more broadly that are often already accepted in society and readily accessible in abstracted forms via discursive accounts and carriers of ideas such as consultants, business schools, and media (Sahlin-Andersson & Engwall, 2002). They also tend to be unfamiliar beyond their origins (Tracey et al., 2018) and the requisite expertise to implement them is often concentrated in the hands of the people creating them or what some call their originators (Dacin & Dacin, 2019; Westney & Piekkari, 2020; Zucker & Darby, 1997). Meanwhile, since the implementation of emerging technologies is often limited, their travels often entail theorizations based on high-level abstractions that can sometimes muddle and exaggerate them (Kleinaltenkamp & Ansari, 2021).

Moreover, to further enrich the literature, this dissertation explores the relatively underexplored case of collective translation, defined as translation facilitated through collaborations between actors from both the origin and destination of an idea. Given the social-symbolic nature of ideas as objects that derive meaning through their situatedness in local systems (Lawrence & Phillips, 2019), we can expect that collective translations might be particularly prone to conflict and tension (see Brüggemann et al., 2018; Claus et al., 2021) and conditions that might work as "counter-forces" against the "intensified circulation" of ideas (Wedlin & Sahlin, 2017: 118). Yet, studies also point to how interactions with the originators of ideas can aid in their implementations as they transfer institutional knowledge across boundaries to adopters of ideas (e.g., Westney & Piekkari, 2020; Dacin & Dacin, 2019). Regardless, our understanding of how ideas travel and are translated from a "supply" side of ideas – including where it overlaps with the "demand" side – remains limited (Røvik, 2016; Scott, 2014; Wæraas & Nielsen, 2016). Taken together, the conditions presented by emerging technologies and

collective translation proved to not only be ripe for examining translator heterogeneity and the microfoundations of ideational translation, but also promising for broadening our understanding of different types of translation that transpire in society.

OVERVIEW OF CONTEXT AND METHODS

This dissertation examines the micro-dynamics and patterns of organizational life behind the travel and translation of the idea of a blockchain platform – specifically one based on non-fungible tokens or "NFTs" as most people call them – to the field of climate. Further, it does so as an ethnography based on 24 months of fieldwork conducted at the pseudonymous *Blockset*, one of the world's first blockchain-based carbon offset platforms created by a set of climate experts and blockchain experts. As a method of study, ethnography embraces a naturalistic profile (Miles & Huberman, 1994) and relies on the representation of intimate details about culture and the patterns of human activity that researchers observe through prolonged immersion in a community (Conklin, 1968; Van Maanen, 1979, 2011; Van Maanen & de Rond, 2017). Indeed, as scholars have noted, given their interest in and focus on the lived experiences of people, ethnographic studies are well equipped for studying the microfoundations of institutional problematics such as translation (Zilber, 2020). All in all, my decision to conduct an ethnography was also motivated by my desire to understand what happens on the ground as emerging technologies travel to new areas of application and serve as the basis for creating new ventures and to create knowledge from the lived experiences of those facilitating their travels and translations, an effort fitting for ethnography (Zilber & Zanoni, 2020).

As Iansiti and Lakhani (2017) explain, blockchain is the category of digital technology "at the heart of Bitcoin and other virtual currencies" and "is an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way."

Indeed, during and after my fieldwork, blockchain was considered one of the most cutting-edge emerging technologies of our time by not only scholars (Kleinaltenkamp & Ansari, 2021; Murray, Kuban, Josefy, & Anderson, 2021; Seidel, 2018), but also the media, practitioners, and policy makers (e.g., Gartner, 2018; Forbes, 2020). Thus, my study coincided with an important moment in the history of blockchain, when it was in its early stages of traveling beyond its initial focus on cryptocurrency, and in many cases, serving as the sole idea on which new ventures were founded. At the same time, it took place before the idea of NFTs experienced a distinct and sustained surge in mainstream interest. Yet, as scholars have noted, novel ideas are often "the sole dimensions on which new ventures, particularly high technology new ventures" form (Kiss & Barr, 2017). Crucially, during such a period, we saw the formation of communities operating under "blockchain for X" labels such as "blockchain for healthcare" and "blockchain for impact" (e.g., Forbes, 2018). Yet, what struck me about Blockset was the convening of blockchain experts and climate experts under one roof. As members say, it "straddles two worlds… the crypto and blockchain and the climate."

Based in a major city in North America but with members around the world, Blockset quickly became an organization with about twenty members that largely but not exclusively worked voluntarily and in sprints to contribute to the ideation of the platform at the heart of the venture. While work at Blockset involved both in-person and virtual interactions, the team often worked out of a workspace at the office of a strategic partner during my fieldwork that traced the evolution of Blockset from conceptualization to the completion of a functional prototype launched in a testing environment on the Ethereum blockchain, one of the most actively used blockchains. Yet, interactions also often took place offsite, including at partners' offices and

events. Further, as an emergent organization, however, Blockset embraced a "pop-in pop-out" culture with members maintaining full-time commitments in their fields.

In the words of Bechky (2021: 3), "[a]s an organizational ethnographer, my goal is to try to understand and portray the daily life of the people working in the organization." This meant immersing myself in the work of everyone at Blockset, exposing myself to their worlds, and following them in their daily lives. Welcomed into the organization with unrestricted access shortly after it was founded, I developed a comprehensive dataset comprised of fieldnotes from observations, interviews, and public and proprietary archival data, including nearly all organizational communications, documentation, and materials. Yet, despite the innovativeness of Blockset, my study focuses on exploring life behind the formative creation of the platform throughout the ideation stage rather than what it does in a technical sense or its merits.

SIGNIFICANCE AND CONTRIBUTIONS

All things considered, the core contribution of this dissertation is an exploration of the microfoundations of the incipient process of new venture ideation predicated on the travel and translation of a novel idea to a new setting and does so through a nuanced ethnographic account of translator heterogeneity and the diverse lived experiences of translators within an emergent organization based on an emerging digital technology. What I observed revealed to me that adequately understanding what transpired behind the ideation of Blockset to transport the idea of a blockchain platform to the field of climate requires research and theory to recognize the different translation orientations – a term I use to capture an actor's general belief with regards to the appropriate way to execute the implementation of an idea – embraced by translators, changes to these orientations, and how such heterogeneity impacts the dynamics and outcome of translation. Had I treated Blockset as a singular entity and/or relied solely on interviews based on

retrospective accounts and archival data, I do not hesitate to say that I would have missed nearly all the richness reported in this dissertation, including the tensions and struggles that emerged but were seldomly documented anywhere beyond the data that I collected. Further, my fieldwork revealed to me the importance of temporality in translation. Had I started my fieldwork later in the process of creating Blockset, I would have not been in the position to detect and unpack critical changes in the lived experiences of translators and how these changes shaped and were shaped by the formative process of ideational translation underpinning new venture creation.

Overall, the ethnographic account that I provide of Blockset illustrates that an important delineation of translator heterogeneity within an organizational setting that can help us understand the dynamics and outcomes of ideational translation is the translation orientations that people embrace in the moment and their relationships to one another. At Blockset, when it came to approaching all phases of ideating the focal idea underpinning its emergence as an organization, contributing members embraced different translation orientations: idealism and pragmatism. On the one hand, idealism emphasizes conforming to the norms of the crypto community to implement a platform that creates an alternate social system. On the other hand, pragmatism emphasizes conforming to the norms of the climate community to implement a platform that fits into the existing social system. Consequently, the main challenge that amounted at Blockset was not tension between climate experts and blockchain experts. Instead, it was tension between climate experts that converted from pragmatism to idealism – becoming what I call idealism disciples – and climate experts that continued to embrace pragmatism. Indeed, pragmatists generally understood and accepted blockchain experts' idealistic orientations but did not understand their fellow climate experts' embracement of idealism.

Crucially, I find that when key decision makers become idealism disciples to the extent that they reject the views and work of their fellow experts, pressures from local actors to make concessions for both social-symbolic and technical reasons can further entrench them in their orientations and their rejection of others' views and work. However, when such pressures come from trusted allies such as those that are deemed fellow idealists, they are more likely to accept and even praise such views and work. Yet, for such pressures to emerge, idealists that serve as trusted allies must move away from idealism and towards pragmatism. Explaining such heterogeneity amongst translators, the tensions and struggles that ensue during ideational translation, how people navigate them, and to what avail is the focus of this dissertation. All in all, the story that I tell focuses on the life of translators leading up to the creation of one the world's first blockchain-based carbon offset platforms and the travel of the idea of a blockchain platform into the field of climate situated at the heart of such an endeavour.

OUTLINE OF THIS DISSERTATION

This dissertation is organized and divided into three major parts. Part I, "Background," contains chapters 1-2 and presents important details to build a foundation for the focus of this dissertation. In chapter 1, I unpack this dissertation's theoretical framework, offering an overview of the literature on translation and the motivation behind this dissertation's concern with the microfoundations of ideational translation, particularly translator heterogeneity and the diverse lived experience of translators. In chapter 2, I then provide a detailed description of the context and methods used to study the topic of this dissertation.

Part II, "Translator heterogeneity and ideational translation," contains chapters 3-5 and presents the focus of this dissertation, an ethnographic account from my 24 months of fieldwork. In chapter 3, to set the scene, I introduce the dominant translation orientations underpinning the

formative ideation of Blockset – idealism and pragmatism – unpacking what they entail and profiling the people that embrace them. In chapter 4, I examine how the co-presence of idealists and pragmatists shaped the dynamics of organizational life during Blockset's ideation and the conditions under which they each approached implementing Blockset in a way consistent with their orientations and to what avail. In chapter 5, I explore how idealists and pragmatists changed over time and why some of them experienced reorientation throughout the ideation process, moving away from their initial orientation and towards their opposing orientations.

Part III, "Discussion," contains chapters 6-7 and concludes the dissertation. In chapter 6, I explore my findings in further detail and present an orientation-based model of ideational translation that captures the essence of what I observed at Blockset. Lastly, in chapter 7, I discuss this dissertation's contribution to research and theory and practical implications as well as its limitations and directions for future research before concluding the dissertation.

PART I:
BACKGROUND

CHAPTER 1:
A TRANSLATION FRAMEWORK TO UNDERSTAND THE TRAVEL OF IDEAS

Ξ

In this chapter, I offer an overview of the theoretical framework grounded in the translation perspective guiding this dissertation's examination of the diverse lived experience of actors facilitating the travel of novel ideas beyond their origins – that is, what actors recognize as an idea's rootedness, situatedness, or locus prior to its travels within a situation. As a school of neo-institutionalism (Greenwood, Oliver, Lawrence, & Meyer, 2017; Greenwood, Oliver, Sahlin, & Suddaby, 2007) often referred to as Scandinavian institutionalism, the translation perspective (Boxenbaum & Strandgaard Pedersen, 2009; Czarniawska & Sevón, 1996, 2005; Sahlin & Wedlin, 2007; Wedlin & Sahlin, 2017) tends to the changes that ideas undergo as they travel into new settings. Overall, rather than present an exhaustive review of the literature since the perspective came to fruition in Czarniawska and Sevón's (1996) edited book *Translating Organizational Change* and repeat insights presented in existing reviews on translation (e.g., Sahlin & Wedlin, 2007; Wedlin & Sahlin, 2017) – including a special issue on translation and variants beyond institutional theory (i.e., actor-network theory, knowledge-based view) in the *International Journal of Management Reviews* (Lamb, Örtenblad, & Hsu, 2016; O'Mahoney, 2016; Radaelli & Sitton-Kent, 2016; Røvik, 2016; Spyridonidis, Currie, Heusinkveld, Strauss, & Sturdy, 2016; van Grinsven et al., 2016; Wæraas & Nielsen, 2016) – I focus my efforts on areas of the literature that informed and motivated this dissertation.

TRANSLATING IDEAS

The translation perspective was inspired by the sociology of translation in actor-network theory (Callon, 1999; Latour, 1996) as well as work on the social construction of reality (Berger & Luckmann, 1966) and developed as a variant of neo-institutionalism to move away from early diffusion models that failed to account for agency (Czarniawska & Sevón, 1996; Czarniawska, 2007). Thus, before unpacking the perspective, I briefly explore its roots in neo-institutionalism. As Czarniawska (2007: 770) notes, neo-institutionalism or institutional theory as it is often called (Greenwood et al., 2017, 2007) "is not a theory at all, but a framework, a vocabulary, a way of thinking about social life." It was born in the late 1970s to early 1980s (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Tolbert & Zucker, 1983; Zucker, 1977) amid growing interest in why organizations experience isomorphism – that is, "why organizations tend to look alike" (Greenwood et al., 2014: 1207). Research and theory until this point had largely emphasized technical and market rationalizations to explain the structure and behaviours of organizations. Yet, "[t]he initial concern of neo-institutionalism was to explain organizational isomorphism that could not be explained by competitive pressures or efficiency motives" (Lawrence et al., 2009: 4), and what "captured the imagination" of what early institutional theorists were observing is the thesis that organizations are influenced by and conform to their institutional contexts, where institutions broadly refer to "more-or-less taken-for-granted repetitive social behaviour that is underpinned by normative systems and cognitive understandings that give meaning to social exchange and thus enable self-reproducing social order" (Greenwood et al., 2007: 3-5).

In addition to isomorphism driven by social-symbolic motives, a key argument put forth by Meyer and Rowan (1977) is that even though organizations conform to the institutional pressures that they face to gain legitimacy from crucial constituents, they often decouple such

conformity from their actual activities. In turn, while organizations appear to be conforming to their institutional contexts and behaving in accordance with social expectations, it might only be ceremonial. As Meyer and Rowan argue, although "organizations are driven to incorporate the practices and procedures defined by prevailing rationalized concepts" and those that do so "increase their legitimacy and their survival prospects" (340), such conformity may compromise efficiency and lead organizations to decouple their activities from surface level conformity, thus creating and perpetuating what institutional theorists call "rational myths" or "rationalized myths" – that is, the myth that an idea is rational (Meyer & Rowan, 1977; Zilber, 2006).

As neo-institutional research progressed, scholars began to question structural diffusion models used to explain organizations' adoptions of ideas. Specifically, the perspective failed to account for the possibility of change and agency – that is, an actor's degree of choice (Child, 1997) – and needed to be "modified to recognize the agency of individual adopters, changes over time in conceptions of the innovation, and the importance of distinguishing between formal adoption and implementation" (Scott, 2014: 156). Indeed, Oliver's (1991: 145-146) classic work on the strategic responses to institutional processes notes, there was increased criticism of the perspective's "lack of attention to the role of organizational self-interests and active agency in organizational responses to institutional pressures and expectations." As scholars worked to rectify the overly structural conceptualization of the relationship between organizations and institutions and evaluate the merits of the institutional perspective (Oliver, 1988), one community of scholars that emerged that found the structural model of diffusion particularly problematic ultimately produced work that formed the foundations of the Scandinavian school of institutional theory that we know as the translation perspective (Czarniawska & Joerges, 1996; Sahlin-Andersson, 1996; Sevón, 1996), as explained by van Grinsven et al. (2016: 271-272):

> …theorists developed a critique on diffusion models of innovation underlying the established neo-institutionalism traditions. In the eyes of these early translation scholars, neo-institutional theory was too concerned with stability and standardization and did not adequately address and explain the issue of change... They sought to distance themselves from neo-institutional approaches by shifting their focus to the ways in which agents actively respond to, and enact regulations, norms, values and cultural-cognitive beliefs, thereby highlighting organizational variation and distinctiveness over stability and standardization… This early translation literature concerned itself mainly with how ideas become modified when adapted from their original social contexts to new specific settings. Central to this tradition of research is the 'travel of ideas' metaphor, with its disembedding and re-embedding dialectic…

Importantly, what also brought contributors to the Scandinavian school together was an "interest in the *practice of organizing*" within lower level "local" institutional environments (Czarniawska, 2007: 771; emphasis in original) rather than the global institutional environment, the convergence of change and stability to "grasp the complexity of organizational life" (Czarniawska & Sevón, 1996: 8), and the role of actors and action in institutions (Boxenbaum & Strandgaard Pedersen, 2009; Christensen, Karnoe, Strandgaard Pedersen, & Dobbin, 1997).

To this regard, the translation perspective is concerned with the travel of ideas and their transformation or "translation" into legitimate and meaningful (Boxenbaum, 2006) ideas locally (Cassell & Lee, 2016; Frenkel, 2005; Saka, 2004; van Grinsven et al., 2020; Zilber, 2006), where "translation" refers to the changes that an idea undergoes when it is implemented in a context (Boxenbaum & Strandgaard Pedersen, 2009). Ultimately, translations manifest as new "accounts and materializations of a certain idea" (Sahlin & Wedlin, 2007: 225) – that is, discursive and enacted manifestations of ideas in new settings – that often evolve (e.g., Lawrence, 2017). Yet, the nature and degree of change realized can vary, making translations "idiosyncratic" (Claus et al., 2021) and introducing "significant uncertainty with respect to what an [idea] might look like when introduced into a new social context" (Lawrence & Phillips, 2019: 260). As reviews have found, transformations can relate to the social-symbolic/representational and structural/material aspects of an idea (van Grinsven et al., 2016) and range from minimal to radical (Røvik, 2016).

Since its early development, the perspective has embraced conceptualizations of translation as entailing the disembedding and reembedding of ideas as described in Czarniawska and Joerges' (1996: 22-23) seminal work offering a foundational model of translation:

> We watch ideas become quasi-objects, transgressing the barriers of local time and entering translocal paths, becoming 'disembedded,' in Giddens' (1990) terms. We watch them again, landing in various localities, becoming 're-embedded,' materialized in actions, and – when judged successful – becoming institutions, only to occasion anew the generation of ideas.

As defined by Giddens (1990: 21), disembedding means "the 'lifting out' of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space," which is achieved because mechanisms "remove social relations from the immediacies of context." Also referring to Giddens' conceptualization of disembeddedness, Sahlin-Andersson (1996: 85) argues that when ideas are being implemented in new settings, "time- and space-bounded features are excluded" and "local prerequisites are de-emphasized or omitted" and ideas are thus "disembedded – distanced or decoupled from time and space (Giddens, 1990)." Thus, according to these early conceptualizations that continue to be embraced, the process of translation entails the disembedding of an idea from one setting and then the reembedding of it into another setting, sub-components that have frequently been coupled with or "equated" to decontextualization and recontextualization, respectively (Røvik, 2016; Westney & Piekkari, 2020).

Taken together, as Czarniawska and Joerges (1996) describe it, translation has been theorized to proceed as follows. It begins with an idea in a moment and place being "objectified" or "translated" into objects (e.g., a text, picture, protoype). These objects are disembedded from their context and are "sent" or "translated" to another context where they are reembedded. This reembedding entails the landing of an idea in a new moment and place, its subsequent translation into objects, and then "enactment" or translation into action in their new context. The process may then repeat and/or the objectified idea may be disembedded and sent to another context.

Crucially, while longstanding conceptualizations portray translation in a linear fashion, studies have illustrated and called for recognition of its circular and multidirectional nature (Battilana et al., 2010; Nielsen et al., 2021; Surachaikulwattana & Phillips, 2019; Tracey et al., 2018). Meanwhile, although some scholars have stated that ideas are "assumed to be stripped of time- and space-bounded features before beginning their travel in translation processes" (Wæraas & Nielsen, 2016: 246), others have noted that it is through time and repeated translation that ideas are gradually "stripped" of their originating context and translated into an enacted idea and/or eventually an institution (Czarniawska & Joerges, 1996; Sahlin & Wedlin, 2007). In turn, as scholars have noted, cases of translation are often best understood as multiple instances of translation rather than a single translation (e.g., Lawrence, 2017; Tracey et al., 2018). Very rarely does an idea travel and get implemented into a new setting in one swift movement, making translation an inherently complex and potentially murky process.

TRANSLATORS AND THE ROLE OF AGENCY

When it comes to the travel of ideas, the translation perspective stresses agency and views actors as active "translators" that "edit" ideas to fit local settings (Sahlin-Andersson, 1996) rather than passive adopters that "imitate" them (Westney, 2013). Accordingly, a core argument is that for ideas to diffuse, "actors must construct localized legitimate meaning" (Surachaikulwattana, 2014: 24). In turn, translators and translation have been argued to be inherently "pragmatic" (Wedlin & Sahlin, 2017). This is supported by extensive work showing how ideas are recontextualized as they travel (Boxenbaum, 2006; Morris & Lancaster, 2006; Mueller & Whittle, 2011; Reay et al., 2013; Saka, 2004; Teulier & Rouleau, 2013; Waldorff, 2013; Zilber, 2006). For example, Gond and Boxenbaum's (2013) study of responsible investing shows that translators deploy different types of "contextualization work" to "disentangle and reassemble

both the material and symbolic components" of ideas to achieve a local fit (709). Indeed, the literature indicates that translators draw on an range of tools and practices to conduct "translation work" (Brüggemann, Tracey, & Kroezen, 2018; Cassell & Lee, 2016; Claus et al., 2021; Gutierrez-Huerte O et al., 2020; Nielsen et al., 2021; Outila et al., 2021; Surachaikulwattana & Phillips, 2019; Tracey et al., 2018; van Grinsven et al., 2020; Wright & Nyberg, 2017).

Given the perspective's focus on the local transformation of ideas, it should come as no surprise that the dominant focus of research and theory (e.g., Boxenbaum, 2006; Cassell & Lee, 2016; Lawrence, 2017, Mueller & Whittle, 2011; van Grinsven et al., 2020) has centered around translators occupying positions as "adopters" of ideas – that is, actors that "unpackage" (Brüggemann et al., 2018) and implement ideas into their own organizations, fields, or other settings. From managers to entrepreneurs to members of the community, such translators are argued to interpret and convert ideas into practice, modifying them along the way to create contextualized ideas and make them institutionally appropriate "based on their classifications of the situations and their identities" (Surachaikulwattana, 2014: 25). Importantly, however, because agency is structured by local ideas, beliefs, rules, and values (Lawrence & Phillips, 2019), what adopters functioning as translators deem appropriate and incorporate in their edits is said to be shaped by the institutional contexts in which they are embedded (Gutierrez-Huerte O et al., 2020; Pallas, Fredriksson, & Wedlin, 2016) and how they make sense of the pressures that they face (Boxenbaum & Strandgaard Pedersen, 2009).

Thus, although agency is at heart of the translation perspective and adopters are viewed as active translators, given the paradox of embedded agency (Battilana, 2006; Battilana & D'Aunno, 2009), edits to ideas are argued to be the product of actors conforming to institutional pressures that emanate in a given setting as elaborated by Sahlin and Wedlin (2017: 109):

> The editing concept highlights the continuous reformulation and recontextualization of models and prototypes as they are moved between contexts and settings. This recontextualization may change the formulation as well as the meaning and content of experiences and models. At first glance, such editing processes might seem to be creative and open-ended. However, the processes of translation observed in these studies were rather characterized by social control, conformism and traditionalism – thus following rule-like patterns. Thus editing rules restrict and direct the translation – or editing – in each phase of circulation.

The translation perspective, therefore, explains heterogeneity among the circulation of otherwise rather homogenous ideas by emphasizing the relationships between structure and agency – and the power of institutions – within an idea's new locality. In turn, as Sahlin-Andersson (1996: 86) argues, editing is "a process of social control, conformism and traditionalism." This is because adopters of ideas assuming the role of translators are "themselves shaped by local contexts and situations, and their interests and motives in translation processes are considered both contextually and culturally shaped and dependent (Wedlin & Sahlin, 2017: 119).

Although much of the literature focuses on translators as adopters of ideas, a subset focuses on translators as actors occupying positions as "proponents." These translators – which entail consultants, gurus, business schools, academics, media, technology suppliers, and trade or professional associations – have also been conceptualized as "carriers" (Jepperson, 1991) of ideas that frame, package, and circulate ideas to be adopted (see Sahlin-Andersson & Engwall, 2002) and "translate" ideas from practice, producing and promoting accounts of them as decontextualized and abstract ideas and sometimes moderately recontextualized ideas (Nielsen et al., 2021; Røvik, 2016). While many studies examine the role of proponents in translation (e.g., Armbrüster & Kipping, 2002; Morris & Lancaster, 2006; Pallas et al., 2016), it has been broadly argued that proponents convey and introduce ideas to new actors and fields rather than engage in the subsequent work needed to transform them to meet local conditions (Claus et al., 2021; Nielsen et al., 2021). For instance, Chong's (2018) ethnography based on 16 months of fieldwork inside a management consulting firm offers a detailed account of how consultants work to

elevate, legitimize, and sell "best practices" to standardize practices. In other words, the transportation of ideas across boundaries has been argued to be "mediated" through proponents (Wedlin & Sahlin, 2017), some of which distinctly abstract and theorize ideas from practice to enable them to diffuse across boundaries more broadly (Greenwood, Suddaby, & Hinings, 2002; Rao, Monin, & Durand, 2003).

To date, some studies treat proponents and the activities of abstracting and theorizing as separate from but related to translators and translation (Reay et al., 2013; Surachaikulwattana, 2014) as consistent with conceptualizations of translations as representative of the changes that ideas undergo (Boxenbaum & Strandgaard Pedersen, 2009). Yet, others treat them as parts of the holistic translation process and ecosystem of translators (Özen & Berkman, 2007; Westney & Piekkari, 2020) in line with foundational conceptualizations addressing both the disembedding and re-embedding of ideas and emphasizing that ideas from translated from one "moment/place" and then translated into another "moment/place" (Czarniawska & Joerges, 1996). Regardless of such ambiguity surrounding the role proponents, they are nonetheless a part of the constellation of activities that facilitate the travel of ideas.

TRANSLATION AND THE COMPLEXITIES OF ORGANIZATIONAL LIFE

Despite steadfast interest in translation (e.g., Arnold & Loconto, 2021; Hultin et al., 2021; Outila et al., 2021), it has been argued that the contexts of translation research have remained narrow and produced a body of literature that is not well-equipped for informing our understanding of the diversity of translations in society. In turn, in line with broader calls for research to pay more attention to the "essential impact of context" (Johns, 2006), it has been emphasized that there is a "need to distinguish between different types of translation contexts in order to identify and understand their distinctive translation processes" (Claus et al., 2021: 6), including those

involving different types of ideas, boundaries, and translators. For example, in a study by Brüggemann et al. (2018), it is highlighted that although translation efforts between both adopters and proponents of ideas functioning as translators are common in international development and in the face of grand societal challenges, research tends to examine adopters and proponents of ideas – and thus the two types of translators – in isolation. In turn, the literature has suffered from a lack of insight on translation involving both such actors and translators, which is surprising as translation "connotes an interaction that involves negotiation between parties and reshaping what is finally transmitted" (Zilber, 2006: 283). Via an examination of such translation arrangements, their study shows how clashing expectations and power imbalances can stimulate the need for intermediaries that engage in empowerment work to advance translation through different modes (i.e., controlling, collaborative, generative), which highlights the importance of paying attention to who is involved in translation.

Generally speaking, in recent years, studies have shifted attention towards translations facilitated via diverse sets of actors and contexts with interactions amongst, between, and beyond adopters and proponents (Brüggemann et al., 2018; Claus et al., 2021; Dacin & Dacin, 2019; Heinze et al., 2016; Lawrence, 2017; Nielsen et al., 2021; Surachaikulwattana & Phillips, 2019; Tracey et al., 2018; Westney & Piekkari, 2020). In doing so, they have shown that when translation entail the convergence of actors with different perspectives, preferences, and interests (Boxenbaum, 2006; Frenkel, 2005), they are susceptible to tensions and fragility anchored on distrust and skepticism (Brüggemann et al., 2018) and even risk failure (Claus et al., 2021). Yet, when navigated carefully, they can facilitate the travel and translation of novel ideas that have the power to elicit change (Westney & Piekkari, 2020). Further, when they involve collaborations between originators and adopters, they create opportunities to maintain ties to the

origins of an idea and minimize the degree to which ideas change (Dacin & Dacin, 2019; Westney & Piekkari, 2020). Yet, despite such a focus on diverse arrangements involving different actors facilitating the travel and translation of ideas, studies have tended to focus more so on what happens to ideas and how the overarching process of translation unfolds rather than who the actors serving as translators are and how they may differ from one another.

Nonetheless, taken together, such studies on diverse translation settings have shined light on overlooked dynamics and possibilities. In doing so, they have also contributed to an emerging stream of research giving attention to the broader aspects of social and organizational life that make up the concept of "translation ecologies," which treats translation as a "dynamic process" that shapes and is shaped by "a multitude of activities, actors and interests" that may or may not be "controlled or planned" (Sahlin & Wedlin, 2017: 103). Indeed, as studies have shown, despite the perspective's emphasis on agency, in many cases, agency might have a limited role in the transformation of ideas (Surachaikulwattana & Phillips, 2019). Although the concept of a translation ecology has received limited empirical investigation (i.e., Nielsen et al., 2021; Westney & Piekkari, 2020), it has been noted that it is well-equipped for "giving sensitivity to the interactions among heterogeneous actors and activities in unfolding translation processes that morph ideas as they move between contexts" (Nielsen et al., 2020: 5), which also lends itself well to addressing growing interest in real-time translations and studies embracing a microfoundations perspective to unpack what happens on the ground as ideas travel (Cassell & Lee, 2016; Surachaikulwattana & Phillips, 2019; Zilber, 2006). This is important as translators interactions have been argued to shape the translation of ideas (Powell et al., 2005; Saka, 2004) and are more broadly known to serve as a mechanism and source of meaning and conventions (Gray, Purdy, & Ansari, 2015; Leibel, Hallett, & Bechky, 2018).

While agency is at the heart of the translation perspective, the focal object (Lawrence & Phillips, 2019) of translation remains the ideas being implemented. Recently, however, it has been noted that most studies – with a few notable exceptions (Creed, Scully, & Austin, 2002; Zilber, 2006) – have focused on highly circulated, relatively abstract, and well-defined ideas that originate from dominant knowledge hubs and travel across national boundaries into existing organizations (Røvik, 2016; Tracey et al., 2018; Westney & Piekkari, 2020). This has produced a perspective that is well-equipped to explain scholar's initial interest in highly circulated management practices (e.g., lean management) amidst mass globalization when the perspective came to fruition but has led scholars to question it generalizability. Accordingly, scholars have expanded contexts to encompass a broader range of ideas such as organizational forms to create new organizations (Claus et al., 2021; Surachaikulwattana & Phillips, 2019; Tracey et al., 2018), social issues (Wright & Nyberg, 2017), novels and/or contentious ideas (Hensel, 2018; Lawrence, 2017; Tracey et al., 2018; Westney & Piekkari, 2020), identities (Creed et al., 2002), and myths (Zilber, 2006). They have also examined different translation "routes," focusing on the movement of ideas across "misaligned," "high distance," and unfamiliar institutional contexts (Claus et al., 2021; Gutierrez-Huerter O et al., 2020; Tracey et al., 2018; Westney & Piekkari, 2020) and linguistical boundaries (Piekkari, Tietze, & Koskinen, 2020).

Collectively, the recent wave of translation studies has helped develop a more dynamic and comprehensive perspective. On the one hand, studies have shined light on the role of previously unexplored aspects of organizational life that influence the translation of ideas, including: language (Piekkari et al., 2020), control (Cassell & Lee, 2016), power (Brüggemann et al., 2018), authenticity (Tracey et al., 2018), identity (van Grinsven et al., 2020), temporality (Surachaikulwattana & Phillips, 2019), history (Claus et al., 2021), and emotions (Lawrence,

2017), as well as actors such as intermediaries (Brüggemann et al., 2018; Heinze et al., 2016) and originators (Dacin & Dacin, 2019; Westney & Piekkari, 2020). On the other hand, they have revealed some of the struggles and failures that might ensue in translation efforts (Brüggemann et al., 2018; Claus et al., 2021; Lawrence, 2017). They have also demonstrated that treating translation as a linear process through which an idea travels from one setting to another limits our understanding of how ideas travel and that translation can be multidirectional or circular (Battilana et al., 2010; Chan, Clegg, & Warr, 2018; Nielsen et al., 2021; Surachaikulwattana & Phillips, 2019; Tracey et al., 2018). Yet, above all, these studies reinforce the translation perspective's argument that ideas vary in their implementation as they travel as actors assuming the role of translators face different conditions and edit ideas accordingly to meet them.

VARIATIONS IN THE TRANSLATION OF IDEAS ACROSS ORGANIZATIONS

The argument that the implementation of ideas varies by the case lies at the heart of the translation perspective. Thus, it should be of little surprise that scholars have noted that the bulk of translation studies have focused on how translators recontextualize ideas as they re-embed them in their local (see Røvik, 2016; Wæraas & Nielsen, 2016) and even global settings (e.g., Varlander, Hinds, Thomason, Pearce, & Altman, 2016). Yet, in focusing on recontextualization, translation research has tended to embrace the presupposition that when ideas travel, they are disembedded and decontextualized – that is, they are "lifted out" of "social relations from local contexts of interaction" (Giddens, 1990: 21) and "detached" from "conditions that constrain the generality of meanings and actions" (van Oers, 1998: 138) of said ideas. This foundational assumption makes sense from a macro sociological perspective to understand how ideas travel over time. Nonetheless, a sub-set of research reveals the importance of exercising discretion when embracing such an assumption from a micro sociological perspective to understand how

ideas travel on the ground, particularly when considering how translation unfolds from the viewpoint of individual translators. Such work emphasizes that ideas are gradually stripped of their originating contexts as they are transformed into institutions (Czarniawska & Joerges, 1996; Sahlin & Wedlin, 2007) and shows how and why translators may seek to retain or reconstruct all or aspects of an idea's embeddedness and contextualization in its origins (Hensel, 2018; Powell et al., 2005; Tracey et al., 2018; van Grinsven et al., 2020; Westney & Piekkari, 2020).

The argument that an idea can be traced to a moment/place where the "original" was created is poised for contestation as ideas – from cutting-edge technologies to longstanding traditions – are continuously reconstructed (Hargadon & Sutton, 1997; Hobsbawm & Ranger, 1983). "It is always difficult to determine the origins of something and when it began" states Boxenbaum and Strandgaard Pedersen (2009: 180). Indeed, while the perspective suggests that ideas that translators change and implement come from an originating setting, it has been argued that, not only is it "often pointless – if not downright impossible – to find an origin (Bourdieu, 1977)" of an idea being translated, but "[t]here is also not always a clear source of translation attempts" and "the object of translation may itself change" (Wedlin & Sahlin, 2017: 105, 119).

Such an explanation of the literature's paucity towards exploring the notion of an idea's origins makes much sense, particularly when it is recognized that the bulk of translation studies have focused on highly circulated ideas that have existed for years, if not decades, in relatively abstract forms. However, it does not mean that translators on the ground do not claim or recognize actors and settings as the so-called originators and origins of the ideas that they seek to implement. In other words, for some translators, regardless of its subjectivity and/or their motives, an originator and/or origin relative to the translation at hand is recognized and may even be engaged in some manner. For example, in Lawrence's (2017) study of safe needle injection

sites for illegal drugs, actors in Vancouver, Canada were inspired by and modeled their efforts after sites in Europe and brought in actors from the European sites to interact with actors in Vancouver early in the process. Yet, the literature on translation has largely remained relatively silent with regards to the notion of an origin and the relationship that translators might have with it, beyond referencing an origin in passing: "Lean can be traced back to scientific management traditions and the Toyota production system" (van Grinsven et al., 2020: 6). Nonetheless, as a select few recent studies illustrate, recognition of and engagement with an ideas originators and origin can have profound effects on the travel and translation of an idea.

For instance, Westney and Piekkari's (2020) study of the early movement of ideas beyond their origins (i.e., the translation of Japanese management practices to the United States) illustrates how some translators travel directly to the originating setting of an idea to learn from the originators on the ground in real-time. At the same time, they show how for some translators, explaining rather than stripping away the aspects of the ideas contextualized in their origins enabled their implementation in the early stages of their travels beyond their origins in ways that retained their innovativeness, a finding consistent with studies showing how adopters of new ideas engage in micro-level theorizing (Reay et al., 2013) to justify rather than change them and "proselytize" resistors of ideas (Powell et al., 2005; van Grinsven et al., 2020). Based on these findings, Westney and Piekkari argue that foundational "disembedding/decontextualization" arguments do not generalize well over to the travel of new ideas from unfamiliar settings, something that only became apparent via the study of interactions between translators and actors in the translation ecology. Indeed, as Gondo and Amis (2013) theorize, when ideas are accepted by adopters and they engage in conscious reflection, they often change their setting to fit an idea rather than change an idea to fit the setting.

In a similar vein, Tracey et al.'s (2018) study of the translation of novel ideas across "misaligned institutional contexts" (i.e., the translation of the incubator organizational form from the Silicon Valley to Italy) shows how once translators of ideas obtain legitimacy via local translation work by prioritizing conformity to local systems of meaning (Hargadon & Douglas, 2001), the recontextualizing of implemented ideas to fit the conditions of their origins can create new opportunities for them to access resources and serve as a way to distinguish themselves from their peers. By engaging in "local" and "category" translation work, it is thus argued that translators can obtain "dual optimal distinctiveness," conforming to the expectations of an idea's destinations and origins while standing out (Zhao, Fisher, Lounsbury, & Miller, 2017) in both contexts based on cross-boundary ties. While it is stated that such dual linkages are a delicate balancing act (Zilber, 2009), such findings show the importance of rethinking arguments surrounding disembedding and decontextualization and translators connections to an idea's origins and destination. Specifically, once translators distance an idea from its origins, they may encounter forces guiding them and the idea at hand back (Tracey et al., 2018). Indeed, as broader studies highlight, conformity and distinctiveness in complex contexts is not a zero-sum game in which actors much pick one context over another (Voronov, De Clercq, & Hinings, 2013).

Overall, the important insight that I take from this subset of studies offering a stark contrast to most translation research is that one can argue that an adopted idea has been disembedded from a "moment/place" (Czarniawska & Joerges, 1996) in a basic sense, but translators can be motivated to refrain from decontextualizing ideas or seek to reconstruct decontextualized aspects of them. As Powell et al. (2005) note in their study of the adoption of managerial practices in the San Francisco Bay Area nonprofit community, implementors of ideas can range from "enthusiastic adopters" to "active resistors." Indeed, some studies even show

how some managers attempt to undermine new ideas (McCabe & Russell, 2017). Thus, although the argument that the "intensified circulation" (Wedlin & Sahlin. 2017: 118) of an idea is faciltated via disembeddedness and decontextualization – where "[a]bstract thinking is generally seen as maximally decontextualized" (van Oers, 1998: 138) – is theoretically sound, it is crucial to recognize that translators may seek to implement ideas without decontextualizing them (Ansari et al., 2010; Gondo & Amis, 2013; Hensel, 2018; Westney & Piekkari, 2020).

Despite such possibilities, I am not suggesting that disconnection from an idea's origins is not important as studies have clearly shown how detaching ideas from their origins can be necessary to avoid failure. For example, based on their study of the translation of "macro-credit" loans from a Dutch organization to Tanzanians, Claus et al. (2021: 3) argue that "the movement of an idea across high institutional distance requires strategies that 'culturally detach' the idea from its institutional origins." Yet, the important point that I emphasize is that – successful or not – disconnection or detachment might not always be the route taken by translators. Afterall, as Dacin, Ventresca, and Beal (1999: 341) argue, the "notion of disembeddedness may well rely on direct and instrumental or intentional action by organizational actors to step back and outside of institutional features." Thus, I attest that from a micro sociological perspective from the viewpoint of translators, both the disembedding and decontextualization of ideas may very well rely on intentional action and cannot be assumed to executed. As Røvik (2016: 293) notes, in some cases, an exact reproduction is considered a "good" translation:

> Historically, the duty of the translator is simply to reproduce exactly the chosen unit of translation from the source context into the target context... At the other end of the spectrum are traditions celebrating norms of unbounded (free) translation, echoing Cicero's ideal of translation as exprimere imitando: molding and creating something new as an imitation of something that already exists. In this sense, the translator should be a mediator and an artist who applies the full range of translation rules. A corresponding debate is between defenders of 'foreignizing' (retaining as many details as possible from the source context version in the translated target context version) and defenders of 'domesticating' (altering the chosen unit of translation so that it fits with current values and is easily understood and accepted in the target context) …

Indeed, studies show that some translators retain "many specifics of the original implementation that may be irrelevant" (Hensel, 2018: 225) and even implement unedited ideas, maintaining high fidelity with previous versions (Ansari et al., 2010; Gondo & Amis, 2013; Røvik, 2016).

WITHIN ORGANIZATION TRANSLATOR HETEROGENEITY

Although the literature indicates that translators vary from case to case in their approaches to implementing ideas because they face different conditions, little attention has fallen on understanding translator heterogeneity *within* organizations rather than *across* organizations. Indeed, despite early insights into differences in the preferences of translators within a setting (Boxenbaum, 2006), translation studies – including those shining light on different types of translators (e.g., Powell et al., 2005; van Grinsven et al., 2020) – tend to treat translation as being executed by a single unitary set of actors, an actor that is supposedly representative of an organization, or decision makers overseeing the implementation of an idea. Such insight on how translators implement ideas heterogeneously across organizations has been helpful in advancing our understanding of translation. Yet, the lack of attention on heterogeneity amongst translators within organizations has created a distinct gap in knowledge on the microfoundations of translation (Boxenbaum, 2006; Gutierrez-Huerte O et al., 2020; Surachaikulwattana & Phillips, 2019; van Grinsven et al., 2020; Vossen & van Gestel, 2019) – that is, the lived reality of what happens on the ground as translators facilitate the translation of ideas.

Ultimately, while many studies have contributed to our understanding of the micro-processes and practices underpinning the translation of management practices into established organizations (see Radaelli & Sitton-Kent, 2016) – some of which draw on real-time data (e.g., Gutierrez-Huerte O et al., 2020; Heinze et al., 2016; Morris & Lancaster, 2006) – an important point of departure of this dissertation from prior work is a distinct focus on translators and the

exploration of the diverse lived experiences of translators within a single organizational setting. Such a focus is important because it has long been argued that organizations are comprised of diverse actors, each with their own vested interests (Greenwood & Hinings, 1996; Selznick, 1949). Thus, even though an organization may end up implementing an idea in a specific way, it is often comprised of diverse actors that do not share the same experiences, views, or interests, and therefore may have different stances towards an idea and/or implementation (van Grinsven et al., 2020). By treating translators within an organizational setting as the same as one another, we gravely risk oversimplying real microfoundational complexities of social and organizational life that impact how ideas travel and are translated.

Crucially, a problem with treating the translation of an idea as executed by organizations operating as single set of unitary translators or soley facilitated by those in power is that it constructs a skewed understanding of reality (Berger & Luckmann, 1966), one that oversimplifies important nuances of organizational life. Moreover, it privileges specific actors' perspectives to the extent that "the conditions of action are unacknowledged and scant attention is paid to unintended consequences" and other ways that phenomena such as translation unfold and are experienced (Khan, Munir, & Willmott, 2007: 1073). Thus, while it is reasonable to assume that people that occupy positions of power may greatly influence the implementation of an idea as the dominant translators, they are not necessarily the only ones actively contributing to it, and by paying little attention to other people also assuming the role of a translator within an organization, we risk missing important nuances of how translation ultimately unfolds.

For instance, in Powell et al.'s (2005: 241) study of nonprofits, one of the types of translating organizations that they identify is called the "enthusiastic adopter," and in their illustrative example, they explain how "Bay Academy regularly hires consulting firms to bring in

fresh ideas and convert them into practice" and that "administration wholeheartedly implements the recommendations brought in from these consultants, and is a firm believer in the practices they carry." Yet, they only interview executives, and in illustrating this example, they draw exclusively on quotes from the head of the organization and shine little light on the perspectives of the 120 staff and 20 board members mentioned. Meanwhile, in van Grinsven et al.'s (2020) study of the translation of lean management practices into Dutch healthcare organizations, they reveal how translators can engage in four types of "translation-as-identity-work" – externalizing, professionalizing, rationalizing, and proselytizing – based on their individual orientations and organizational engagement. Yet, their study is predominantly based on interviews with a single identified implementation manager within each healthcare organization and pays little attention to the broader constellation of actors within said organizations that might be contributing to the translation efforts and functioning as translators (e.g., Westney & Piekkari, 2020).

My aim in highlighting these examples is not to contest the claims being made in the empirical settings or the findings derived in the studies. Instead, it is to illustrate how we can easily miss the perspectives and experiences of entire sets of actors and translators on the ground, whilst uplifting the perspectives of others – most often ones in positions of power – as emphasized by Khan et al. (2007), thus constructing a skewed representation of reality. Therefore, if we endeavour to have an accurate representation of translation, it is imperative that we direct attention to developing a more comprehensive and holistic understanding of translators within organizations contributing to the implementation of an idea and the nuances of their lived experiences. To this regard, while early research on translation has shown that translators within established organizations can have different preferences that reflect their own trajectories in life and shape how they regard ideas and seek to implement them (Boxenbaum, 2006), our

understanding of who translators are and how they may differ from one another within a single organizational setting in meaningful ways remains limited. In other words, we distinctively lack a nuanced understanding of within organization translator heterogeneity.

At the same time, whereas the bulk of the literature has tended to examine the transformation of relatively mature and well-circulated ideas by translators as they travel into established organizations, there is a distinct gap in the literature with regards to translators within newly emerging organizations predicated on the travel and translation of a novel idea to a new setting or what might be more aptly described as new venture creation through translation (Tracey et al., 2018). Indeed, although a select few recent studies reveal that the formative stages of the new venture creation through translation is highly dynamic (Lawrence, 2017; Tracey et al., 2018), the on the ground dynamics and lived experiences of translators during such a formative stage of organizational life when it comes to translation remains an elusive topic that has experienced limited investigation. Yet, now more than ever, particularly in the face of grand societal challenges, diverse sets of actors and experts are increasingly being called upon to collaborate to share and introduce ideas across boundaries to ideate and create new solutions and often entirely new organizations (Ferraro et al., 2015; George et al., 2016). However, despite recognition that the formative stages of the emergence of new organizations can have profound impacts on the survival and trajectory of an organization (Cardon et al., 2005), the literature distinctively lacks insight on translators and the microfoundations of translation during such a stage of organizational life when diverse actors begin to convene across boundaries.

All in all, in this dissertation, I set out to address these distinct gaps in the literature concerning within organization translator heterogeneity and the microfoundations of organizational life during the formative stages of new venture creation through translation.

Moreover, I seek to do so whilst paying explicit attention to the particular stage of new venture creation concerning ideation, which deals with the incipient generation, elaboration, championing, and implementation of an idea for a new venture (Kier & Mcmullen, 2018; Kier & McMullen, 2020; Perry-smith & Mannucci, 2017). Afterall, while an idea that is at the heart of a new venture may ultimately be implemented in a specific way after it travels across boundaries into a new setting, understanding the nuances of what happens on the ground amongst translators leading up to such an implementation is what will enable us to develop robust theory to explain the travel and translation of ideas. However, understanding key microfoundational aspects of translation such as who translators are and how they might differ from one another calls for real-time examinations of the lived experiences of them. Accordingly, in the following chapter, I describe the context that I studied and methods that I deployed to examine translator heterogeneity and the microfoundations of what I refer to as ideational translation: the incipient process of new venture ideation predicated on the translation of an idea to a new setting.

CHAPTER 2:
CONTEXT AND METHODS

Ξ

In this chapter, I describe the context of the study underlying this dissertation and the methods that I deployed to advance our understanding of translator heterogeneity and the microfoundations of the travel and translation of ideas underpinning new venture ideation. Overall, I conducted a 24-month ethnography – a method based on deep and intimate observations to understand patterns of human activity (Van Maanen, 1979, 2011) – of the pseudonymous *Blockset* – one of the world's first blockchain-based carbon offset platforms – from conceptualization to implementation as a functional prototype. With this in-depth qualitative case study, a well-regarded approach for researching understudied phenomena (Eisenhardt, 1989), I treat Blockset as a revelatory case (Yin, 1994) as it was created by "experts from crypto and climate" – functioning as translators – during the formative stages of blockchain's expansion beyond crypto as they sought to create a new venture centered around the idea of a blockchain platform and its travel into the field of climate. Indeed, as I explain in this chapter, my fieldwork spanned the nascent stages of the organization's emergence as an entity as it progressed through the incipient process of ideational translation.[‡]

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[‡] My ethnographic fieldwork was made possible by the people at Blockset openly welcoming me into their organization and lives and allowing me to join them every step of the way. To ensure anonymity and confidentiality and respect the privacy of all persons and organizations that I encountered during my fieldwork, many details have been deliberately modified, described vaguely, or omitted. This includes but is not limited to the names of people, organizations, and other actors, dates and locations events, technical and functional details of the focal idea such as its technological underpinnings and the specific users of the platform, quotes from public discourse such as media interviews and conference presentations. Overall, I have sought to do so in a way that accurately portrays what I observed during my fieldwork and take sole responsibility for any ambiguities that might have resulted from my efforts to ensure anonymity, confidentiality, and privacy. Any names and details that appear to match those of actors, events, and/or any other objects in the real world are purely coincidental.

BLOCKCHAIN AND CLIMATE

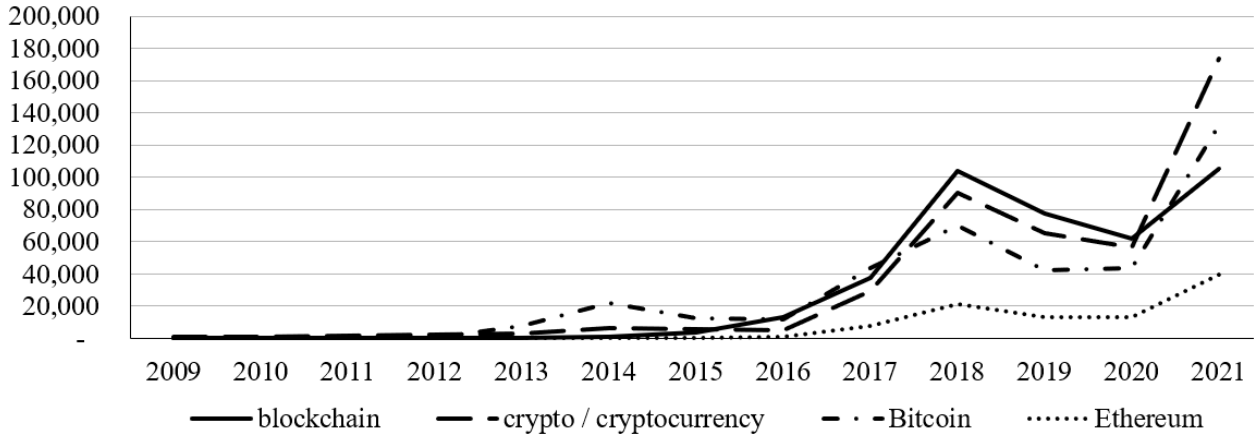
This dissertation is about the travel and translation of ideas, and while the focal idea in a general sense that I examine is the idea of blockchain, the empirical context lies at the intersection of two fields – that is, broadly recognized communities of actors (Zietsma, Groenewgen, Logue, & Hinings, 2017) – crypto and climate. Yet, before I introduce such, I must declare that there are some distinct ambiguities surrounding them, specifically the terms blockchain and crypto. In this dissertation, while I largely use "blockchain" to describe a category of technologies and "crypto" as a field in my empirical context, the two are often used synonymously as there is a ill-defined distinction between them. This is due to their strong associations with one another and blockchain's much attributed origins in the crypto community, particularly by members of the crypto community. Indeed, such ties between blockchain and crypto and frequent coupling of the two – as I reveal in my findings – are important parts of the story that I tell in this dissertation. Ultimately, what those that are not familiar with the context might find confusing is how the terms blockchain and crypto are frequently used, so I hope to bring some clarity to the matter. I also provide a glossary of commonly used abbreviations in my research context in Table 1.

Table 1. Glossary of commonly used abbreviations

Abbreviation	Meaning
ETH/Eth	Ether cryptocurrency / Ethereum
ETH2/Eth2	Ethereum 2.0 (second iteration of Ethereum – proof of stake)
CO_2	Carbon dioxide
COP	Conference of the Parties (United Nations Climate Change Conference)
dApp	Decentralized application
ERC	Ethereum request for comment (token standard prefix)
GHG	Greenhouse gases
ICO	Initial coin offering
IPCC	Intergovernmental Panel on Climate Change
MVP	Minimum viable product
NFT	Non-fungible tokens
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UX/UI	User experience / user interface
Web3	Web 3.0 (third iteration of the internet – decentralized)

While blockchain refers to a category of technologies – that is, an idea or category of ideas – it also refers to a field, including but not limited to blockchain as an industry and a hobby. Meanwhile, crypto is often used interchangeably with blockchain in the manner that I just described. This is largely because, technically speaking, crypto is short for cryptography, which denotes the practice of securing information networks via mathematical code and is precisely what underpins blockchain. Thus, many blockchain developers and technologists use blockchain and crypto interchangeably because to them, they represent the same ideas, the use of cryptographic techniques of cryptographers. Yet, what muddles everything is that many users of blockchain and lay persons are not specifically concerned with the cryptographic underpinnings, and when they refer to crypto, they mean cryptocurrencies and its surroundings. Nevertheless, the technology underlying most cryptocurrencies is blockchain and thus cryptographic. Further, most blockchain platforms are integrated with some sort of cryptocurrency. As illustrated in Figure 1, blockchain and crypto have followed a similar pattern in the media.

Figure 1. Media mentions of blockchain, crypto/cryptocurrency, Bitcoin and Ethereum



Source: Factiva (December 2021)

Blockchain and the crypto community

> The main advantage of blockchain technology is supposed to be that it's more secure, but new technologies are generally hard for people to trust, and this paradox can't really be avoided.
>
> —Vitalik Buterin, Co-Founder of Ethereum

In 2008, the anonymous Satoshi Nakamoto introduced the world to the concept of the blockchain – though it was not explicitly called "blockchain" – in the Bitcoin whitepaper (Nakamoto, 2008), time-stamped chains of immutable records managed by a network of distributed computers and not a centralized authority to ensure data security and transparency as well as to create a decentralized system to form the underlying architecture of the digital token and cryptocurrency Bitcoin. Launched in 2009 as a cryptographic token, Bitcoin uses peer-to-peer technology to operate with no central authority and its advent spurred the growth of a community around the technology that was largely comprised of members of the *cypherpunk* hacker community. This is not to be confused with the *cyberpunk* community that denotes the lawless dystopian and technological future. Indeed, as Humayun (2019: 9) stresses in her five-year study of Bitcoin and blockchain, "Bitcoin came from a world of cryptographers and Cypherpunks … a group of individuals deeply concerned about the lack of privacy that the internet and the world wide web were creating." Thus, most blockchain developers and technologists consider the crypto community, cryptocurrency, and Bitcoin the origins of blockchain. This is despite many of them recognizing the work of cryptographer David Chaum – often called the Father of Crypto – whose dissertation *Computer systems established, maintained, and trusted by mutually suspicious groups* (Chaum, 1979) put forth the world's first known blockchain-like protocol. Yet, as Chaum notes in an interview (Epicenter, 2019), his work went unnoticed for decades:

> It's a little bit ironic that my concern about digital sovereignty made me not sign the copyright of my dissertation over to something called dissertation abstracts… most theses would be online, and people could find them, and you could order copies. I kept the copyright and everything for mine. So, it just basically lived in the library in a paper form. There were 3 copies in 3 different parts of the Berkeley library system, but it was never digitized. It pretty much escaped notice.

Despite its roots in Bitcoin, blockchain has evolved and now represents a category of technologies comprised of numerous types of blockchains, including the Ethereum blockchain, which is the second largest blockchain in the world that uses a local cryptocurrency called Ether.

Indeed, research has argued that blockchain represents a "new class of institutional technologies" (Allen, Berg, Markey-Towler, Novak, & Potts, 2020) that is currently in the "proto-institutional" (Lawrence, Hardy, & Phillips, 2002; Zietsma & McKnight, 2009) stage of its lifecycle (Hinings, Gegenhuber, & Greenwood, 2018). Crucially, proposed by Vitalik Buterin in 2013 in the Ethereum whitepaper (Buterin, 2013) and launched in 2015, the Ethereum blockchain builds on the innovation behind Bitcoin, but was created to expand the applicability of blockchain to enable the creation of decentralized applications. Thus, blockchain use cases are not limited to cryptocurrency, though it is intricately related as many blockchains have a cryptocurrency native to their blockchain. While several explanations of blockchain exist in the organizational and management literature (Hsieh, Vergne, Anderson, Lakhani, & Reitzig, 2018; Hsieh, Vergne, & Wang, 2017; Lumineau, Wang, & Schilke, 2020; Murray et al., 2021; Seidel, 2018), Vergne (2020: 9-10) offers a particularly insightful overview of blockchain, its uses, and history:

> A blockchain is a decentralized and distributed digital ledger that securely stores structured, authenticated transaction data using public keys as identities. The first application of blockchain technology was Bitcoin ... Bitcoin builds on three decades of advances in computing and cryptography … Outside the cryptocurrency industry, blockchain is used to power decentralized applications in finance … cloud infrastructure … online gaming … digital identity … and trade settlement … A blockchain is a digital ledger that 'has blocks and has chains' … The chain component provides a sequential history of transactions that cannot be altered without others noticing. … transactions awaiting processing are queued until consensus has been reached; the queued transactions are then grouped together and recorded jointly as one 'block'. Thanks to these properties, blockchains enable searching through vast amounts of structured data with little computation and can provide independently verifiable proofs that a transaction took place.

Notably, as Vergne notes, despite the proliferation of "blockchain" in the public domain, from a technical standpoint, experts believe specific criteria of what constitutes a blockchain exist:

> As forcefully argued by leading blockchain expert Andreas Antonopoulos, if it is not 'open, borderless, censorship-resistant, decentralized, publicly verifiable and neutral [. . .], it's not a blockchain' (Antonopoulos, 2020). Indeed, most 'distributed ledgers' are not decentralized and presuppose the existence of a decision-making hierarchy. They are typically used on private networks by authenticated, trusted participants and resemble traditional shared databases. By analogy, experts compare a blockchain's properties to the Internet's properties, and a distributed-but-centralized ledger's properties to a corporate Intranet's properties.

To this regard, a blockchain platform, for all intents and purposes in this dissertation, is a platform based on blockchain technology. As Logue and Grimes (2019) note, a platform is a mechanism and an organizational model that generates, connects, and coordinates relationships amongst organizational and/or individual actors often for the purpose of economic exchange (Gawer, 2010; Ozalp, Cennamo, & Gawer, 2018). For example, Uber is considered a digital platform – albeit not a blockchain one – that connects drivers and riders (Garud et al., 2020). Although the concept of a platform still lacks conceptual clarity, what is important to recognize in this dissertation is that a blockchain platform – sometimes called decentralized applications or "dApps" – is a new organizational model that exists (Leiponen, Thomas, & Wang, 2021).

Various blockchain platforms have existed since Bitcoin launched. However, crypto and blockchain experienced a major uprise in attention (Wang & Vergne, 2017) during the 2017/18 boom in initial coin offerings (ICOs), as explained in this article (New York Times, 2017):

> What is an initial coin offering? … programmers raise money by creating and selling their own virtual currency, generally with rules similar to well-known virtual currencies like Bitcoin. The new tokens are usually designed so that they can be used only on a computing service the programmers are building. Filecoin, which raised $257 million in the largest coin offering to date, is being designed to pay for storage on a global cloud storage network…

During this boom, blockchain was in the formative stages of moving beyond its incipient field of cryptocurrency but remained close to the immediacy of it as platforms still tended to launch their own cryptocurrency based on cryptographic tokens, or so it seemed, as 80 percent of ICOs in 2017 were found to be scams, leading to over 1 billion USD in lost funds (CoinTelegraph, 2017). Indeed, the following from an article accurately describes the situation (The Atlantic, 2017):

> **The Rise of Cryptocurrency Ponzi Schemes**
> Scammers are making big money off people who want in on the latest digital gold rush but don't understand how the technology works.

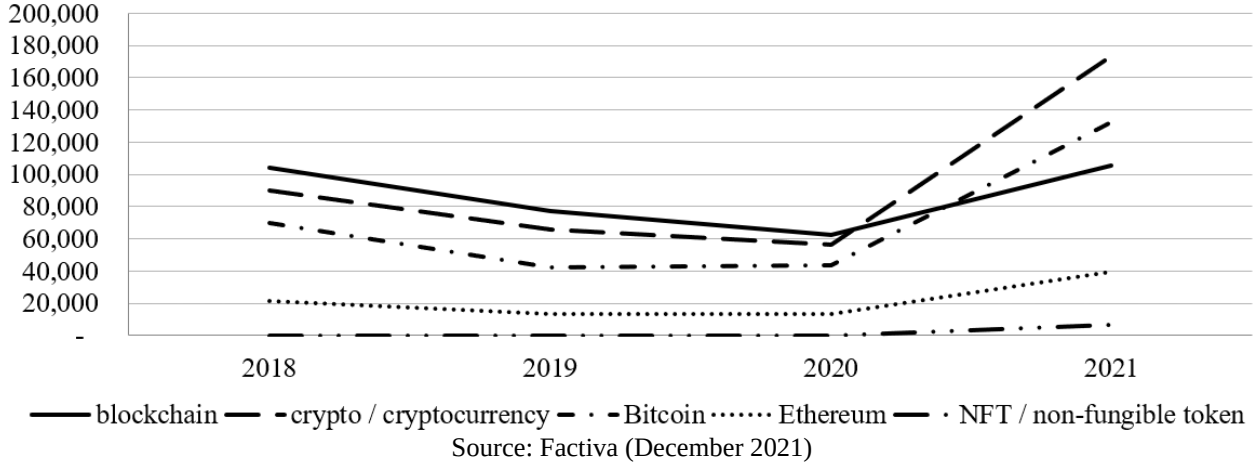
Despite many legitimate blockchain platforms and cryptocurrencies, scams triggered action by regulators and led to companies (e.g., Facebook, Google, Twitter) banning mentions of ICOs,

and in some cases, blockchain. As explained in an article by TechCrunch (2018): “In January 2018 at the height of the crypto craze, [Facebook] blocked all blockchain related ads.” However, PwC (2018) still reported that 84 percent of surveyed executives were involved in blockchain.

While I do not aim to provide an exhaustive history of blockchain, one particular type of blockchain platform that concerns this dissertation is the blockchain platform based on non-fungible tokens, more commonly referred to as NFTs. As noted in an article (Forbes, 2021), NFTs are “blockchain-based assets, distinguished from other blockchain-based assets – like, say, cryptocurrencies – in that they cannot be substituted or exchanged for similar items.” NFTs experienced a notable boom in mainstream interest in 2021, as illustrated in Figure 2, with what seemed to be every news outlet releasing a variant of a “What are NFTs?” story, and an NFT selling for a “record-breaking $69.3 million” as seen in a New York Times (2021) article. Take for example this segment of a BBC (2021) article that explains the concepts:

> …a fungible asset is something with units that can be readily interchanged - like money. With money, you can swap a £10 note for two £5 notes and it will have the same value. However, if something is non-fungible, this is impossible - it means it has unique properties so it cannot be interchanged with something else. It could be a house, or a painting such as the Mona Lisa, which is one of a kind. You can take a photo of the painting or buy a print but there will only ever be the one original painting. NFTs are "one-of-a-kind" assets in the digital world that can be bought and sold like any other piece of property, but they have no tangible form of their own. The digital tokens can be thought of as certificates of ownership for virtual or physical assets. … With NFTs, artwork can be "tokenised" to create a digital certificate of ownership that can be bought and sold.

Figure 2. Media mentions of NFTs/non-fungible tokens and related topics



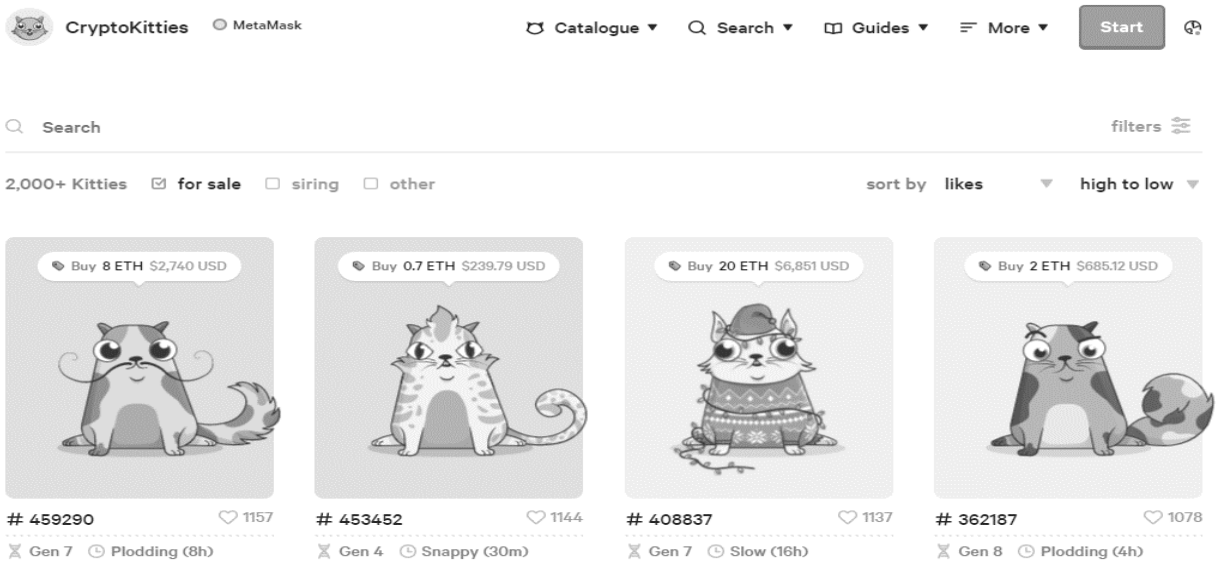
Source: Factiva (December 2021)

Yet, despite its surge of mainstream attention in 2021, to the extent that "NFT" was Collins Dictionary's 2021 "Word of the Year," the idea of NFTs began to gain prominence in the crypto community at the end of 2017 with blockchain platforms such as the "ground-breaking" CryptoKitties, which lets people "buy and breed 'crypto-pets' on Ethereum's underlying blockchain network" as shown in Figure 3 and described on the CryptoKitties (2021) website:

> In CryptoKitties, users collect and breed oh-so-adorable creatures that we call CryptoKitties! Each kitty has a unique genome that defines its appearance and traits. Players can breed their kitties to create new furry friends and unlock rare cattributes. CryptoKitties is one of the world's first blockchain games. 'Blockchain' is the technology that makes things like Bitcoin possible. While CryptoKitties isn't a digital currency, it does offer the same security: each CryptoKitty is one-of-a-kind and 100% owned by you. It cannot be replicated, taken away, or destroyed.

Indeed, CryptoKitties gained global attention, amounting to $4.5 million "spent on the cartoon cats" within a week of launching (BBC, 2017) and inspiring future NFT projects (CNBC, 2021).

Figure 3. CryptoKitties NFT-based blockchain platform



A crucial development in the timeline of NFTs is that the launch of CryptoKitties, "clogged" the Ethereum blockchain – "putting transactions in a long-time limbo" as explained in an article by the popular crypto media company CoinDesk (2017) – due to scalability issues with its underlying technologies, namely the ERC-721 non-fungible token standard, as blockchain technologies were very much still in their formative stages of development as a technology

> Already, [CryptoKitties], which uses ethereum's blockchain to create a public, shared history of cryptographically unique (not to mention cute and cuddly) fluffballs, is ethereum's most popular, with users having spent at least $3 million total on breeding, buying and selling the in-game items, up from $1 million just yesterday … currently, the average cat is trading for $100 in ether. But the application is clogging the ethereum network, putting transactions in a long-time limbo.

Indeed, an important thing to know about blockchain is that during and after the launch of CryptoKitties, the core infrastructural elements of NFT and blockchain platforms more broadly were still being developed by a community of blockchain developers around the world.

At the end of the day, as a digital technology, blockchain is comprised of code created and maintained by coders, developers, programmer, and software engineers – terms that are often used interchangeably – and that form the digital artefacts underlying the many different types of blockchains that exist (e.g., Bitcoin blockchain, Ethereum blockchain). Yet, in comparison to traditional software developers, if we can call them that, being a blockchain developer requires a specific skillset. For example, while the code that traditional software developers write is generally based on well-established programming languages (e.g., JavaScript, C++, Python), the language of the Ethereum blockchain is Solidity, a relatively young language that was proposed in 2014 by Gavin Wood, co-Founder of Ethereum, in the Ethereum yellow paper. Thus, while anyone can learn to code and build blockchains, there is a learning curve to doing so.

To this end, what is important to know about blockchain developers and members of the crypto community is that many of them hail from the open-source software movement and hackers community, which overlap and embrace a distinct culture with its own aesthetics and ethics rife with informality and what many non-hackers would consider inappropriate behaviour (Coleman, 2013, 2014; Coleman & Golub, 2008; Massa, 2017). For example, as Coleman (2013: 93) explained in one of the most detailed and well-regarded ethnography of hackers to date:

> Hackers value cleverness, ingenuity, and wit. These attributes arise not only when joking among friends or when hackers give talks but also during the process of making technology and writing smart pieces of code.

Indeed, as Humayun (2019) notes throughout her study, “Bitcoin was conceived in the back alleys of the internet, on listservs and talk forums where avatar names and trolls ruled the night” and many developers “subscribe to the Cypherpunk ethos” and embrace lives “infused in hacktivist culture.” While not all blockchain developers and members of the crypto community follow in the footsteps of the hacker community and open-source movement, many of them do.

Carbon offsets and the field of climate

> Countries are finding clever ways around having to take real action. Like double counting emissions reductions and moving their emissions overseas and walking back on their promises to increase ambition or refusing to pay for solutions or loss of damage. This has to stop ... The real danger is when politicians and CEOs are making it look like real action is happening when in fact almost nothing is being done apart from clever accounting and creative PR.
>
> — Greta Thunberg, Climate activist and 2019 TIME Person of the Year

Climate change is “the defining issue of our time” (United Nations, 2019) and the main driver of it is what is referred to as the greenhouse effect by which greenhouse gases (GHGs) – namely carbon dioxide (CO_2) – in the Earth’s atmosphere trap in the sun’s heat. This causes the planet to warm and is already severely impacting the planet and has put humanity in a state of emergency. Indeed, in 2019, the Oxford Dictionary Word of the Year, “a word or expression shown through usage evidence to reflect the ethos, mood, or preoccupations of the passing year, and have lasting potential as a term of cultural significance” was *climate emergency*, defined as “a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it.” Sadly, while the science behind climate change is clear and tens of thousands of scientists have declared a climate emergency that could bring catastrophic effects for humanity (Ripple et al., 2017; Ripple, Wolf, Newsome, Barnard, & Moomaw, 2020), society continues to face grave challenges of inaction on the parts of individuals, organizations, and entire nations.

The Intergovernmental Panel on Climate Change (IPCC) states in the latest draft of the Sixth Assessment Report (IPCC, 2021) authored by hundreds of experts that "[i]t is unequivocal that human influence has warmed the atmosphere, ocean and land" and that "[h]uman-induced climate change is already affecting many weather and climate extremes in every region across the globe." As UN Secretary-General António Guterres expressed, the latest IPCC report is a "code red for humanity" (United Nations, 2021). The IPCC report stresses that "[e]very tonne of CO_2 emissions adds to global warming" and paints a grim picture of the future of the planet and humanity. Yet, it also stresses that by drastically mitigating carbon emissions, we can contain the global temperature rise to under 1.5°C and minimize catastrophic effects. "Climate change mitigation involves actions that reduce the rate of climate change," as IPCC Working Group III (2021) on climate change mitigation notes, which requires mitigating GHGs as explained here:

> Climate change mitigation is achieved by limiting or preventing greenhouse gas emissions and by enhancing activities that remove these gases from the atmosphere. Greenhouse gases can come from a range of sources and climate mitigation can be applied across all sectors and activities. These include energy, transport, buildings, industry, waste management, agriculture, forestry...

Mitigating climate change requires actions from everyone, making it truly an all-hands-on deck effort. Accordingly, the field of climate denotes the highly diverse global community of actors whose work focuses on climate action and addressing the issue of climate change. Indeed, this entails all members of society, including but of course not limited to businesses, entrepreneurs, social movements, governments, and people at large. Notably, one of the many mitigation mechanisms that climate actors have used and continue to are carbon offsets.

The IPCC (2018) describes carbon offsets as "a reduction in emissions of carbon dioxide or other greenhouse gases made in order to compensate for ("offset") an emission made elsewhere." Yet, an important characteristic of offsets is that they exist in society as a market-based mechanism. Each tonne of carbon that has been mitigated is turned into a carbon credit

functioning as an environmental asset that can be sold or traded in carbon markets around the world to actors until an entity retires said carbon credit, which means they count them within their carbon budgets or footprints. However, it is important to know that there are voluntary and compliance markets for offsets, as explained by the Ecosystem Marketplace (2021):

> …voluntary carbon marketplace encompasses all transactions of carbon offsets that are not purchased with the intention to surrender into an active regulated carbon market. It does include offsets that are purchased with the intent to re-sell or retire to meet carbon neutral or other environmental claims. Voluntary demand… is driven by companies and individuals that take responsibility for offsetting their own emissions … as well as entities that purchase pre-compliance offsets before emissions reductions are required by regulation.
>
> …compliance carbon markets are marketplaces through which regulated entities obtain and surrender emissions permits (allowances) or offsets in order to meet predetermined regulatory targets. In the case of cap-and-trade programs, participants – often including both emitters and financial intermediaries – are allowed to trade allowances in order to make a profit from unused allowances or to meet regulatory requirements.

Specifically, when it comes to the compliance market, as Rawhouser, Cummings, and Hiatt (2019: 515) explain, "offsets are created by instituting projects that produce greenhouse gas emissions below the level of emissions that would have occurred if the project had not been developed." Generally, for offsets to be registered and exchanged in the carbon market, they must meet monitoring, reporting, and verification (MRV) requirements for the standard that they seek, as Rawhouser et al. (2019: 19) explain about offsets under the Kyoto Protocol:

> If a project is properly designed, executed, monitored, and documented, the relevant UN office issues certified emission reductions, which can be sold to firms in advanced economies seeking to achieve their Kyoto Protocol–mandated reductions…

As with anything, some standards are more robust than others and considered better. Indeed, the embracement of no or poor standards by some and simply bad practices by others is a major reason why carbon offsets often face criticism. Yet, in general, if all parts of MRV and the subsequent trades is executed properly, a carbon offset or carbon credit represents a tonne of carbon mitigated and thus contributes to tackling climate change because they "achieve real

emission reductions" (IETA, 2019). However, a challenge that sometimes emerges is the intentional and unintentional double counting of offsets, as explained by the Environmental Defense Fund (2020), which can compromise their integrity:

> One particular concern is that traded reductions might be 'double counted,' meaning counted once by the country of origin when reporting its emissions inventory, and again by the receiving country (or other entity) when justifying emissions above its pledged climate effort. In the absence of rules, a country of origin could reduce emissions to meet its pledged effort and transfer those to a recipient; the recipient could then claim those same reductions to meet its pledged effort. In that case, only one reduction has actually occurred, but it is being claimed twice. Analyses indicate that such double-claiming could eliminate the entire climate benefit…

Nonetheless, as Jennings, Hoffman, and Sharifian (2020: 691) note, carbon offsets have been "a key method for achieving the overall goals of climate accords since their first appearance as a centerpiece in the Kyoto Protocol (1997)" and will continue to be under the Paris Agreement, "a legally binding international treaty on climate change" within the United Nations Framework Convention on Climate Change (UNFCCC). Indeed, in 2015, with the negotiation of the Paris Agreement, all nations party to the UNFCCC reached a landmark agreement at the 21st Conference of the Parties (COP 21) – UN Climate Change Conference to take ambitious action to combat climate change. Crucially, while carbon markets exist at various levels, carbon offsets and carbon markets exist at the transnational level via the Paris Agreement.

To this end, although I have introduced the two sides of the context of this dissertation separately, as blockchain began to move beyond its incipient focus on cryptocurrency, we began to see various "blockchain and X" communities emerge, one of which formed under the label of "blockchain and climate." Such a community is comprised of actors working to develop climate use cases for blockchain. Yet, like many efforts to implement novel ideas, such efforts were rife with struggles. In the case of climate, however, this is a particularly paramount issue as climate action failure has been predicted to have the largest impact on society over the next ten years, ahead of weapons of mass destruction and infectious diseases (World Economic Forum, 2021).

BLOCKSET

At the most basic level, Blockset is a blockchain platform on which organizational and institutional entities issue, hold, and transact offsets as described in a hypothetical scenario in Table 2. From a technical standpoint, each token or unit on the platform is a "Blockset" and represents one tonne of carbon or its equivalent in other greenhouse gases mitigated. It is designed to connect the entities' carbon accounts via a decentralized system, bring transparency to the market, and address the issue of double counting. To do this, Blockset is built on the Ethereum blockchain, using NFTs in a way that each offset is associated with a given Blockset token on the platform. Offsets can be listed and exchanged on the platform and because of how blockchain works, there are no risks of them being double counted in the platform.

Table 2. Vignette of a hypothetical scenario between users of Blockset

Event	Description
[1]	EntityA completes a forestry project called proForest that mitigates 1,000 tonnes of carbon. EntityA then issues these 1,000 tonnes of offsets on the Blockset platform – which is accessible as a browser-based application that runs on the Ethereum blockchain – for the market to purchase and goes through the steps of issuing the offsets on the platform as 1,000 Blockset units that are associated with proForest. Upon issuing the offsets, EntityA continues to be the holder of the 1,000 Blockset units. They appear in its account that it accesses when it logs in and are viewable by any member of society.
[2]	EntityB sees the 1,000 Blockset units on the platform, reviews the details of the offsets, and deems them suitable. It purchases 500 of them from EntityA and 500 Blockset units are transferred from EntityA's account to EntityB's account on the platform. EntityA and EntityB each now have 500 Blockset units and thus 500 tonnes worth of carbon offsets specifically associated with the proForest project. There is no risk of these offsets being double counted on the platform because they are automatically transferred between each entities' accounts connected to Ethereum wallets.
[3]	EntityB realizes that it was overshot its goal for the year and decides to sell 250 of its proForest Blockset units to EntityC. Accordingly, 250 Blockset units are transferred from EntityB's account to EntityC's account just like the previous transaction between EntityA and EntityB.

Introducing Blockset

Blockset was officially founded in 2018 as a registered not-profit based in a major metropolitan city in North America by Leo, a seasoned and award-winning carbon market and climate professional, to convene blockchain experts and climate experts and create one of the world's first blockchain-based carbon offset platforms. Leo has a Bachelor of Science in Biology and an

MBA, and previously founded his own carbon offset company. He has also worked at different climate organizations, including while he operated Blockset. When asked to describe himself, Leo responded: “I'm not an engineer. I'm not a forester. I'm not an inventor. But I understand what they do well enough to connect it over into another world.” Regarded as a subject matter expert on carbon, Leo is often featured in the media and invited to join expert panels. While Leo considers himself a techsavvy person, he is not a coder and had no exposure to blockchain until 2017 when he read about initial coin offerings. This sent Leo “down the crypto rabbit hole” and he started attending meetups at a hackers’ community to learn more about blockchain.

Table 3. Timeline of key events during Blockset's development

Year	#	Description of key events
2017	[1]	Aha! moment for Blockset at an Ethereum event with NFT-based blockchain platform CryptoKitties that inspires Leo to do CryptoKitties but in climate, but it is deemed technologically infeasible
2018	[2]	Idea of Blockset is re-visited after Andy creates a newly proposed Ethereum standard that address prior limitations and makes the idea technologically possible
	[3]	Short blog-style concept note outlining the basic idea of Blockset is drafted by Leo and Andy
	[4]	Blockset is officially incorporated as a not-profit after Leo decides to commit to the idea
	[5]	Blockset is presented at various blockchain, climate, and blockchain and climate events including the UN Climate Change Conference in Katowice and begins to gain attention in the media
	[6]	Partnership established with environmental charity Northco after Leo leaves his job with an offset company to lead the climate team at Northco where Blockset is given office space
2019	[7]	Blockset applies for a $100K grant from AccessFund who recently pivoted to tech and nature
	[8]	Comprehensive specification document for Blockset is completed prior to a major hackathon at which Benjamin and his team at Altco – a leading blockchain development company – plan to build out the first version of Blockset, but the plan falls through and no platform is created
	[9]	Blockset co-hosts an event with a partnering technology university and does a demonstration using CryptoKitties for major international organizations working on blockchain and climate projects
	[10]	Blockset continues to be presented at various minor and major events and is frequently featured in an array of media outlets (mainstream, blockchain, climate)
	[11]	Blockset receives news that it has been awarded $100K grant from AccessFund while it is at the UN Climate Action Summit in New York
	[12]	Mobile mock-up of Blockset is created through a last-minute partnership with Consultech, which is showcased at major events including the United Nations Climate Change Conference in Madrid
2020	[13]	Desktop mock-up of Blockset is created through a partnership with TechStation
	[14]	Blockset applies for an additional $100K grant from AccessFund
	[15]	Blockset is awarded various grants in the range of $5-15K from the government
	[16]	Detailed report with recommended system architectures, user interface designs, and overall implementation plans is created by Pamela and her partner Kyle
	[17]	Series of makeshift versions of Blockset are created with newly created blockchain platforms
	[18]	Blockset partners with a major university to create an implementation plan
	[19]	First line of code for Blockset is written when Nabeel is hired to create the first functional prototype
	[20]	Blockset is continues to be presented at events and is frequently featured in an array of media outlets
	[21]	Blockset receives an anonymous donation in Bitcoin
	[22]	Functional prototype of Blockset is completed and deployed on the Ethereum Rinkeby testnet

Leo learned about CryptoKitties, the first of its kind platform based on the Ethereum blockchain, and NFTs at a meetup the local crypto hackers' community Shift, which was the first major event in the Blockset timeline as summarized in Table 3. Indeed, while CryptoKitties was often labeled "bizarre" and "weird" in the media, many early adopters of NFTs were inspired by CryptoKitties and their use of NFTs, facilitating the creation of uniquely identifiable and non-fungible digital assets powered by blockchain technologies. At this time, the idea of an NFT-based blockchain platform was in its nascent stages of development and few applications of NFTs had been implemented. CryptoKitties remained the most well-known global application of NFTs, though CryptoPunks – 24x24 pixel art images of collectible punk characters – was also well-known in the crypto community as the first NFTs on the Ethereum blockchain.

Upon learning about CryptoKitties, Leo had a pivotal 'Aha!' moment as he felt that CryptoKitties did what was needed in climate, more specifically, his domain of carbon. Yet, Leo would soon learn of the limitations of the technologies underlying CryptoKitties and its inability to do what needed to be done, so he moved on. "That effectively killed that dream," he once said. Months later, however, after meeting with Andy – a blockchain developer – Leo learned that a new token standard that Andy was working on addressed the limitations and revived his dream to do "CryptoKitties but for carbon." After thinking about if he had the time to start a new project, Leo committed to the idea, registered a not-profit, and formally founded Blockset. He then spent the next few months pitching the basic idea to crypto and climate audiences based on a blog-style concept note that he and Andy wrote and building a team of "experts from cryptocurrency, blockchain, and climate." The team initially comprised of the "Original Five" which consisted of two blockchain and three climate experts and then grew to become a team of about twenty facilitating the travel of the idea of a blockchain platform to climate.

As an emergent platform organization, Blockset largely served as a "tent" or "umbrella," that convened people from crypto and climate to help build the platform and nothing else. While the boundaries are sometimes blurry, the people behind Blockset are often described by members as "the climate folks" and "the blockchain and crypto folks" and people on "the climate side" and "the blockchain and crypto side." The climate folks are considered the climate experts contributing to Blockset. They each come from "the climate space" and work on climate-related issues such as the carbon market, cleantech, clean energy and renewables, climate policy, and corporate sustainability. Likewise, the crypto folks are considered the blockchain experts contributing to Blockset. They each come from "the crypto space" and work on projects related to a range of blockchain technologies such as cryptocurrency, blockchain infrastructure research and development, blockchain consulting and education, and various blockchain applications.

Many of the climate and crypto folks have also earned prestigious honours, are regular participants in leading initiatives, and are frequently featured in the media. At the same time, they each come from a range of organizations such as not-profits, trade associations, university research centres, corporations, startups, consulting firms, multi-lateral organizations, blockchain research and development firms, and hacker spaces. Together, they also bring to the table a diverse range of educational backgrounds and training in climate, biology, environmental studies, engineering, finance, management, communications, public policy, medicine, computer science, information studies, and range from university dropouts to PhD holders.

Although Blockset is a formally registered not-profit, for the bulk of the incipient ideation stage leading up to the creation of a functional prototype, almost no one contributed to Blockset full-time, though a few exceptions existed as some people joined for a specified period via grants. Most contributors have full-time or part-time jobs and various commitments

elsewhere in their fields. In turn, their contributions to Blockset during ideation were either done through their day jobs and/or on their own time outside of such day jobs. Because of such arrangements, various organizations affiliated with some of the members have formed partnerships with Blockset to support the creation of Blockset. While the depth and nature of such partnerships have varied, in some cases, additional people from partners also contributed to creating Blockset. However, not all people that contributed to the ideation of Blockset are members. In some cases, arms-length partnerships existed with external organizations, but they also tended to be voluntary in nature.

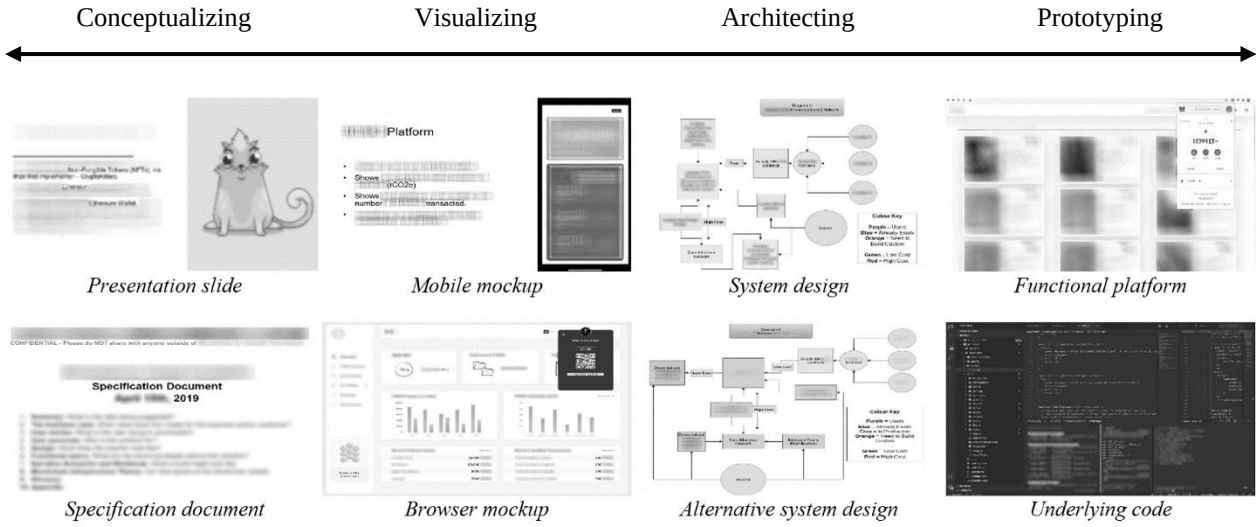
Blockset maintains a relatively informal and unstructured work environment to keep things as "lean" as possible and not get bogged down with administrative tasks. As an organization, it does not even have its own bank account as it manages its modest budget in the form of grants awarded by AccessFund through its partnership with Northco whose office is also used as Blockset's office. Recognizing that everyone has various commitments, the members promote and embrace a "pop in and pop out culture." While many members are concentrated in a single city and frequently work out of the Northco office, the team is geographically dispersed. In turn, meetings and work related to Blockset often involves a hybrid approach combining in-person and virtual interactions. Because of the various collaborations, meetings and work related to Blockset often place offsite at partner's offices and common places as illustrated in Figure 4.

Figure 4. Illustration of various places where members of Blockset gathered and worked

Ideation development phases of Blockset

After committing to what he calls the "transmogrification" of CryptoKitties, Leo registered Blockset as a not-profit and "officially founded" the organization. All in all, the ideation of the platform leading up to the creation of the first functional version of Blockset transpired over four dynamic and overlapping phases – conceptualizing, visualizing, architecting, and prototyping – as shown in Figures 5 and described in the remainder of this section.

Figure 5. Ideation development phases of Blockset and example manifestations



First, the idea of Blockset was conceptualized, updated, and refined so people could obtain a coherent understanding of the idea. Indeed, when it was founded, Blockset was a very early-stage idea and its level of development was predominantly limited to the initial concept articles that Leo and Andy wrote, which were not as developed as the various white papers that most organizations developing blockchain ideas were publishing. Yet, over time, more accounts of the idea were created and recreated that not only introduced people to Blockset as an idea but also helped members expand and refine the idea. These accounts included slide decks and presentations, interviews and features in the media, event and grant applications, various modes of communication, diagrams, and a detailed "specification" document that explained Blockset.

Second, visual manifestations of Blockset were created. While these visualizations were not functional – that is, they were "mock-ups" or "clickable demos" as members described it – they illustrated what the digital platform could look like and were more than flow charts, diagrams, and/or sketches. They were professionally designed and digitally rendered objects that transformed the conceptualizations of Blockset into visuals. Overall, two official visuals were created: one of a mobile application and another of a desktop-based application.

Third, a detailed report proposing frontend and backend system designs and recommended "tech stacks," including programming languages, standards and protocols, and third-party integrations, amongst others, was created. The idea with this architecture document was to create a detailed specification document that a developer could use as a guide to build a functional prototype of Blockset. All in all, several architecting options were identified.

Lastly, a functional prototype of Blockset was created. At the beginning of this phase, a major milestone was reached in the materialization of Blockset as the first line of code was written. At the end of this phase, another major milestone was reached in that members of Blockset successfully issued and transferred test carbon offsets called Blockset on the Rinkeby testnet, a testing environment for Ethereum. Blockset was fully integrated with other third-party platforms such as widely used marketplaces for NFTs and transaction ledgers that are a part of the Ethereum ecosystem. While it was expected that refinement would still be needed, the creation of a functional prototype "live on the Blockchain" was a long-awaited milestone.

ETHNOGRAPHIC METHODS

To explore translator heterogeneity and the microfoundations of new venture ideation through translation, I conducted a 24-month ethnography of Blockset that spanned all four ideation development phases from conceptualizing through visualizing and architecting to prototyping.

As a method of study, ethnography "stays close to the naturalist profile" (Miles & Huberman, 1994: 8) and draws on deep immersion, observations, and the writing of fieldnotes (Emerson, Frets, & Shaw, 2011) to capture and understand "patterns of human activity" (Van Maanen, 1979: 539). In turn, it is "highly particular and hauntingly personal" whilst serving "as the basis for grand comparison and understanding within and across a society" (Van Maanen, 2011: xiii). Indeed, as explained by Conklin (1968: 172), procedurally ethnography entails:

> a long period of intimate study and residence in a well-defined community employing a wide range of observational techniques including prolonged face-to-face contact with members of local groups, direct participation in some of the group's activities, and a greater emphasis on intensive work with informants than on the use of documentary or survey data.

Although ethnography has long had its place in the organizational and management literature (Zilber & Zanoni, 2020), it is "making something of a splash of late" (Van Maanen & de Rond, 2017: 396). Born out of the field of social anthropology, "ethnographic methods tend towards the descriptive" and the "analysis task is to reach across multiple data sources (recordings, artifacts, diaries) and to condense them, with somewhat less concern for the conceptual or theoretical meaning of these observations" (Miles & Huberman, 1994: 8). In other words, as a research method, "[e]thnography relies on fine detail to gain insight into social processes and contextualize behavior, rather than seeking to generalize from what is, after all, a sample of one" (Van Maanen & de Rond, 2017: 398). Thus, ethnographic methods are particularly valuable when the researcher's desire is to "offer a rich description of both the context and the process being investigated" (Patriotta & Gruber, 2015: 1577). There's no questioning that some of the most profound and influential research of our time has come from ethnographic research (e.g., Goffman, 1961; Latour & Woolgar, 1986). As Eisenhardt, Graebner, and Sonenshein, (2016: 1113) note, inductive methods such as ethnographic research "can powerfully address grand challenges while also developing strong and insightful theory."

While a general problem is that "the terms ethnography, field methods, qualitative inquiry, participant observation, case study, naturalistic methods, and responsive evaluation have become practically synonymous" (Mile & Huberman, 1994: 1), a distinct feature of an ethnography is the deep immersion of the researcher for an extended period of time in the research setting (Pratt, 2009), as demonstrated in the work of leading ethnographers (de Rond, 2017; Kellogg, 2011). Indeed, some argue that "when an ethnography does not involve extended periods of field work, it does not deserve the name" (Barley, 1990: 232). Yet, what it means for a researcher to be immersed has changed to accommodate the changing nature of work, organizations, and social life. Most notably, as Kaplan (2011: 325) notes, immersion is no longer reserved for physical immersion as it has evolved to include the virtual world:

> With roots in anthropology, ethnographic techniques have primarily entailed the researcher being physically immersed in the field. With the growing use of modern communication technologies, the meaning of "being in the field" is changing as ethnography goes "virtual" … This study combined traditional techniques of being physically on the ground with virtual techniques of participation via teleconference and e-mail.

Nevertheless, perhaps the biggest challenge that lies within ethnographic research, is the researcher's navigation of their role in the research setting. While many scholars stress the importance of "maintaining analytical distance" (Latour & Woolgar, 1986: 278) and a role as a researcher, others stress the importance of joining and participating in your research setting and "get[ting] the seat of your pants dirty" (Park, 1927). This divide between "researcher as academic" and "researcher as person" (Fuller, 1999) has created certain tensions in scholarships. Yet, as much of prior work has shown, many ethnographers lean towards the researcher as person role and confronting the challenge of going native, as Barely (1990: 240) notes:

> The primary intellectual risk of long term participant observation is that one may eventually come to view the setting entirely from an insider's perspective … situated behaviors and interpretations begin to appear normal, unsurprising, and commonsensical. ... I had certainly gone native on several fronts …

In the end, the degree to which the researcher is immersed in the research setting and the position that they adopt will differ from researcher to researcher and study to study. However, as Miles and Huberman (1994: 8) note, ethnography tends to be the primary method used for social anthropology approaches to research, which "stays close to the naturalist profile" and entails:

> …extended contact with a given community, concern for mundane, day-to-day events, as well as for unusual ones, direct or indirect participation in local activities, with particular care given to the description of local particularities; focus on individuals' perspectives and interpretations of their world; and relatively little pre-structured instrumentation, but often a wider use of audio- and videotapes, film, and structured observation than in other research traditions.

The goal is to "get close to the activities of participants" (Kaplan, 2011: 325) and "secure the most valid and richest information possible regarding the topic of inquiry" (Snow, Benford, & Anderson, 1986: 379). Thus, in many cases, the ethnographer strictly maintains a role as an observer, but in others, they engage in deeper levels of involvement to learn the language, connect, and experience the daily lives of their subjects (Becker & Geer, 1957) by taking on official roles (e.g., Howard-Grenville, 2007; Reinecke & Ansari, 2015; Tracey & Phillips, 2016).

A key aspect of ethnographic research is to recognize and be transparent about your role and position as an ethnographer. As Snow, Benford, and Anderson (1986: 391) have argued, there is no single right way role to be adopted in ethnographic research and an ethnographer's role can vary from a controlled skeptic to an ardent activist, buddy-researcher, and credentialed expert, though most qualitative researchers tend to avoid the role of a credentialed expert as "they are more in keeping with the role of an outside consultant than an 'insider.'"

To this end, my decision to conduct an ethnography was driven not only by the method's suitability for studying the microfoundations of translation (Zilber, 2020) and the need for a real-time understanding of translation (Boxenbaum, 2006), but also my desire to understand the nuances of the lived human experiences of people transporting and implementing cutting-edge ideas such as emerging technologies to tackle grand societal challenges that we face today. My

ethnographic fieldwork thus traced the unfolding of life at Blockset through all four broad overlapping ideation development phases that transpired during the formative years of its emergence as an organizational entity. As an organizational ethnographer, I ultimately followed in the footsteps of other organizational ethnographers and "tried to get as close to my informants as possible, to become a 'Convert' rather than a 'Martian,' to draw a broad cultural portrait from focusing on everyday happenings, to provide detail on these day-to-day situations, and to get rid of my 300,000-feet variables" (Kellogg, 2011: 1987). Thus, like Howard-Grenville's (2007) adoption of a role as an intern, Jay's (2013) role as an insider, and the many other ethnographies where researchers had a role in the organization (e.g., Reinecke & Ansari, 2015; Tracey & Phillips, 2016), I joined the organization as a volunteer member like others. Internally, job titles were vague and almost non-existent, and most people were merely called team members, with the exception of Leo, who was recognized as the founder of Blockset.

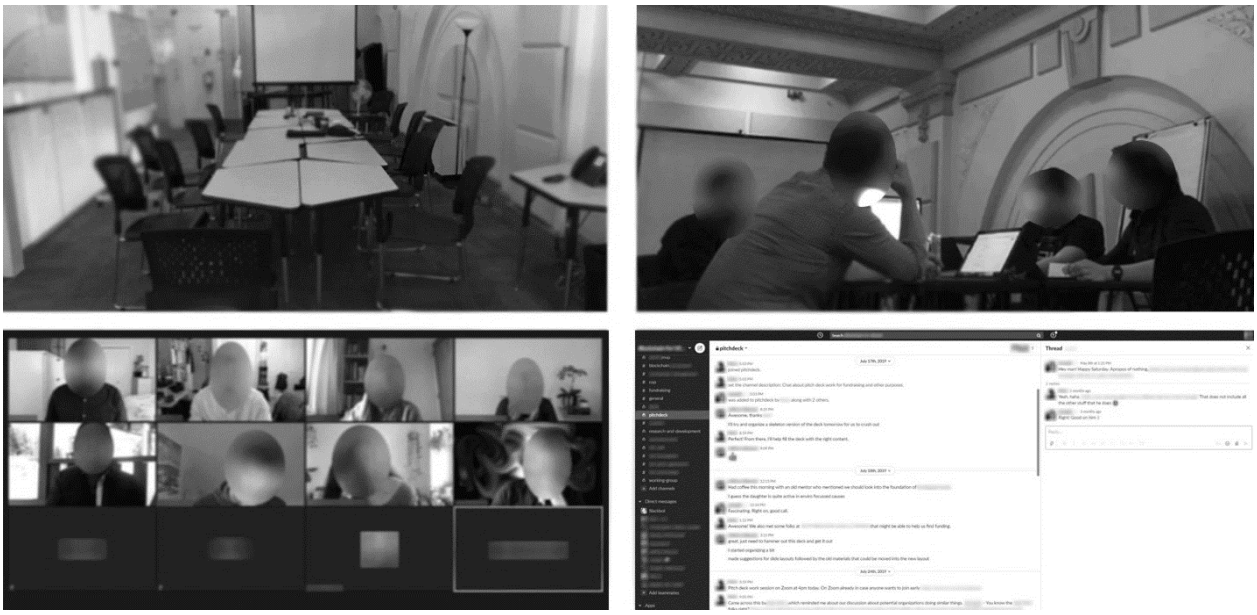
As an embedded member, I was engaged in Blockset like other members, contributing to everyday administrative tasks, attending and assisting with events, and working with other members on projects. However, as someone in close quarters with them, I also established a researcher-buddy relationship with all members. Indeed, my role as a researcher was openly communicated and I was accepted as someone that also observes, questions, and learns about Blockset and the people contributing to it. I was also afforded the opportunity to regularly interact with members of the broader fields of blockchain and climate such as developers, consultants, policy makers, entrepreneurs, business professionals, and other interested actors. Meanwhile, natural gaps in the workplace gave me time to follow members beyond the immediacy of Blockset. Yet, I emphasize that this dissertation is not a study of how the idea of blockchain in general traveled into climate but rather what happened at Blockset.

Data

My ethnographic fieldwork at Blockset took place between 2018 to 2020 during the 24-month period leading up to the completion of the first functional prototype. I participated, both in-person and virtually, in work sessions with various members, internal meetings with members, external meetings prospective collaborators, partners, and funders. Indeed, a key advantage of being side by side with members in such a diverse set of settings was that it allowed me to observe "unwritten verbalizations" and the more transitory accounts of ideas that happen frequently in everyday organizational life but are hard to capture (Westney & Piekkari, 2020).

Because I wanted to maximize my exposure to the work behind Blockset, whilst also following other members, I maintained proximity to the founder Leo who convened most work and was the most active member. I was also regularly present in Blockset's workspace – a well-light open room – in strategic partner Northco's office as seen in Figure 6, which also includes screenshots of a virtual meeting on Zoom and Blockset's virtual workspace on Slack. Yet, since many contributors were based at partners' offices, I also spent time offsite and in their offices.

Figure 6. Illustration of Blockset's physical and virtual workspaces



Additionally, I attended – alongside other members of Blockset – local, regional, and international events including blockchain summits and hackathons and climate events such as the United Nations Climate Change Conferences and Climate Action Summits. Like all members of the organization did, we traveled together, ate meals together, and shared accommodation together when going to events out of town as illustrated in Figure 7. All in all, being in such close quarters with members of Blockset enabled me to get to know them on a deeper level to understand who they are as people and their lived experiences.

Figure 7. Members of Blockset during their trip to Madrid for COP25

From the moment I began my fieldwork, I was given unrestricted access to the organization, including administrative permissions to virtually all Blockset's online accounts. Thus, in addition to observing and participating alongside members in their work in-person and virtually via platforms (i.e., Zoom, Slack, Twitter, WhatsApp), I also had access to all Blockset's files (e.g., minutes, slides, applications, notes) stored in online repositories (e.g., Google Drive, Github) and was included in or given access to nearly all organizational emails. I was also given permission to audio and video record all meetings, which amounted to 275 meetings being

recorded and transcribed. Meanwhile, for my routine observations, I took over 600 pages of handwritten notes in field diaries and made over 350 voice memos that detailed my observations made on the ground and in the moment during my fieldwork. I also held hundreds of informal ethnographic interviews and augmented the data that I collected with 40 semi-structured interviews. By the end of my fieldwork, I constructed a comprehensive and unique dataset as summarized in Table 3 for this 24-month ethnographic study of the formative creation of Blockset as an organizational entity underpinning this dissertation.

Table 4. Summary of data collected

Data Type	Total collected
Observations	24 months of observations 600 pages hand-written notes in field diaries 350 voice memos, recorded and transcribed 100s of photos 275 in-person and virtual meetings, recorded and transcribed
Interviews	100s of ethnographic interviews 40 semi-structured interviews, recorded and transcribed
Archival data	*Proprietary* 1 functional prototype 5 makeshift semi-functional demos 2 visual mock-ups 37 slide decks 100s internal documents (e.g., notes, reports, diagrams, grant applications) 1500 emails Code repository (i.e., GitHub) Digital interactions (e.g., Slack, SMS, WhatsApp, Google Hangout, Twitter) *Public* 45 media articles featuring Blockset 15 hours of speaking engagements by Blockset, recorded and transcribed Blockset website Social media accounts of Blockset and its members

Observations. My ethnographic observations were my main data and my approach to turning them into usable data involved taking live fieldnotes, creating voice memos, and converting such data into typed fieldnotes as follows. First, during my participation, I took detailed notes in a physical notebook that served as my field diary, supplementing my notes with

photos when helpful. Next, at the end of each day that involved participation, I audio-recorded detailed voice memos derived from my notes. When I first started my fieldwork, I typed my fieldnotes and observations at the end of each day, but I quickly switched to embracing voice memos. Creating recorded voice memos allowed me to document my observations with a level of depth that would be difficult to obtain via typed fieldnotes given the time constraints. These voice memos lasted anywhere between 15 to 120 minutes per day depending on how eventful the day was and are best understood as narrations of my observations. Lastly, these voice memos were transcribed and converted into typed fieldnotes so I could access and analyze them as thick descriptions (Emerson et al., 2011; Van Maanen, 2011). Importantly, I also audio and/or video recorded nearly all in-person and virtual meetings, which allowed me to re-examine interactions that I observed. Figure 8 depicts some of my field diaries that I carried with me and used to document my observations during my fieldwork.

Figure 8. Some of my many diaries from my fieldwork at Blockset

Interviews. While my main data were ethnographic observations, I also collected additional data through ethnographic interviews and formal interviews. Unlike other qualitative research that derives its primary insight from interview data, my use of interviews was primarily

to augment the data and insight that I had collected via observations. Thus, I predominantly embraced ethnographic traditions in which interviews were unstructured, relatively informal, and conversational in nature, as explained by Spradley (1979: 464):

> …skilled ethnographers often gather most of their data through participant observation and many casual, friendly conversations. They may interview people without their awareness, merely carrying on a friendly conversation while introducing a few ethnographic questions. It is best to think of ethnographic interviews as a series of friendly conversations into which the researcher slowly introduces new elements to assist informant to respond as informants.

Such ethnographic interviews were integrated into natural interactions with organizational members but were distinct from casual everyday conversation (Spradley, 1979). Importantly, in many cases, the in the moment nature of them allowed me to capture and better understand people's behaviours, reactions, and experiences as they happened, without worrying about retrospective rationalizations of them or people forgetting about what happened. Nonetheless, while I conducted hundreds of ethnographic interviews, when deemed helpful, I supplemented them with semi-structured interview that lasted anywhere between 30 to 120 minutes long.

Archives. I also compiled an extensive set of proprietary and public archival data. While this was partly to triangulate observational and interview data and fill in some gaps, the primary purpose of such data served as important objects of analysis to shine light on two important aspects of my study. First, as several translation studies have noted, the travel of ideas into new settings general manifest as discursive and material accounts of ideas (Lawrence, 2017; van Grinsven et al., 2016). Thus, archival data such as media interviews, articles, presentations, proposals, application, documents, diagrams, visual mock-ups, and the platform itself were manifestations of the idea. Next, as Kaplan (2011) notes, much of modern organizational life transpires digitally via email and other various digital platforms facilitating virtual interactions. In turn, archival data such as emails, text messages, the organization's Slack workspace, and a wide assortment of digital means allowed me to observe and analyze the digitally enabled

aspects of organizational life, which needs to be taken seriously in this day and age. While some categorize such as a netnographic data (Belk, Fischer, & Kozinets, 2013), I consider such data as proprietary internal archival data that is a part of modern organizational ethnography (Kaplan, 2011). As an embedded member, I was given unrestricted access to all documents and all online accounts, copied on and/or included in as many email communications as possible.

Analysis

My analysis occurred simultaneously with my data collection and entailed an open-ended, inductive, and iterative process moving between my data, theorizing, and the literature (Miles & Huberman, 1994). I used fieldnotes from observations and ethnographic interviews, recordings and transcripts of meetings, and digital communications as my primary data and then interview transcripts and archival data to support and refine emerging themes (Fayard et al., 2017). Overall, I embraced an analytical strategy in which I examined my data to identify "the micro patterns of an institutional problematic" (Zilber, 2020: 12), treating the formative creation and ideation of Blockset as an effort of translation and seeking to understand the micro-dynamics and processes of organizational life underpinning such a macro process of translation (Surachaikulwattana & Phillips, 2019) that I refer to as ideational translation. While I was interested in how actors from different fields interact when my study began, it became apparent that a translation story involving cross-field interactions was unfolding. In the end, without foreshadowing too much of what comes in the next part of this dissertation, the analysis for the findings that I present in this dissertation roughly proceeded as follows.

I began by reviewing and openly coding all my data that I uploaded into *Atlas.ti*, a widely used qualitative analysis software. While this process was often overwhelming as I dwelled on the minute details of my data, given the vastness of my data, my goal was to reflect on the

overall story that I had observed and obtain a holistic feel for my data. During this stage, I distinctively noted that in routine interactions, members of repeatedly encountered comments such as “hide the blockchain”, “don’t talk about it”, “unblock it”, “abstract it”, “you don’t need the crypto,” “it’s stigmatized”, “isn’t blockchain just Bitcoin?”, “why crypto”, “be more earthy”, and “focus on the climate side” that were seemingly guiding the idea of Blockset away from its roots in the crypto community. This sparked my interest in understanding such behaviour and interactions, so I re-examined my data. Because such phrases very rarely occurred in isolation and were usually followed by back-and-forth discussion, I examined the data surrounding such encounters in more detail whilst revisiting the literature. In doing so, I noted that such behaviour that I observed resonated with the translation literature’s emphasis on decontextualizing ideas from their originating context or locus of disembedding.

My attention then shifted to another observation that a distinct set of interactions involved people passionately and repeatedly defending such behaviours and doing what appeared to be the opposite of decontextualization, which created tension amongst members at Blockset. This was particularly interesting because the literature emphasized the importance of decontextualization. While at many points throughout my fieldwork and analysis, I thought “were these people at Blockset just doing a bad job?” and that this might be an instance of failure, I observed the opposite. Blockset was securing funding, gaining attention and traction, and progressing forward on this pursuit to create a prototype. Such insights prompted me to re-analyze my data more closely to better understand these people refusing to disconnect Blockset from the crypto community.

These two foundational observations – that is, micro-forces guiding the idea away from its roots in the crypto community and resistance against the decontextualization of the idea –

ultimately formed the basis of the rest of my analysis and the findings that I present in this dissertation as I combed through my data to further unpack these two broad sets of behaviours and eventually construct detailed profiles of those that embraced them. To do this, I drew on all my sources of data, exploring the relationships between insights observations and interviews to the various manifestations of Blockset and observations that I made on the dynamics of organizational life. This resulted in a detailed profile of two sets of people behind the creation of Blockset that embraced what I call idealism and pragmatism orientations towards the holistic process of ideation. Working with these profiles, I explored how and why these orientations influenced the various manifestations of Blockset that came into existence and the dynamics of the organization during the various ideation development phases. Lastly, with detailed profiles of each contributor to Blockset, I traced their evolution over time and distinctly noted that several of them experienced notable changes in the orientations that they embraced over the course of my fieldwork. Consequently, the findings of this dissertation are not only concerned with who the translators behind Blockset are but also how they changed during the ideation process.

Overall, like any ethnography, the key challenge that has ensued has been deciding how I can best offer accounts that do justice to the on the ground dynamics and lived experiences of the group of people and organizations that I had gotten to know through prolonged interactions and help people peer into and understand their worlds while balancing the expectation that this dissertation unearths findings with theoretical relevance (Van Maanen, 2011; Van Maanen & de Rond, 2017). In the next part of this dissertation, I present my findings that emerged in a way that I hope effectively allows readers of this dissertation to peer into and understand the world of the diverse translators behind the formative creation of Blockset and enable a more sophisticated and detailed understanding of translators and the microfoundations of ideational translation.

PART II:
TRANSLATOR HETEROGENEITY AND IDEATIONAL TRANSLATION

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CHAPTER 3:
TRANSLATION ORIENTATIONS

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In this chapter, I begin to explore the diverse lived experiences of the people behind the ideation of Blockset – that is, its translators – and examine two translation orientations that I witnessed them embrace: *idealism* and *pragmatism.* Whereas idealism stresses consistency with the norms of the crypto community to implement a platform the creates an alternate social system, pragmatism stresses consistency with the norms of the climate community to implement a platform that fits into the existing social system. Yet, when it comes to understanding the two orientations, although I describe them as being distinct from one another, the orientations of translators behind Blockset are best understood as being situated on a spectrum with idealism and pragmatism at each end as seen in Figure 9. Thus, while some embrace orientations that are largely anchored in idealism or pragmatism, others favoured one but had qualities of the other.

Figure 9. Translation orientation spectrum

To better understand these orientations, I explore the perspectives and lived experiences of the translators embracing them – that is, idealists and pragmatists. As I set out to explain, those that embrace idealism and pragmatism had distinct preferences with regards to how to approach the ideation of Blockset as summarized in Table 5.

Table 5. Summary of preferences under idealism and pragmatism

Manifestations of idea	Idealism	Pragmatism
Material	Create a "real" blockchain platform	Create an adoptable blockchain platform
Representational	Acknowledge the idea's roots in crypto White box the technology	Distance the idea from crypto/blockchain Black box the technology

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IDEALISM

Pamela is an idealist and frequently expresses her concerns with regards to the growth of blockchain outside of what she and her peers consider its founding setting, the crypto hackers community. “My biggest fear,” she once said, “is that as blockchain becomes an industry rather than a hobby out of passion, companies will deviate from the purpose of the technology and its features like decentralization and transparency to empower people and the oppressed.” Moreover, when it comes to the ideation of Blockset, while she acknowledges that “blockchain has a lot of potential,” she regularly emphasizes that she is hesitant about how actors are ignoring the rootedness of blockchain in the crypto community and abstracting away the blockchain aspects when they implement ideas. To her, doing so “goes against crypto culture, what it means to be a blockchain company, and what makes an idea legitimate to crypto folks.”

Pamela is from a major city in the United States. She earned her Bachelor of Arts in Critical Theory at a liberal arts college as well as a Master of Arts in Psychology for which her thesis examined cybertechnology and issues of centralization. She is also pursuing a Master’s in Information and Technology Studies where she is the head of the Bitcoin student group and a contributor to several blockchain projects within and beyond academia. Her plan is to pursue a PhD focused on the topic. Like other idealists, she is extremely well-read, beyond the topic of blockchain, especially on the topics of governance, power, oppression, and autonomy.

Beyond her formal education, Pamela has a long list of experiences working in technology, largely in the areas of project coordination, operations management, and community organizing but also in customer support and event planning. While some of these experiences deal with software in general, many of them are specifically focused on blockchain. Notably, among this list is experience as one of the organizers of Shift, the local underground hackers’

space recognized as the local unofficial home of the blockchain community. At the same time, although Pamela possesses deep technical know-how when it comes to blockchain and considers herself a technologist, blockchain enthusiast, and decentralist, as she often explains, she is learning to code and would only consider herself a junior developer. “I have immense respect for the developers in the community and those leading the way with Solidity,” she said in a meeting, “but I personally don’t know Solidity yet” – Solidity being the coding language of Ethereum.

Pamela first discovered blockchain at Shift when she was completing her master’s thesis on cybertechnology as her partner Kyle – who also occasionally joins Blockset meetings with her – was an early and active member of the hackers’ space through his work as the founder of another blockchain company. During this time, blockchain was predominantly associated with Bitcoin, though Ethereum was getting ready to launch. As Pamela states on her website, she was “mesmerized by Bitcoin” and its foundations in open-source software and decentralization to “transform and liberate people from centralized systems of power and oppression.” Additionally, in her online profiles, she describes herself as a “Blockchain Proselytizer,” explaining:

> I'm madly in love with decentralization and technology users' rights to autonomy. I love spreading the word regarding the impact of the disruptive technology and approach this from a philosophically and politically idealistic stance. This idealism is not necessarily the whole picture – reality plays out differently – but I believe it can serve to excite newcomers about these ideas and incite inspiration in applying them in the real world.

To this regard, Pamela is not the only member that is characterized as embracing such proselytizing or converting roles. Indeed, reflecting on Leo’s role in Blockset, a member said: “Leo’s an evangelist. He’s so passionate about blockchain. He’s like a blockchain evangelist.”

Both Pamela and Kyle are self-proclaimed “Bitcoin maximalists” or “maxies” for short, terms that you often hear in the crypto community. “In my heart of hearts, I’m a cynical Bitcoin maximalist,” says Pamela during an introductory system architecting meeting, “but I am opening up to more blockchains and blockchain uses.” While a quick Google search of the term will yield

several definitions, Vitalik Buterin – co-founder of Ethereum – describes the concept of Bitcoin maximalism in a blog post on the Ethereum Foundation (2014) website as follows:

> …the idea that an environment of multiple competing cryptocurrencies is undesirable, that it is wrong to launch 'yet another coin', and that it is both righteous and inevitable that the Bitcoin currency comes to take a monopoly position in the cryptocurrency scene.

As Pamela explains in an unpublished blog post for Blockset, she and Kyle possess "cynicism around the word 'blockchain' being divorced from its cypherpunk provenance in Bitcoin."

In general, maximalists at Blockset are idealists. Yet, although maximalism might be the most frequently associated with Bitcoin, it is used by many people in association with virtually any blockchain. As explained in an article ConsenSys (2021) – one of the world's biggest blockchain development companies founded by Joseph Lubin, co-founder of Ethereum – "maximalism in crypto means a fervent, singular, and blinding belief." Thus, while Pamela and Kyle embody the essence of the Bitcoin maximalisms, they are not the only maximalists. In fact, the key set of contributors to Blockset are largely Ethereum maximalists.

From a technological standpoint, idealists at Blockset each have slightly different preferences on how to adopt the idea of a blockchain platform in the field of climate. These are also preferences that are constantly changing alongside the rapidly evolving technology. Indeed, new ideas based on improved protocols are introduced, discussed, and revisited so frequently that it is almost impossible to keep track of them all. "Sorry, I guess I forgot to tell you, but I dropped ERC-____ from my thinking a little while ago" explains Andy in an email. "I know we've been talking about ERC-____ this whole time, but have you heard of ____?" asks Leo, "I just read about it in a newsletter and think it could work." Despite such volatility, what unites idealists is a shared preference to maintain consistency with the norms of the crypto community and what they consider to be appropriate behaviour for an organization implementing a blockchain platform beyond what makes technological sense to achieve the goal.

With these glimpses of idealists at Blockset in mind, I now explore the preferred approaches of translators to the formative creation of Blockset as per idealism. The intensity of several members embracement of idealism suggests that how they seek to adopt the idea of a blockchain platform is not solely based on technical and market rationalizations geared towards efficiency. They are also based on their beliefs and perspectives about what is socially appropriate in what they consider the founding setting of blockchain, the crypto community.

Building a "real" blockchain platform

"I'm all about decentralization," says Nabeel during an introduction meeting with Pamela, "that is what got me into blockchain and all of this, especially Ethereum, and why I started learning Solidity and what excites me about this project." To idealists, the material manifestation of Blockset – that is, what is created in terms of a platform and its underlying architecture – is of great importance. Creating Blockset is not merely about developing a blockchain platform that is tailored to the demands of the users in an untethered manner to maximize adoption. Instead, it is about developing one that idealists deem to be a "real" blockchain platform, one that is "a legitimate use case of blockchain and of why the technology exists" and that "stays true to crypto principles of decentralization for the good of people" as various idealists explain.

Benjamin was one of the main translators behind Blockset during conceptualization. He taught himself to code in high school and is regarded as one of the top blockchain developers in the country, and as founder and CEO of Altco, he oversees a team of blockchain developers building many of the infrastructural elements and blockchain protocols of Web3 – that is, the next generation of the internet described by the Ethereum Foundation (2021) as follows:

> Web2 refers to the version of the internet most of us know today. An internet dominated by companies that provide services in exchange for your personal data. Web3, in the context of Ethereum, refers to decentralized apps that run on the blockchain. These are apps that allow anyone to participate without monetising their personal data.

When I began my fieldwork, Benjamin's team at Altco had about twenty full-time employees, and by the end, it had over forty. He is close friends with Andy – one of the Original Five – and they spend a lot of time together at hackathons and blockchain conferences around the world. "Benjamin and I will take care of it and hack it out at ETHDenver," writes Andy, who also runs his own blockchain development company and is the creator of various proposed Ethereum standards – including some underlying NFTs – but is also completing his PhD in Computer Sciences. Unlike Andy and Pamela, who have pursued extensive post-secondary education, Benjamin is a university drop out. Like other idealists, however, Benjamin is extremely well-read and knowledgeable. His shelf at the Altco office is filled with books covering what seems to be every documented instance of a society seeking decentralization, and his ability to recall the details of them all is uncanny. "My brother and I have been researching everything and trying to figure out what works and what doesn't in terms of creating a decentralized society, because it has happened," says Benjamin, "ancient Greek is amazing example."

"Do you know about this thing called the Parallel Polis? It's a Czech thing," Benjamin asks me one day. "Nope, what is it?" I respond, and then he explains to me:

> Parallel Polis is about parallel cities or parallel spaces where alternative societies or cultures live in parallel to mainstream society. It is where decentralized systems thrive. It's there for you to join if you want to. The goal isn't to replace mainstream society with a decentralized society. It is to create an alternative that exists in parallel to it. That's the goal with blockchain and the technology that we are creating. It's not to revolutionize the world and get like all the big banks to adopt blockchain. That's not realistic. Also, fuck the banks and the centralized enterprises controlling society. People often don't even realize that this was all created to work around centralized entities and not with them. The goal is to give people the option for another reality.

Intrigued by the topic, I ask Benjamin to share more about how he approaches the creation of blockchain platforms like Blockset because I know that Altco gets approached by lots of people interested in blockchain and he explains to me the importance of decentralization and ensuring that ideas do not deviate from what he views as the goal of blockchain:

> Blockchains don't solve the problems. They never will. Technology has never done that. But people will solve society's problems … the key question is, how do we ensure that it remains beneficial to society? … when people got into this space back in the day, and Ethereum especially, this was about creating unstoppable code, like, that was the main thing … I think like that notion of being more geared towards creativity… is the one thing that's been absolutely lost, and it mostly has to do with the capture of these networks, through a lack of guidance towards what the point of this was all along … So, it needs to be beyond just 'hey, is there this kind of tech that I can use?' It's like, more or less, you know, 'what kind of things do I need to do to ensure that what I'm suggesting even is in line with true decentralization for societal benefit.'

While all idealists at Blockset share a similar view as Benjamin, Pamela stands out as she often speaks and writes on the topic, as illustrated in this excerpt from an article in a crypto website:

> We've just been hit with a major attempt of corporate capture. We need to scrutinize the objective value-add of private companies and powerful players within blockchain. We need to ask who benefits from what we are building and how will it impact the commons and decentralization. While it is easy to build a new world that looks like the existing one, we have enough grit and boldness in the crypto community to resist the temptation to up lift new leaders. Real innovation calls for vigilance, persistence, and turbulence.

The importance of building a blockchain platform that enables decentralization for the benefit of society and empowers people is shared by all idealists at Blockset. "What the hell is the point?" says someone in a meeting, if the use of blockchain and decentralization does not achieve "individual empowerment for members of society and only serves centralized actors with power in society." For idealists at Blockset, a real blockchain platform remains consistent with what they consider the founding "spirit of blockchain" and "crypto principles" and the vision to create an alternative decentralized society enabled through transparency and verifiability. To this regard, there is a distinct preference by idealists to build Blockset on a public blockchain as opposed to a private blockchain designed to operate what idealists describe as a "walled garden" or "self-serving" platform. "I get private blockchains, but I feel that they kind of go against what decentralists stand for, right?" says Pamela before going on to add:

> And they're not like real blockchains, right? I mean, I know that there are back-door edits in private-permissioned blockchains too … which is not very useful for the people of the world, right? ... it doesn't have that key feature of transparency that feels like kind of the social good add here of Blockset and building it on a real blockchain like the mainnet.

The intensity of idealists' commitment to the features of blockchain – decentralization, transparency, and verifiability – is clear as deviation from such features are often called out. "Okay, well this kind of a big 'no' in the crypto community" says Andy in response to an idea being discussed in a meeting. "Don't you think that isn't very crypto like or kind of goes against crypto principles?" asks Leo to a potential partner in a direct message conversation on Twitter.

Taken together, for the idealists behind the ideation of Blockset, creating a blockchain platform in general does not suffice. It is important that it is what they consider a real blockchain platform and is anchored on decentralization, transparency, and verifiability for the betterment of society. Yet, for idealists, their preferred approach to implementation entails much more than the material manifestation of the idea. It also entails representational manifestations of the idea.

Acknowledging the roots of the idea

"CryptoKitties, wow, that came out of nowhere," says a manager of a potential partner during a meeting, "I wasn't expecting that to be a part of the presentation." No matter how big or small an interaction – whether it is a casual encounter with someone they just met or a formal presentation in front of a room filled with climate professionals – when idealists introduce the idea of Blockset to others, they almost always explain what idealists consider the origins of Blockset, pinpointed down to the moment and place that they believe the idea came to fruition. While such explanations frequently start with statements such as "Who here has heard of CryptoKitties?" and "The first foot really fell with the launch of CryptoKitties," many idealists explain how CryptoKitties – what is recognized as the first major use case of NFTs – led to the pivotal 'Aha!' moment behind Blockset as it revealed a pathway on which it was possible for the unique details of carbon offsets to be embedded on a cryptographic token, as this statement by Leo during a talk at a major international climate conference illustrates:

> With CryptoKitties, there's eight different characteristics that are genetically combined. So, it's eye color, hair color, background color, mustache, whisker type, and so on and so forth. But those different characteristics instead of having like nose be long, you could have the country from which the project is. So basically, that room for data architecture, putting carbon token info instead of cat characteristic token, that was like the big Aha!

Idealists also frequently emphasize that this 'Aha!' moment transpired at a specific moment and place, during a meetup with the creators of CryptoKitties at the underground hackers' community Shift that Pamela organized, as pictured in Figure 10.

Figure 10. CryptoKitties event where the idea of Blockset came to fruition

Notably, although idealists recognize that the idea of CryptoKitties is "weird" or as Emily said in an interview, "it's still just Tamagotchi" and "when you're talking to someone that has never heard about CryptoKitties, who fucking cares right?" it is important to them that they acknowledge its "groundbreaking" nature and its role in the creation of Blockset. To idealists, Blockset would not have been possible without CryptoKitties.

While acknowledging the role of CryptoKitties in Blockset's origins is important to idealists, so is acknowledging the broader contributions of the crypto community for developing and advancing the technological underpinnings of Blockset. In turn, after explaining the Aha! moment, idealists often specify which blockchain token standards they are deploying and the

journey to arriving at any given deployment choice, explicitly acknowledging who created these standards and how Blockset would not be where it is without them. For example, “we are building on Andy’s ERC-____ token standard” was always mentioned during the conceptualization phase. Yet, even after switching, members mentioned Andy’s work and its role in developing Blockset.

Because very few people work at Blockset full-time, my fieldwork afforded me opportunities to follow them in settings away from the immediate context of creating Blockset. This included observing contributors such as Benjamin in his everyday work at Altco. Despite being a leading blockchain developer, as founder and CEO, Benjamin’s work often takes place on stage and away from his laptop and he introduces the work of Altco to other blockchain developers around the world. He is a highly sought-after speaker and more or less lives out of his well-worn in black backpack that he takes with him around the world. What is undeniable is that in nearly all interactions about Altco and their many projects, Benjamin discusses the origins of Altco and acknowledges its roots. On the front stage at a Web3 conference, Benjamin says:

> We started at this Ethereum developers’ meetup. We heard each other speak and I remember my partner Logan and I, we each made a comment and heard each other and then followed up and became best friends … so, this is where we first started renting space at this hackers’ club. My hope in telling the story of how we got together to working on this infrastructure is to remind everybody how we as a community got to the place we are. Five years ago, we weren't sitting in auditoriums like this and it's because of the work and commitment of people who honestly love this technology for the sake of the technology that we are here. It isn't because of a crazy go-to-market strategy that everyone's building on Ethereum. It’s because of the things that people like us do every single day.

When I asked Benjamin about his presentations, he explains that “it’s important that we remember where we came from and to not lose sight in what we believe in.” He then adds, “the crypto community and blockchain was born out of the open-source movement, and in open-source, we believe in acknowledging and celebrating the work of the community and our peers.” In response to a similar question but in the context of Blockset, Leo says:

> It's a hat tip to the crypto anarchists because they came up with this in the first place. They invented this shit … if you're being a respectful user of the stuff that these people have come up with, then continuing to respect and favor and like them is just polite.

For idealists, acknowledging the roots of the idea and crypto community is a norm that is a part of everyday life and embodies the essence of what Nabeel describes as the crypto community's "culture of giving… unlike a culture of taking, just a take take take mentality, like many businesses these days." In turn, as several idealists attest, ignoring Blockset's roots and the crypto community is considered "disrespectful," "inappropriate," and "a slap in the face."

White boxing the technology

Just like the roots of Blockset, the technology underpinning the idea is expected by idealists to be white boxed, a term that I borrow from science and technology studies to capture the opposite of discursively or visually abstracting away, hiding, simplifying, or black boxing technology for a general non-technical audience. As a member of the crypto community beyond Blockset, but a close friend of many members, tweeted: "a blockchain and Web3 learning curve is necessary… we don't need to make it invisible or dumb down crypto for new users." While not all members of the crypto community embrace this view, many do, including idealists in Blockset.

What this looks like on the ground for idealists at Blockset is openly illuminating and explaining its use of blockchain and the specific technologies and ideas being deployed that make Blockset possible as well as creating a user interface that "looks like a blockchain platform and not just your standard web app" as someone said during a prototype meeting. Notably, idealists recognize that it is possible to explain Blockset and create a version of it in a way that does not surface or mention blockchain or any of its underlying technological components and that doing so would likely make the idea more understandable to a wider audience. Yet, they do not see that as the goal and believe that doing so is a disservice to both the crypto community

and blockchain technology. Thus, idealists recognize the challenges that come with illuminating the technology such as confusion and disengagement, but do not shy away from the words "blockchain" and "NFTs" and the various token standards on which Blockset is built, as the following except from a presentation by Leo at a major United Nations climate event illustrates.

> We've identified the Ethereum as being the right blockchain for us to create Blockset and are building a proof-of-authority side chain where we can have a node for every one of our users so they can mint carbon credits using non-fungible tokens built with ERC-____. This side chain will regularly plug back into the Ethereum main chain to capture the state of our side chain.

Idealists believe that people need to overcome a necessary learning curve if they are to use blockchain. "Gotta climb a new hill!" states someone during a discussion.

Although several idealists believe that white boxing the technology differentiates Blockset from other non-blockchain based platforms and contributes to helping change perceptions of blockchain to show the world that blockchain is more than Bitcoin, they predominantly believe that doing so signals that Blockset is a legitimate blockchain idea, as Pamela explains in a meeting in which several members were discussing the topic:

> ...the idea of fully abstracting away the blockchain. You know, like using blockchain for verifiability, but not having it right in the user's face. I get the drive there, but what worries me as, you know, 'hacker space educator background' me, is: how will people like, if we abstract things successfully away, how will anyone but technical experts be able to tell whether something is really using a blockchain? The technology is what makes it a legitimate idea.

Consequently, idealists frequently question the legitimacy of blockchain platforms that do not white box the technology, as the following interaction during a team meeting shows:

Tyler	Did you see this article about OrganizationX working with OrganizationY on a blockchain platform?
Natalia	Interesting, do you see this bit about not showing the blockchain? It says: 'We do not position our solution as [gestures air quotes] blockchain. We are using blockchain, but that's just a technical part of it. It is not important or relevant to the users and the end service being provided.' What do you think about that?
Leo	You see, to me, that just tells me that they don't have a real, a legitimate, use of the blockchain. Also, this article is published by OrganizationZ, haha, like don't they know that's a crypto and blockchain site?

Meanwhile one day after a weekly development meeting, I asked Nabeel what he thinks about abstracting away blockchain and his response was:

> I get it, but also, fuck that right? If you're the real deal, like a legit blockchain company, you should be showcasing and celebrating the idea to everyone and putting it in people's faces like Leo does. Why hide it? My friends and I talk about this all the time. Blockchain, blockchain, blockchain. I hear it from business guys all the time. They are working on something 'revolutionary,' but they can't tell me a single thing about ERC this and ERC that or anything that they are building with. Like okay, cool man, good for you. In my ideal world, we should just force the tech on everyone. We're creating it, right? We can control it.

Indeed, the topic of black boxing the technology was important to idealists at Blockset and one that elicits intense responses with regards to developing and conveying the idea of Blockset.

PRAGMATISM

Vincent is a pragmatist and frequently expresses how he feels that for progress to be made, the team at Blockset needs to distance the idea from crypto. "For me to understand this idea, and I think for other climate people to get it," he states in a meeting, "I feel that we need to decouple this all from crypto and all the blockchain stuff, strip it down to its barebones and frame it up for our target audience." At the same time, with regards to implementing Blockset, although he recognizes that "the technology is groundbreaking," he often stresses that he feels that "Blockset needs to prioritize making this a legitimate climate solution and focus on a climate audience." To him and the other pragmatists, prioritizing the tailoring of the idea to a climate audience "just makes senses, because we're a climate company, and the clock is ticking."

Vincent is from a major city in Canada. He earned his Bachelor of Arts at a public research university as well as a Master of Science in Climate and International Development for which his thesis examined how businesses respond to growing pressures to reduce greenhouse gas emissions. He also completed a graduate diploma on ecology, conservation, and restoration. Like other pragmatists, he possesses deep expertise on the carbon market and/or climate change.

Vincent describes himself as a climate professional and has extensive experience working at the intersection of business and sustainability, largely in the areas of business development and strategic partnerships. For over two decades, he has been working with different organizations on an array of climate initiatives and has also long provided consulting services on the side. Importantly, he has equally as much experience in the carbon market as Leo, and once headed business development at a leading carbon offset solution provider for nearly a decade. Recognized by many as a veteran and trusted expert in the field, Vincent has worked with Leo on several projects in the past long before any effort to create Blockset. At the same time, having spent many years building partnerships in the carbon and climate space, he is well-connected with key organizational and institutional entities that may eventually be users of Blockset.

Vincent's familiarity with blockchain, Ethereum, and NFTs is representative of most but not all climate experts at Blockset. He has a basic understanding of blockchain and has learned most of what he knows about it via his colleagues at Blockset and the interviews and media featuring members of Blockset. He will occasionally come across an article about blockchain in the media and skim it. Yet, beyond that, his familiarity with the technical ideas underlying Blockset beyond the climate use case is minimal, and he does not go out of his way to learn more about them. When I asked him how familiar he is with blockchain, his response was as follows:

> I should probably brush up on my blockchain knowledge. I've read a few articles and the different articles on Blockset. I've learned the basics from Leo and what I hear in the meetings. But aside from those, I could probably benefit from digging in a little more. I actually have this book that I picked up, but don't think I made it past the first chapter. It's called, revolutionary or blockchain revolution, revolution something. I don't know if it's good though. Do you know it?

Vincent and many climate experts at Blockset are what maximalists call "normies," a term used in the crypto community to describe people that do not use cryptocurrency and blockchain and are said to embrace a traditional mindset. As defined by Merriam-Webster dictionary, normie is "both a noun and an adjective referring to one whose tastes, lifestyle,

habits, and attitude are mainstream and far from the cutting-edge, or a person who is otherwise not notable or remarkable," which captures the essence of a normie at Blockset and the purview of the crypto community. Indeed, in the crypto community, people often tell stories about their "normie friends." While people like Vincent do not call themselves normies, they fit the mold of people that do not "get it" or "aren't very crypto." "What's ETH?" asks Sara, referring to the abbreviation for the cryptocurrency Ether during a demo of Blockset. In the context of Blockset, normies are not particularly interested in the technology underlying the idea, and do not consider that within their domain: "I mean, we're not techies, right? We're climate guys" states Vincent.

Most pragmatists at Blockset are normies and while they understand that blockchain is a cutting-edge technology, they are not aware of the emergent nature of the technology, the speed at which it is developing, and the work required to create a blockchain platform. "Wait, wait, what do you mean developers are creating and maintaining blockchain everyday?" asks Vincent during a meeting, "Can't we just get IBM or Microsoft or someone to build us this?" Instead, they are laser focused on "the climate side." For them, the blockchain platform underlying Blockset already exists in the world, and implementation is about tailoring it to appeal to a climate audience, so they create a carbon offset platform that is adopted by as many of its target users as possible. They share a preference to maintain consistency with the norms and expectations of the climate community and what they considered to be appropriate behaviour of an organization implementing a climate solution, doing what they feel makes practical sense.

Having peered into the world of pragmatists, I now explore what pragmatism entails in the realm of creating of Blockset. Generally, the way that normies embrace pragmatism suggests that how they seek to create Blockset is highly influenced by their understanding of what constitutes a legitimate climate solution that has the potential to resonate with a large audience.

Building an adoptable blockchain platform

"I don't think it's really practical for us to create a public permissionless or public permissioned platform," says Lena during a call, "the people that we are targeting aren't going to want to have their information available to everyone in the world, so we should be looking into building a private permissioned blockchain." Just like the idealists, for the pragmatists engaged in the design process, the material manifestation of Blockset is of great importance. Yet, for pragmatists, it is about maximizing the potential for adoption and tailoring it to fit the climate community and the entities that will be using Blockset as a carbon offset platform. "We need to be practical," emphasizes Lena, "I think we should consider a private permissioned system, something like Hyperledger Fabric because it makes more sense given who we are dealing with."

Lena and Klaus are both researchers at a research university where they are working together to understand different climate use cases of blockchain technology. Thus, unlike Vincent, they have a rather advanced understanding of the technical nuances of blockchain and Ethereum. At the same time, they have deep expertise on the climate problem being targeted. As colleagues at the same research university, Lena and Klaus approach the designing of the blockchain platform similarly and regularly emphasize their preference for tailoring Blockset to the organizational and institutional entities that will eventually be the end users of issuing, holding, and trading carbon offsets on the platform in the global effort to address climate change.

Lena has a Bachelor of Science in Information Sciences and a Master of Science in Information Technology for which her thesis theorizes the applicability of blockchain. She is also completing her Master of Science in Industrial Engineering for which her thesis is examining the specific applicability of blockchain in the carbon market. In terms of professional experience, she has held software development and technical analyst positions at technology and

consulting firms and is a blockchain consultant with a major technology service provider. “I’ve always been interested in climate, but before my current master’s didn’t have much of a technical understanding of climate,” states Lena in an interview, “that has obviously changed.”

Klaus, on the other hand, has a Bachelor of Science in Environmental Science and a Master of Science in Environmental Science for which his thesis examined the risk of climate change on industries around the world. He is also currently completing his PhD in Technology Studies for which his dissertation looks specifically at how to best design blockchain systems for climate action, including via the carbon market. Beyond his education, Klaus has held project management and consulting positions with major international organizations offering climate solutions, many of which deal directly with carbon markets and potential users of Blockset.

Aside from Leo, Lena and Klaus are the only members with climate expertise that contribute to the technical designing of Blockset. Yet, whereas Leo tends to be a big advocate of building Blockset on a public blockchain like Ethereum, Lena and Klaus consistently advocate to build it on a private blockchain like Hyperledger Fabric. As Lena once explained, she embraces a “practical stance and recommendation” based on her “assessment of who the end users are and the demands and concerns that they might have.” She and Klaus have even published scholarly articles on the matter. In a similar fashion, Klaus explained in a meeting, “I would love for us to be able to create a fully decentralized system on Ethereum, but I don’t think it’s possible and people won’t adopt it, I mean, privacy is a major concern if we build on a public blockchain.” Taken together, the pragmatists contributing to designing Blockset feel that the most important thing is to create a “practical blockchain platform that will get adopted by the most users.” Anything to the contrary is “irrational” as Lena stated in an interview. Yet, as with idealists, their preferred approach to creating Blockset entails more than the material manifestation of the idea.

Distancing the idea from "crypto" and "blockchain"

Charles is head of the Climate Institute, and although he does not use blockchain technologies, he regularly tells his team that "blockchain is absolutely revolutionary" and "the technology is perfect." Yet, in terms of Blockset, it is very clear that he believes in the power of storytelling and that he has a distinct preference for constructing a climate story around Blockset that touches the hearts of people around the world and decoupling said story from crypto. Whether it is a panel featuring members of Blockset that he is moderating, a closed meeting with the team, or an interview, Charles repeatedly emphasizes the importance of framing Blockset as a climate story. Take for example the following statement by Charles at a climate event that he was moderating:

> I think the thing that is becoming evident here is that how we frame our work is important. There are many innovative ideas. But we need to frame our work as a climate story that resonates with people. If you haven't heard of him, please check out George Lakoff, he's a linguist who has researched extensively the importance of framing when it comes to environmentalism.

Meanwhile, while discussing Blockset's roadmap, Charles clearly expresses his preference for avoiding reference to CryptoKitties, Ethereum, and blockchain in presentations about Blockset:

> When you get lost in the nuances and details of some of these smaller things, whether that's these rabbits or bunnies or kitties or kittens or CryptoKitties, nobody has any idea what you're talking about and it scares people…When you're talking to fellow geeks, it's completely fine to dive into these nuances, CryptoKitties, Ethereum, blockchain... but when you're talking to the general public or your targeting funders… People aren't looking to invest in CryptoKitties or kittens or whatever… We have a great communications person here that can help. Let's set up a meeting.

Charles is not alone with such a preference to distance the Blockset story from a crypto one and in favour of a climate one. "I'm just not sure if it's right for us to be targeting a crypto audience," attests Sara in a team meeting, "doesn't it make more sense for us to be targeting a climate audience?" At the same time, written in bold in the comments of a strategic document prepared by Vincent is the message: "Our idea has to resonate (crypto kitties as an example???)."

For pragmatists, referring to CryptoKitties and aspects of the crypto community makes little practical sense as the "priority audience" to them is the climate community. Yet, their

shared preference for how to represent Blockset does not stop there as they also prefer to avoid associations with the word "blockchain." While this is in part because they feel that the general person does not understand blockchain and will be deterred by it, it is also because they feel that the word "blockchain" triggers negative associations with cryptocurrency and Bitcoin and will compromise the legitimacy of the idea, as the following statement by Clara illustrates:

> The sense that I'm getting is that blockchain has been tied a lot to cryptocurrencies and Bitcoin … one of the communications challenges that we might face is to kind of separate ourselves from the kind of like get rich quick world of Bitcoin, because that's not what we're building.

Indeed, as a designer contributing to Blockset illustrates, the tie between blockchain and Bitcoin was rampant in pragmatists' minds: "if I talk about blockchain, I think about Bitcoin, and we're not using Bitcoin." Even Klaus who was familiar with both climate and blockchain voiced his preference during a design meeting for not mentioning blockchain because of its links to Bitcoin:

> What we're creating is kind of related to Bitcoin and that's the worst association that we can get. I would really refrain from using it to be honest as much as I personally like it… but it just triggers a lot of misassociations and misconceptions... ideally, you don't mention the blockchain.

Thus, pragmatists preferred to distance the idea from not only crypto but also the technology of blockchain underlying said idea to position Blockset as a legitimate climate solution.

Black boxing the technology

As one might expect when dealing with an emerging technology, many people do not understand blockchain and are confused when learning about Blockset. Indeed, blank stares and phrases like "hold on a second, explain to me what you do without talking about blockchain," as the head of one of the world's biggest carbon registries once said to a member at the UN Climate Change Conference in Madrid, are common occurrences during routine interactions. Indeed, like most people that members of Blockset encountered, pragmatists firmly believed in black boxing the technology and focusing on what it achieves and bypassing the technological underpinnings.

Clara is a communications specialist that has spent most of her career working on various environmental and climate initiatives and joined Blockset to develop communications and visual materials to support the implementation of Blockset. “In the history of science, there is this thing called black boxing technology,” she states in a meeting, “my communications training really tells me that we need to focus on telling the world what Blockset is without talking about any of the technology … ideally, it should be understandable to a grade 3 audience.”

“I’m not trying to be mean, but I’ll be frank, I think there are some communications parts that we can work on and continue to refine over time,” says Charles in a meeting with Leo, before he proceeds to encourage him to explain Blockset in a simple non-technical way that resonates with a non-specialist audience, drawing on an example of being an oncologist treating a patient, given his background as a medical professional working in climate:

> When you are an oncologist and you’re seeing a patient, the patient doesn’t care about the small details and the scientific parts, they just want to know the basics, what’s happening in plain old English. …if you start to throw technical words and jargon at them, they will develop fear or just get overwhelmed... when the audience is afraid and overwhelmed, you’ve lost them...

Like each of the pragmatists at Blockset, Clara and Charles feel that removing descriptions of the technological aspects in presentations on Blockset is the most effective way engage the climate audience. To them, it is not practical to describe technology to non-technical audiences. This goes for conversations, presentations, interviews, slides, and more. Accordingly, when tasked with creating a revised slide deck, Heather – who is an engineer by training – moved all reference to the blockchain technology being deployed for Blockset to an appendix, explaining that she felt that it would appeal to a broader audience that way. “We need to have a media kit or communications materials that explains everything in non-technical ways,” says Charles in a meeting, “so anyone on the team can take it and show the idea to the world … people aren’t going to take us seriously if you just talk overwhelm them with the technology.”

PROFILING IDEALISTS AND PRAGMATISTS

Once we understand that behind the formative creation Blockset is a diverse set of idealists and pragmatists, the interesting question becomes not what their preferred approaches to the various aspects of ideation are but rather why they embrace their respective orientations in the first place. After all, the orientations represent how the people behind Blockset seek to develop the idea.

Leo is the founder of Blockset and by many definitions is an Ethereum maximalist, consistently demonstrating that he is not interested in implementing Blockset on any other blockchain except for the Ethereum mainnet. He strives to create what he feels is a legitimate blockchain platform – "it's not legit until it's on the mainnet" he often says – that embodies the Ethereum community and could easily be the poster child for people that seek to acknowledge the roots of Blockset in the crypto community and white boxing the technology. Yet, Leo is not a blockchain developer. In fact, although he is knowledgeable about Ethereum and engages in technical conversations about it, he has no coding abilities whatsoever and has never written a line of code in his life. He is a seasoned carbon market expert and a climate professional.

Nabeel, despite still being an undergraduate student, is an in-demand blockchain developer that taught himself to code at a young age and has long been a part of the hackers' community. As a high school student, he was a contributor to the hacker-led Open Mesh Project which restored internet for people in Egypt after the government shut down all internet services amidst protests. "For my interview," Nabeel says to the team, "I thought you were going to test me, but you didn't, I had everything open and was ready to show you what I can do with Solidity … That smart contract that I spooled up was nothing." While Nabeel is open to exploring various blockchains, he states that he is a "big believer in Ethereum" and committed to decentralization. "Anyone can make a private blockchain, it's not hard, but it's not really a blockchain," Nabeel

says during a meeting, “I could do it tomorrow if that’s what we want but putting this on the Ethereum mainnet and in the public domain in true crypto fashion, that is what I love about this.”

Lena is the ultimate pragmatist at Blockset, never wavering from her preference to approach the implementation of Blockset in the most practical way possible to maximize the adoption of the platform by the end user. She has deep technical know-how of all the various blockchains and has spent years researching the behaviour of potential users of Blockset and the constraints that they face. At the same time, like other pragmatists, she insists on distancing the idea from crypto – “can make we make it a little more earthy or climatey” she says to the team – and minimizing the “tech speak.” This is all despite her being a technologist and coder herself.

Cassie, on the other hand, has more experience in the carbon market than Leo, likely knows more about carbon markets than everyone on the team combined, and is recognized as one of the world’s foremost experts in the carbon market. She oversees more carbon market efforts at all levels and across all sectors than you can count and is one of the first to know of any developments in the space. “Apply to this event,” Cassie writes in an email to a select few members of the team, “You have to go if you want to have a shot a working with OrganizationX, but make sure to keep your application high-level. My advice, avoid the techy stuff.”

Lena and Cassie represent two types of pragmatists at Blockset that share the same preferred approach to creating Blockset: blockchain experts that are relatively new to the climate space and climate experts that have spent their entire careers in the space. Meanwhile, Leo and Nabeel exemplify two types of idealists: climate experts that have become idealists and blockchain experts that have been long embedded in the crypto community. Thus, not all pragmatists are climate experts that are highly embedded in the space and not all idealists are technologists and blockchain developers that you might consider crypto native.

So, who are these idealists and pragmatists striving to maintain consistency with what they recognize as the norms of the crypto community and climate community, respectively, as they work to create Blockset? In this section, I delve deeper into the profiles of idealists and pragmatists as summarized in Table 6 to explore why they embrace their translation orientations.

Table 6. Summary of profiles of idealists and pragmatists

Profile aspects	Idealists	Pragmatists
Preferred approach to implementation	Consistency with the norms of the crypto community to implement a platform that creates an alternate social system	Consistency with the norms of the climate community to implement a platform that fits into the existing social system
General characteristics	Maximalists and early adopters of blockchain, Ethereum, and NFTs with active and direct exposure to the ideas	Normies and professionals in the context climate with passive and intermediated exposure to the idea
Priority audiences	Crypto community; tech savvy people	Climate community; general public
Attributed origins of the idea	CryptoKitties; crypto community	Bitcoin; society at large
Views of the idea	Personal craftwork, an end in itself, preserve social-symbolic aspects	Public generic tool, a means to an end, omit social-symbolic aspects
Perceptions of opposing orientation	Unappreciative and appropriating	Unrealistic and misguided

General characteristics

In addition to being maximalists, idealists are early adopters in the context of the target idea, whether that is blockchain in general, Ethereum, and/or NFTs, that highly identify with blockchain and the crypto community. Thus, their engagement with blockchain platforms is not limited to the use case of Blockset. Whereas some idealists are early blockchain and Ethereum developers, more broadly they are early members of the NFT community, buying, holding, and trading CryptoKitties and other NFTs. “Holy, how many CryptoKitties do you have?” someone asks an idealist as they open their wallet to send someone a CryptoKitty as demo of how Blockset works. “Well, in this wallet, I have sixty-seven,” they respond, “I kind of went crazy they first came out.” Accordingly, idealists have been actively and directly exposed to the ideas that they seek to implement to create Blockset, as explained in this interview with Leo:

> I went down the crypto rabbit hole and spent so much time seeing what was possible with blockchain. When I joined Shift, I got to see even more directly from the brilliant people in the city creating these things. Once I started to see what could be done and what was feasible, I got a better feel for what is possible with blockchain, and I mean, we're just getting started. People are coming up with groundbreaking things every day. When we first started, NFTs were nowhere. Look how much progress has been made and what is possible now.

Pragmatists, however, tend to be normies that work in the field of climate – whether that be the broad field of climate or carbon markets specifically – that do not really identify with blockchain and the crypto community. Their engagement with blockchain, in general, is also limited to Blockset or projects directly related to Blockset. Importantly, pragmatists tend to have been passively exposed to the ideas that they seek to implement to create Blockset via intermediated means such as another person or organization directly exposed to the ideas or discourse on said ideas. Indeed, if you were to go through the list of pragmatists one by one, you would find that most pragmatists' exposure to the ideas underlying Blockset are limited to interactions with Leo and a select few members of the team and articles or books on blockchain.

Virtually all pragmatists have never directly used the technology or ideas underlying Blockset. While this might appear inconsistent with claims that Lena and Klaus are highly knowledgeable on blockchain, mid-way through my fieldwork, I learned that neither of them had ever used Ethereum before and their engagement with the idea had purely been theoretical for the purpose of their research. Assigned the task of sending CryptoKitties to participants of a half in-person and half virtual event to showcase the idea of Blockset before any functional demo was created, I discovered that both Lena and Klaus had no experience with CryptoKitties and had never used an Ethereum wallet before. "Hey Kam! Where's my public address?" writes Lena in the chat. "Hi Kam – How do I know if it is my public address or my private address?" writes Klaus. Thus, while Lena and Klaus are both extremely knowledgeable about blockchain, they had never actually used the technology that is supposed to be deployed for Blockset.

Priority audiences

Idealists tend to view members of the crypto community – whether that is blockchain developers and/or blockchain users – and tech savvy people more broadly to be the priority audience of their work because they are more likely to "get it." Indeed, although some idealists are described as blockchain proselytizers and evangelists, in reality, they tend to focus on people that are already using blockchain technology and/or those that have demonstrated that they are interested in the technology, rather than converting those that have no interest in the technology whatsoever. Thus, they do not specifically view members of society at large or even members of the climate community at large as a priority audience as stated in the following interview with Benjamin:

> In terms of appealing to the general public, I guess the important thing to clarify is that, for me the target audience of my work is always other developers and members of the crypto community that can build on what I create. So, for me, the 'end user' isn't general users in society. It is other developers and the technologically inclined.

Indeed, Leo frequently stresses, "we don't need to convince everyone and their dogs this is a good idea, we just need to show it to some tech savvy climate folks that get it and don't need convincing and can become our champions." Idealists focus on believers of blockchain.

Meanwhile, pragmatists focus on the end users of the platform and view organizational and institutional entities that are part of the climate community, and in many cases, members of the public as their priority audience for their work because they are the "end user," as many pragmatists emphasize. Meanwhile, although the end user of Blockset is a specific portion of the climate community, pragmatists embrace the assumption that the average climate actor has little to no knowledge of blockchain. Thus, to maximize the potential that Blockset resonates with a large audience and gains adoption, pragmatists treat the public as their target audience. "You have to make this understandable to the lay person, someone that is not technical," says Charles, "imagine that you're teaching this to high school students or even elementary school students."

Attributed origins of the idea

A quality of idealists is that they firmly believe that the origin of the idea underlying Blockset is the NFT platform CryptoKitties. Despite obvious differences, CryptoKitties represents the model idea that they seek to implement and had it not been for CryptoKitties and the much regarded Aha! moment at Shift, Blockset would not exist. Thus, in the eyes of idealists, for all intents and purposes, the specific idea of Blockset originated with CryptoKitties. In fact, even a member of Blockset – who shall go unnamed – that had a personal quarrel with the creators of CryptoKitties, believes CryptoKitties to be the origins of the idea underlying Blockset:

> I don't agree with a lot of the things that they have been doing lately in the realm of trademarks and stuff, but I begrudgingly have to say that what they did with CryptoKitties was a game changer. It built a foundation for NFT platforms and ideas like Blockset. Yeah, so even though, I don't agree with the people at CryptoKitties, the NFT world owes big thanks to CryptoKitties because the idea kind of started with them, and CryptoPunks of course.

Yet, because the technology underlying CryptoKitties and NFTs was and continues to be created and maintained by blockchain developers that are a part of the crypto community, in a broader sense, idealists view the crypto community at large to be the originators of the ideas that they seek to implement, down to the very standards and protocols that they are deploying. "The crypto folks are the ones that are creating and maintaining the technology that we use every day … we've built it as a community" says Nabeel. "I mean, the cutting-edge, the bleeding-edge shit that we are deploying, isn't coming out of IBM and Microsoft, right?" states Leo, "It's coming from the brilliant Ethereum developers' community."

When it comes to pragmatists, however, the notion of an origins is vague and rarely a topic of discussion. While some are readily aware that Bitcoin was the first use case of blockchain and that is it the most widely associated context with blockchain, they tend to view the ideas of a blockchain platform and NFT platform as being ideas that exists in society at large. In this sense, there is no specific source of the idea. Instead, it is an idea that exists out in society.

Views of the idea

Frequently referred to as their "magic" and "craft," the work of members of the crypto community – developers in particular – is regarded by idealists as a scarce resource and something that "not just anyone can do." Thus, with a deep appreciation for the work of members of the crypto community, idealists view the specific technological aspects underlying the idea that they seek to implement and every subtle improvement as personal craftwork representative of hours of hard work and creativity to encode the pursuit of decentralization, transparency, and verifiability into lines of codes that manifest as standards, protocols, and software. "For the sake of the technology" says Nabeel, "we're doing this for the sake of the technology, because we believe in the technology that we are building." Consequently, because it is encoded with the values of the crypto community, idealists view the technology as an end in itself. Blockchain technology is the materialization of what they are working to achieve.

Importantly, for idealists, the social-symbolic aspects of life such as the norms, values, identities, and relations surrounding the model idea of CryptoKitties and the technology that underpins it is of utter importance. They are not only what bring meaning to the idea that they seek to implement, but also are the reason that the idea exists in the first place. Had it not been for such social-symbolic aspects that thrive in the crypto community, to idealists, the ideas underlying Blockset would not have been created. Consequently, it is important that they preserve such aspects of life surrounding the idea. Indeed, as Benjamin revealed to the team in a meeting, blockchains and the ideas surrounding it are personal to him:

> …this is very personal to me, and I know it's very personal to everyone here, but yeah, this is everything that we're working towards … I just want more and more people to potentially discuss these things while doing so in a way that is beneficial to the cause and not detrimental to the cause. Because more than anything, you know, this again, is something that if the wrong person takes this and moves forward with it, the whole thing is co-opted and captured immediately.

Unlike idealists who view the technology underlying Blockset as craftwork, pragmatists view blockchain as a generic and ready-made tool to be used as a means to an end, with the end being the addressing of climate change via the carbon market. To them, creating a blockchain platform is a straightforward task that any technology service provider can do. Thus, they believe that large technology service providers with resources are the most well-equipped to build the platform. “Don’t we need tech providers, like a Microsoft or IBM to come in a build this for us?” asks Vincent to the team, “I mean they have the resources and man-power, don’t they?”

While many pragmatists understand that blockchain is a cutting-edge emerging technology, they are not particularly aware of the emergent nature of the technology and the fact that it is rapid changing and being improved every day. At the same time, they tend to be unaware of what is or is not feasible given the current state of the technology and the amount of specialized work that is required to make Blockset happen.

Perception of opposing translation orientation

To understand the lives of idealists, it is important to understand how they perceive pragmatists – that is, translators’ perceptions of those that embrace opposing translation orientations. From dedicated talks in front of filled auditoriums to intimate meetings with a handful of idealists and one on one interviews, various interactions revealed that idealists tend to view pragmatists as unappreciative of the work of the crypto community and appropriators of their technology. “Blockchain has been captured on so many levels,” says Pamela during a talk, “and it’s to a point where it’s being used in ways that are not consistent with the initial vision anymore.” “They just take,” says Nabeel in an interview referring to businesses using blockchain, “and they don’t give back to the community at all, it’s just like, oh I can use this.”

Meanwhile, pragmatists perceive idealists to be unrealistic and misguided. Because of their preference for implementing Blockset pragmatically, they find it particularly frustrating and irrational when their colleagues embrace idealistic practices. “If you talk about CryptoKitties, people are going to think you’re crazy,” says Charles. “I wish we could create a radical decentralized solution on the public mainnet,” says Klaus, “but if we do, no one is going to want to use Blockset, they are just going to find a platform on some private blockchain.” Having a heart to heart with Leo, Charles says, “don’t forget your passion for the environment and why you got into this … focus on solving the problem, and you will succeed.”

CHAPTER 4:
DEADLOCKS

Ξ

In this chapter, I explore how the co-presence of idealists and pragmatists shaped the dynamics of organizational life behind the formative creation of Blockset. Life at Blockset leading up to the creation of the first functional prototype consisted of countless efforts by the various contributors to construct and legitimate one of the world's first blockchain-based carbon offset platforms. Yet, as explained in the previous chapter, idealists and pragmatists embrace divergent approaches to implementation that are viewed unfavorably by each other. In what follows, I delve deeper into how idealists and pragmatists experienced opposing translation orientations and the practices that they employed to embrace their orientations as summarized in Table 7. While idealists and pragmatists sought to implement Blockset in ways consistent with their orientations, subsequent efforts by their counterparts would regress back to their preferred approach, creating a passive deadlock – that is, the inability to arrive on an agreement between idealists and pragmatists.

Table 7. Summary of practices associated with translation orientations

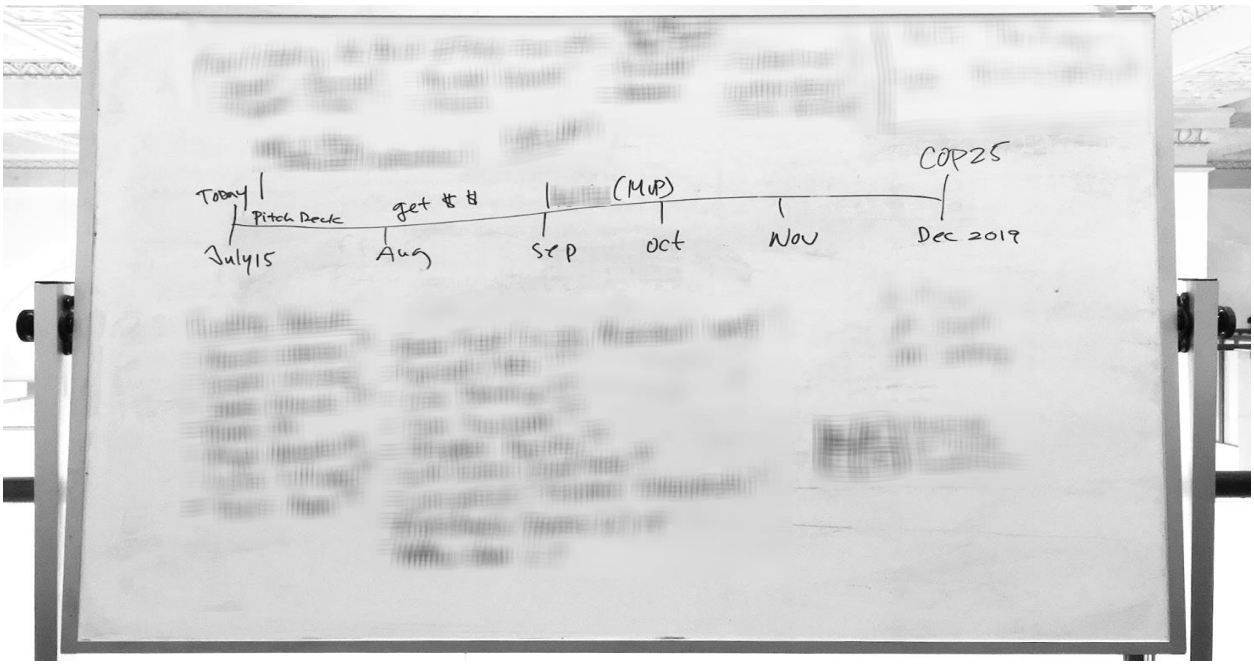
Practices	Who	Outcome	Temporality	Explanation
Justifying orientations	Idealists Pragmatists	Dismissal or bypassing of justification by actors embracing opposing orientations	Fleeting	Actors deem justification as inconsistent with belief of what is appropriate
Targeting the wise	Idealists	Implementation of idealistic manifestation of idea	Enduring	Idealists insulate idea from pragmatic pressures
Rapid implementation	Pragmatists	Implementation of pragmatic manifestation of idea	Temporary	Pragmatists capitalize on urgency

JUSTIFYING ORIENTATIONS

Natalia and Tyler joined Blockset around the same time in a typical manner for members of the team. Each of them heard Leo present on Blockset at a blockchain event and followed up with him to express their interest in the idea. In fact, nearly all members of Blockset learned about Blockset via a presentation at an event with the exception of the Original Five and the odd person that learned about it via a personal connection or an article that they read.

It is both Natalia and Tyler's first time at the office. While they have been at events and joined calls, they have never actually physically been in the Blockset's workspace in the office of Northco where Leo works full-time. After skimming a proposal document by a local blockchain development company and agreeing that it is better if everyone reads the proposal in depth on their own time, Natalia and Tyler end up at the whiteboard. They create a timeline with "COP 25" at the end and work backwards from there as shown in Figure 11. "Okay, so the goal is for us to demo an MVP of the platform at COP in Chile, right? Is that the still the plan?" asks Tyler months before the last-minute relocation of COP to Madrid, "What do we need to achieve that?"

Figure 11. Whiteboard timeline to COP25 created by members of Blockset



“You know what?” Natalia says after a few minutes, “Something that has never been super clear to me is the whole [tagline removed] thing. I don’t know if it’s me, but I don’t think people know what we are talking about. It’s not clear to me.” Tyler jumps in with “I completely agree. It doesn’t really make sense, right? I mean, do we need to mention the blockchain side of it all? I really think we need to de-emphasize the blockchain side and emphasize the climate side of things in our story. Let’s ask Leo about it when he’s back.” A conversation on how to “frame the story as a climate one” continues for about five minutes until Leo returns from his meeting with George. “Oh, there’s Leo” says Natalia as he walks down the hallway.

When idealists and pragmatists convene to work on something related to Blockset, they sometimes get visibly frustrated when their counterparts question their preferred practices. People take deep and audible breaths to calm themselves and/or make side glances and looks to their colleagues that embrace the same orientations that they do. You might also even hear a sudden outburst, but this tends to be rare. “Okay, but my concern about hiding the blockchain is that no one will know that we are a legitimate blockchain platform” an idealist says frustratedly interrupting a designer brought on to create a visual mock-up of Blockset as they expressed their concern about “showing the tech and the blockchain.” “Sorry if I was a bit snappy” the idealist says in a Slack message following the meeting. Indeed, the first few encounters with such questions tend to elicit enthusiastic justifications. However, as members repeatedly face questions or concerns, they grow increasingly frustrated and tiresome.

To this regard, a tactic that both idealists and pragmatists sometimes use is the justification of their orientations. Idealists explain the importance of being a legitimate blockchain organization and why they embrace their preferred approaches to implementation. Meanwhile, pragmatists explain the importance of being a legitimate climate organization and

why they embrace their preferred approaches. “If people don’t think this is a legitimate blockchain use case, there’s a chance some black hat hacker is going to hack this the second they can” says an idealist. “No one is going to support this unless there’s a clear climate story that touches them” says a pragmatist. Yet, for each idealist and pragmatist, their use of justifications tends to stop early in their time at Blockset, and eventually, they simply acknowledge questions and concerns and subtly bypass them. Everyone within the organization is rather conflict adverse and non-confrontational, and in turn, the concerns do not really get addressed.

Even when justifications are given, they are rarely successful and tend to be dismissed. To the receivers of them, they simply do not make sense. For instance, during a standard meeting, a pair of idealists explained why “showing the blockchain” is an important source of legitimacy and why they felt it is a necessary step in attracting qualified blockchain developers. A pragmatist scrunched their nose and said “I don’t know about that though, like you don’t hear all these platforms going around saying, ‘Hi! We’re blah blah, and oh yeah, we use AWS, right?” Meanwhile, reacting to justification by a pragmatist emphasizing the importance of touching the hearts of decision makers through people focused climate stories, an idealist says, “pulling at the heartstrings doesn’t make sense for a blockchain platform though, it’s kind of the opposite.”

While justifications occasionally foster a sense of understanding to move passed tension in the moment, they tend not to provide a long-term solution. Thus, an important question is: if justifications of their own orientations are relatively unsuccessful, how did idealists and pragmatists behind Blockset settle on an approach to implementation on which they agreed? The quick answer is that they did not actually come to an agreement in the short term. Life behind the creation Blockset was a constant push and pull between the idealists and pragmatists that created a deadlock in terms of implementation. In the remainder of this section, I explain why.

TARGETING THE WISE

In the crypto community, there is a saying by the anonymous Satoshi Nakamoto: “If you don't believe me or don't get it, I don't have time to try to convince you, sorry.” The saying is from a message left on July 29th, 2010, in a forum (Bitcoin Talk, 2010), and while it is in response to someone that is complaining about the time that it takes to verify a Bitcoin transaction and comparing it to swiping a credit card, it tends to be used by people to broadly capture the essence of a particular mindset that some people embrace. It signals deep belief in blockchain, its surrounding ideas, and its forthcoming success regardless of if someone that you encounter believes in it or understands it. Thus, there is no need to invest time in trying to convince you to believe or understand it if you do not already do so. Although idealists at Blockset do not embrace such a mindset dogmatically or even explicitly to my knowledge, intentional or not, they often behave consistently with it as the following dialogue between a pragmatist and idealist during a weekly strategy meeting illustrates:

Pragmatist	So, I have a question. I’ve been working on the document to target our outreach and engagement efforts and updating some of the milestones in our execution plan and I was looking at the presentation report for AccessFund that you shared with me. Thanks for sharing that. I was bit confused though. Like if we reach out to Mike and Mindy at wherever, like are they going to be confused by all of this?
Idealist	That’s the big problem right there. We’re not trying to convince Jack and Jill at the Canadian Forest Service or Bob and Beth at the California Action Reserve or wherever that blockchain and Blockset are a good idea. We’re not going to be able to do that nor do we have the time to try. I really don’t think it’s our duty to educate everyone member of the public about blockchain and to change their minds.

At Blockset, idealists embrace a very methodical tactic that I call targeting the wise: people that already believe in blockchain and/or “get it” but are otherwise intermixed amongst the normies. While such wise are not maximalists like several members of Blockset, they have an openness to and/or appreciation of blockchain and its surroundings. Consequently, idealists feel relatively free to embrace their preferred approaches to implementation, in terms of both

material and representational manifestations of Blockset. In other words, when dealing with the wise, idealists find themselves in, as one idealist put it, a "safe space" to embrace their idealism, insulating their orientations from the pragmatic views that they often encounter. Thus, while pragmatists at Blockset and other actors that they encounter exert pressure on them to abandon or modify their approaches to implementation, idealists feel that there is little need to do so as they feel assured that it appeals to the wise – the ones that are in the know. As one idealist explained: "I mean it works, right? We don't need to convince everyone that this is a good idea, we just need to show it to the right people, and we've done that… and it works."

Decision makers behind Blockset are without a doubt those that favour idealism and rather than make compromises to adhere – even the slightest bit – to the requests of pragmatists who seek conformity with the norms of the climate community and general public, they focus their attention on targeting the wise. Across the board with all the various constituents (e.g., users, funders, partners), the targets on which idealists focus with regards to the creation and implementation of Blockset are the wise – the techsavvy, the believers, the curious, and the ones that pass idealists' assessment of the coveted questions that you often hear at Blockset: "are they crypto enough?" and "how crypto are they?" Indeed, over and over again, idealists mention that they are "targeting users like InstitutionX because they are interested in blockchain and don't need to be convinced that blockchain is a good idea." While idealists happily answer questions from people that are interested in learning more about blockchain, because they believe in the technology, they do not aim to convince those that contest blockchain and its surroundings.

Importantly, leading up to the creation of the prototype, targeting the wise created two types of safe spaces for idealists that differed in their temporal nature. The first type of safe space was relatively enduring as they were linked to the acquisition of key resources that enabled

Blockset to sustain its daily operations, giving contributors – namely idealists – the resources that they needed to complete their work to create Blockset. In turn, they insulated idealists' preferred approaches within the immediacy of constituents that controlled resources crucial to the platform's survival. Accordingly, idealists were able to focus on creating material and representational manifestations of Blockset that were consistent with their orientation and faced little to no scrutiny or risk of losing pivotal resources.

One key enduring safe space was Blockset's partnership with Northco. When Blockset was an early-stage idea and had a budget of $0.00, it operated on 100 percent volunteer time that predominantly transpired through sporadic after hour meetings in communal spaces. Meanwhile, any of the limited expenses that incurred were paid out by Leo. In turn, in his mind, the key to making Blockset a reality was to secure resources to "get the work done" and a way for him to spend more time on it. The tricky part, however, was that most climate organizations within Leo's network were not interested in blockchain or even hearing about it.

> I approached Northco before to see if they would be interested in a partnership with Blockset, but the old CEO dismissed the idea right away and told me that she is not interested in blockchain. But when George was brought in as the new CEO, I approached them again when they were recruiting for a climate position because I knew he kind of has a more radical view and isn't your typical granola environmentalist. That's basically how and why I joined Northco as the climate lead and why we have a partnership, and an office space, and a salary for me to work on this.

In this statement by Leo in an interview, he explains how Blockset's partnership with Northco came into being after approaching their new CEO that he knew had a proclivity to technology and innovation. While the relationship with Northco is not specifically clear to all members, several idealists in Blockset consider it a safe space to be creating Blockset as explained by Leo to Clara in a meeting shortly after she joined:

> We exist within a constellation of a variety of kind of difficult to pin down things that are really pulling us together, and the partnership is kind of a safe space for us to be that way, you know the way we are with blockchain and all. It allows us to go for quite a long time before having to answer the question of… straddling two worlds and our blockchain focus.

Northco provides Blockset with a workspace and serves as a key "administrative vehicle" as one of its staff stated. Broadly speaking, however, by giving members the resources that they need and with little monitoring, Northco insulates idealists from typical pragmatist pressures. Yet, the degree of safety that members experienced in the Northco partnership varied. During the early days of the partnership, it was described as a "don't ask, don't tell" environment. It was understood that activities would be taking place at the Northco office, but leadership did not want to see people working on it since it was not obvious to them why blockchain was relevant to climate. Indeed, members of the board even questioned the appropriateness of any mention of blockchain on the Northco website because of media articles highlighting the large electricity usage and carbon footprint of the computer facilities needed to operate Bitcoin and blockchain. This led members to use the room as far away from the main office area as possible and meet offsite and after hours, which Leo described as "not super sustainable." Thus, as one might imagine in a don't ask, don't tell environment, people were literally and figuratively looking over their shoulders to see who was around, which inhibited their ability to work. "If we could get George to endorse Blockset" says Sara, "that would go long way to improving the dynamics."

Importantly, stating "we saw the worm turn," Leo noted that a distinct shift from having a don't ask, don't tell environment to a welcoming environment occurred that enabled members – idealists in particular – to "hit the ground running" after leadership formally gave Leo "the okay" to start working with blockchain developers through its partnership with Northco and explicitly communicated that they have come to realize that blockchain has "tremendous potential." While warming up to the potential of blockchain was a key factor in the creation of such a safe space, Northco's newly founded positioning and identity as an untraditional environmental organization that sought radical change anchored on innovation under new leadership also played a key role.

When new leadership came on though, it was clear that they sought to change things and embraced "radical" approaches and were more open to new ideas at it also sought to change its identity in the environmental NGO space. "We struggle with our own tensions everyday as we try to navigate our identity and approach" admitted Northco leadership during a meeting.

Another enduring safe space manifested through Blockset's partnership with AccessFund, who directly funded the work to create Blockset through multiple grants. Early in the conceptualizing stages, idealists began searching for funding opportunities and were specifically targeting funders that were not just tech savvy but were familiar with blockchain.

> Idealist #1 You should reach out to Joe at the National Research Center in the federal government to talk about funding options. I've come across him multiple times and he's one of the most knowledgeable people in the country on the topic of blockchain and will definitely get what we are trying to build. He may look like your run of the mill suit and tie government bureaucrat, but he's really at the forefront of it all. We've been talking a lot about projects.
>
> Idealist #2 Amazing, I'll have to look him up. So, we're actually talking with the folks at AccessFund. I don't know if you know him. There's this guy there in the environmental program, Arjun, who is excited about crypto and tech in general and I think he wants to give us money. We're working on an application."

A few weeks after the above conversation between two idealists, I joined a meeting with Arjun at a café on the ground floor of the AccessFund building located in the heart of the financial district to discuss a draft of a grant application that a select few members of Blockset had been working. The application was no different than standard presentations that idealists routinely gave, including the one given during the meeting with Arjun. It described Blockset as a platform being built on the Ethereum blockchain and emphasized the decentralized, transparent, and verified nature of it. At the same time, it was filled with technical lingo. During the presentation, Leo also explained Blockset's connection to CryptoKitties and its pivotal role in the creation of Blockset. "This is all great," responds Arjun, "I really think you've got a good chance with this application and I'm going to do everything that I can to advocate for it at the final board level."

As Arjun explained during the meeting, though it had not been announced publicly, AccessFund had recently "pivoted to technology and climate." Yet, while AccessFund's presence at the intersection of climate and technology was perceived optimistically by idealists, such an intersection alone did not suffice to generate a sense of safety amongst idealists as they are particularly worrisome of businesses "capturing technology" as Benjamin and Pamela frequently talk about. Specifically, as early interactions with AccessFund illustrate, idealists sought to understand how open it was to blockchain and Blockset's work.

Ultimately, two things stood out to idealists that convinced them that AccessFund offered the right environment to create Blockset. First, Arjun invited members of Blockset to calls with AccessFund's own internal blockchain team – that had "no public presence" – where they could dive into the nuances of the technology. Although idealists recognized that such interactions were likely a part of their due diligence, it was "reassuring" to them that they "actually liked blockchain." Second, based on multiple interactions with AccessFund, idealists perceived Arjun as a "champion" and someone that "gets it" as he demonstrated enthusiasm towards the technology and how he wanted to "make it work" and get the funding approved by the board.

While AccessFund's position in technology and climate, interest in blockchain, and housing of a champion signaled to members that it would be a good fit, what made it "low pressure" and "a dream" was AccessFund's lack of monitoring and hands-off approach. Nonetheless, idealists' sense of safety with AccessFund was heavily influenced by the presence of Arjun serving as an internal advocate that "gets it." Indeed, uncertainty amassed amongst idealists when they got an email from Arjun informing them that he had been promoted and was moving to a different department. "Do you know who's replacing him…?" was one of the first things uttered after receiving the email. Although a replacement was not found for a few months,

a sense of relief was felt amongst the idealists after they had a meet and greet call with their new contact, who was very familiar with blockchain and immediately deemed “someone on our side.” In fact, the new contact was a part of the hidden internal blockchain team at AccessFund with which several of the idealists had previously interacted. As Leo put it in a team debrief: “We don't even have to pander… he's already interested in what we're doing and gets it.”

While targeting the wise was associated with the emergence of some enduring safe spaces, it was also associated with situational safe spaces that are temporary and bounded to an interaction. These tended to be the events focused on “blockchain and climate” and “blockchain and impact” taking place that convened people interested in blockchain. Indeed, the contrast between the experiences of idealists at such events and climate events is undeniable. “Tell me more about what you are building with…” says someone at a blockchain and impact event. “Tell me what this is without talking about blockchain…” says someone at a climate event.

The most significant amongst the events where idealists encounter the wise, however, are those hosted by Earthchain, a coalition of actors operating at the intersection of blockchain and climate. Earthchain creates time and space for organizations like Blockset to share its ideas with like-minded actors and other interested in the space. The goal is to push the field together as a whole by building bridges to the broader field of climate and championing the promise of blockchain in climate, thus taking care of much of the heavy lifting. At such events by Earthchain, all ideas and identities related to blockchain and climate are welcomed and discussed openly and in detail, and events regularly run long without seeing the size of the audience shrink.

With Blockset as a member of Earthchain and a frequent presenter at their events, idealists regularly share ideas with members of the coalition. During such interactions, they dive deep into the technological aspects of Blockset, unpacking the standards, its origins story

surrounding CryptoKitties, and so forth, and unlike other climate events, presentations are accompanied by nodding heads and audience members approaching them. “I love what you’re doing, that is exactly what we are looking for” says a team of lawyers that approached members after a presentation on Blockset at the UN Climate Conference in Madrid as pictured in Figure 12. “Here’s my card, I really want to talk to you. I’m with the CountryX government and we’re looking at blockchain” states another that approaches the team after a workshop in at the UN Climate Action Summit in New York. Indeed, at these events and during such interactions, idealists get the “bits of validation” and energy needed to keep going. “Seeing people like Sergei is always a great reminder of the good work that people are doing in this space” states an idealist, “the people at Earthchain events are the ones in the know and who we want to be targeting.”

Figure 12. Members of Blockset with a team of lawyers that approached them at COP25

By targeting the wise, idealists were able to create and locate various safe spaces for themselves to embrace their idealistic preferences with regards to the implementation of Blockset, despite facing pressures from pragmatists within and beyond Blockset. Importantly, while idealists openly acknowledged that tailoring Blockset to the masses as suggested by pragmatists would enable faster adoption, they were more than okay with their slower approach. To them, it was important that they do it in a way that remained consistent with crypto principles. Appealing to the masses was not “on the critical path” as they like to say.

Yet, what is important to recognize is that the wise had a pivotal role in idealists' ability to be successful in their embracement of their idealistic approaches. This is because the wise served as a crucial buffer between the idealists and pragmatists. For example, while Arjun was deemed a champion by idealists, he was not the final decision maker at AccessFund. In multiple meetings with members of Blockset, he emphasized that the final decision comes from the board which is comprised of "a bit more traditional and less technical people" and that he would do his best to advocate for Blockset. In such meetings, Arjun asked idealists how he should best respond to anticipated questions from board. "I think this is all great, but I'm eventually going to have to communicate this to the board if we want to get it approved, so if you help me out there..." says Arjun in a meeting, "do you have any recommendations on how explain Blockset to people aren't super technical?" Unlike with other questions of the likes posed directly by pragmatists, idealists within Blockset were not put off by them. As one idealist mentioned, "it's understandable and we still get to create and present Blockset the way that we want to."

Crucially, an important outcome of targeting the wise was not just idealists' ability to embrace their views but also the intensification of such views within Blockset. In the beginning, whilst life behind Blockset possessed a distinct crypto ethos, the salience of such an ethos intensified over time. It became more and more "crypto." Meetings almost always started with small talk about the latest crypto developments beyond the context of Blockset. Moreover, everyday life became increasingly filled with discussions about blockchain alongside discussion about climate as well as members embracing "crypto hacker" behaviours characterized by informality, which the crypto folks felt was important as mentioned by Pamela: "within these communities, people love if you can laugh at yourself, you can grow, and you can meme, you know, you really need to meme." As Nabeel emphasized, unlike in other organizations outside of

the crypto community that he has been a part of, he felt very "comfortable" embracing the "blockchain side" of him, and "bringing out the identity" that he has had "for a long time" but had typically "suppressed" because it was "unpopular" and "not accepted." He also explained that the ability to do so whilst interacting with people that were "passionate about blockchain" allowed him to thrive: "I can just talk and you get it, you get it, Leo gets it, yeah I can be a little technical sometimes, but overall, you guys get it, and it makes everything more efficient."

Concepts such as CryptoKitties were also understood, celebrated, and had a place in everyday life, and as Nabeel noted, people that were not technologists were passionate about the technology. To him, these were signals that he could embrace the blockchain side of him:

> In the beginning, I was just testing the water… Because like I said, a lot of people… they're like, we've been doing this for like three years… you guys are in blockchain and it seemed like you guys were, are, very interested, and Leo is like really passionate… the way he talks about blockchain. He talks about CryptoKitties and stuff like that. He's been around … You guys have CryptoKitties… it made me laugh. So, I was like, okay, he has CryptoKitties, and he's been hoarding ENS names. That's it… he's using the tech.

Further, when I asked him what was different about Blockset from other organizations, Nabeel emphasized that what he was experiencing was rare in comparison to business guys:

> Like you see a lot of these business guys that are like buy crypto buy blockchain and they don't even know what an ENS is. They don't even freaking know what anything is… knowing like the guts of things … me being able to have a conversation with you guys about blockchain is like the ultimate thing… Trust me. Like, it's super rare to hear people talk about just the blockchain technology… But our focus is the technology and that's why just what that's what differentiates.

Yet, such a bolstering of a crypto ethos alongside idealists' targeting of the wise also caused several pragmatists – particularly those that were the least familiar with blockchain – to experience imposter syndrome. Such pragmatists developed doubts about whether they belonged in Blockset and questioned their abilities to contribute to the creation of Blockset, despite their highly relevant climate expertise and experience. In turn, they had hesitations about their engagement and were often reluctant to participate. "Sorry, I haven't been joining calls and stuff

lately, I wasn't too sure if I should be joining since the blockchain side of things isn't really my area of expertise" says one pragmatist that joined the organization relatively early but seldomly participated in meetings. "Hey, I think I need a check in next week," says another pragmatist in a message on Slack, "I am experiencing some imposter syndrome."

As the pragmatist that explicitly stated that they were experiencing imposter syndrome revealed in a meeting, although they were "excited about blockchain," they were struggling to understand it and "feel comfortable in the space" and were "intimidated by all the crypto talk." Moreover, they were filled with nervousness, anxiety, and doubt over blockchain:

> To be honest, blockchain and crypto are kind of actually scary to me. I don't know if it's just me, but I've been in a panic and really stressed out over the past two weeks after I installed a wallet like everyone else and wrote down my seed phrase, but then looked up some videos on YouTube… like am I going to get hacked now? … I'm just trying to figure out or maybe I just need some assurance that this position is right for me.

Lastly, idealists' focus on targeting the wise had a major part in the formation of pragmatists' perceptions that idealists are unrealistic and misguided. Many pragmatists did not grasp the idea that a community of climate actors that are highly passionate about blockchain beyond those that are in Blockset existed and that some climate actors are not deterred by idealists' approaches to implementation. To them, people are either from the blockchain side or the climate side and there is nothing between because they have never seen or interacted with actors of such likes, as the following statement by a pragmatist that started to understand idealists after questioning them supports:

> I initially thought that, you know, Blockset was like the middleman, you know, it was one of the first or only players at the climate and blockchain convergence, but it's not. I actually thought it was combining two worlds, but there's actually a whole world in between as well with people who are already engaged in climate and blockchain… It's like there's communities… they're not distinct, they overlap.

To pragmatists' defense, while idealists at Blockset target the wise and situate themselves in various safe spaces to embrace their idealism, the wise and associated safe spaces are not easy

to spot. Indeed, just like AccessFund's internal blockchain team that had no public presence whatsoever, they often remain hidden, and unless you witness or experience them directly, you would not know that they exist. For example, idealists frequently presented on Blockset at the biggest climate conferences in the field such as the UN Climate Change Conferences, which attracts more than 30,000 attendees annually. However, because securing access to such events is not an easy task, most pragmatists are not aware that amongst the tens of thousands of climate actors attending the world's biggest climate conference is a microcosm, largely created by Earthchain, where climate experts that are passionate about blockchain exist. In fact, even many of those that attended the UN Climate Change Conferences were not aware of such microcosms hidden in a single room amongst the hundreds of rooms in the venue as depicted in Figure 13.

Figure 13. Meetings illustrating the blockchain and climate microcosms

Another example of the hard to spot nature of champions is how a key decision maker at a major offset registry maintained a Twitter account for an alter ego – with "climate by day crypto by night" as their description – that they used to covertly explore their passion for blockchain and the crypto community. This account existed for approximately one year and has since then been completely deleted. Thus, unless you were one of the people that they interacted with via their alter ego Twitter account and revealed their identity during that time, you might never know that they are one of the wise. Consequently, because they did not witness or interact with the wise, pragmatists had difficulties making sense of efforts to target them.

RAPID IMPLEMENTATION

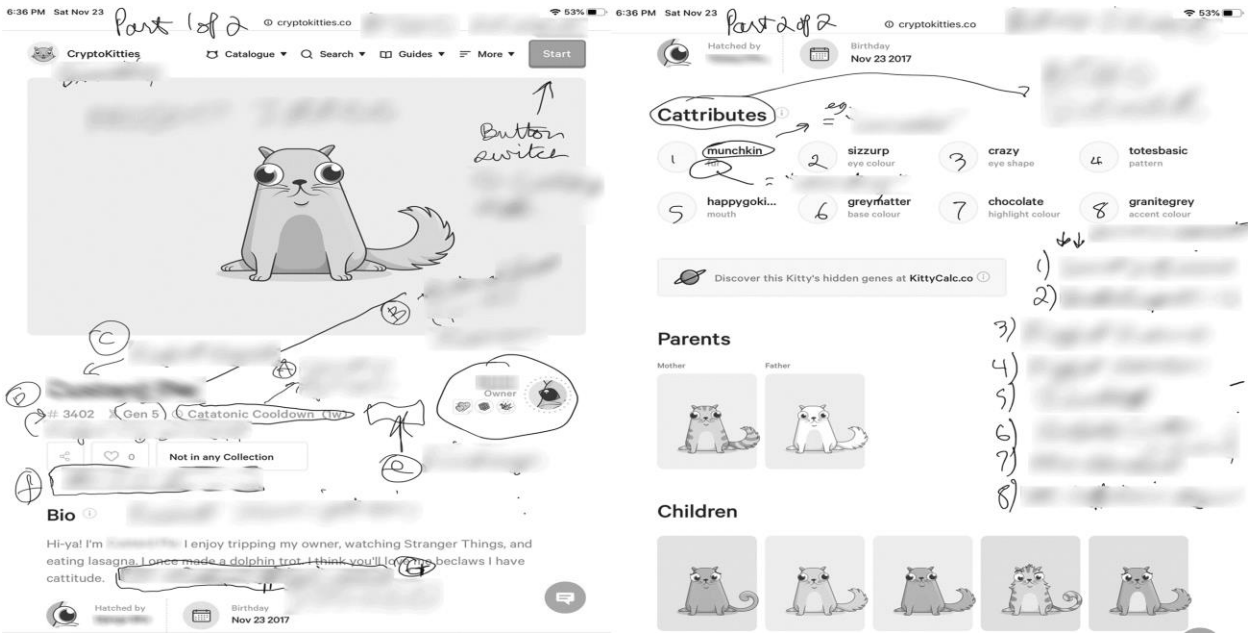
While the key decision makers behind Blockset were idealists, this does not mean that pragmatists did not work to implement the idea in a way that they felt was appropriate. In fact, it was quite the opposite. Much of the work that took place to conceptualize Blockset and produce various representational accounts of the idea was by the pragmatists. However, as the idealists offered feedback and incorporated their own preferences, aspects tailored to the climate community were modified or removed. Pragmatists recommended how to design Blockset, created slide decks, completed applications for grants, designed mock-ups, and produced various communications related materials to promote the idea. Yet, their contributions were often not used by idealists. In fact, in many cases, idealists did not even look at them. Indeed, to pragmatists, their highly researched ideas and work founded on years of experience and expertise were being ignored, which many of them found frustrating. “So, I guess what I’ve been trying to figure out is, why I am I even here? …You know, with Blockset” said one pragmatist in an interview. “It is really important recognize the work of your team” said another pragmatist as a meeting ended, “if you don’t, people aren’t going to be motivated to work on things anymore.”

Despite such frustration by pragmatists – which went unnoticed by the idealists – several pragmatists were successful in their efforts to introduce representational manifestations of Blockset to stakeholders in ways consistent with their preferences. However, what made such efforts successful – that is, they saw the light of day – was the timing of them and circumstances that called for pragmatists to engage in rapid implementation, whereby the execution of tasks related to the creation of Blockset are completed quickly. Pragmatists and idealists had very little time to plan their efforts and had to engage in impromptu behaviour to react to opportunities with minimal time to plan or for idealists to offer feedback as this virtual interaction illustrates:

Pragmatist	Hey! Where's the most up to date slide deck again? I just talked to someone from CompanyX, and they told me to send them something asap. Like by the end of today. Does that work?
Idealist	Totally. Here's the link.
Pragmatist	Perfect! Thanks! I'll make some edits and send it to them. I'll keep you posted on how it goes.

While rapid implementation is not embraced intentionally, it is an important way that the work of pragmatists' makes it beyond the boundaries of the organization, despite the rejection of their everyday work from idealists. In the example interaction above, the pragmatist worked alone to condense the previous slide deck and stripped away the bulk of the technological details and traces of CryptoKitties. They then sent it to a contact at a technology consulting firm that was interested in helping Blockset build a mobile mock-up of the platform a few weeks before members of Blockset were to go to Madrid for the UN Climate Change Conference. In the following week, however, when it was time for an in-person meeting, idealists represented the idea in their preferred manner, this time including the aspects that were stripped away, regressing the idea to its idealized state, including detailed discussions about CryptoKitties illustrated in Figure 14. In fact, idealists never even looked at the slide deck that the pragmatist created.

Figure 14. Document sent to partner depicting Blockset in relation to CryptoKitties



Meanwhile, in other cases, due to sudden changes and idealists not being available as originally planned, pragmatists were tasked with representing Blockset at various climate conferences and presenting on Blockset. “I know I was originally supposed to join you at SummitX” says Leo to a pragmatist on a call, “But I don’t think I can go anymore… are you okay doing the presentation for us?” Accepting the opportunity, the pragmatist refined the presentation to suit their preference with very little time to gather feedback and proceeded to present the idea in a distinctively pragmatic manner, not talking about the blockchain and the underlying technology at all as well as deleting the slide that normally features CryptoKitties as they often advocate for in meetings.

Similarly, while most idealists were occupied for the week, a key pragmatist needed to apply for a government grant that they found. With the deadline approaching quickly, they prepared a complete application that described Blockset to appeal to a lay person audience, focusing on the climate problem that it solves and mentioning little to no technology, except for one mention of blockchain. They circulated a draft amongst the team, writing “please let me know if you have any further comments, and I will submit at end of day today,” in an email but received no feedback before the deadline and thus submitted the application as it was.

Ultimately, although such rapid implementation allowed pragmatic manifestations of Blockset – that is, ones that prioritized and conformed to the norms of climate community and carbon market – to get introduced to the world, subsequent manifestations tended to regress back to the idealized states that idealists created and preferred. Thus, the implementation of Blockset following idealism endured. Accordingly, an important question that remains is whether and how enduring changes in the approaches to implementation of Blockset occurred that brought idealists and pragmatists together, rather than keeping them divided.

CHAPTER 5:
REORIENTATIONS
Ξ

The findings that I have reported thus far have predominantly been cross-sectional in nature, exploring heterogeneity amongst the lived experiences of the translators behind the formative creation of Blockset but with little focus on observed changes of over time. Further, despite stating that the translation orientations that translators embrace are best understood as being situated on a spectrum between idealism and pragmatism, I have presented them and the people that embrace them as distinctly divided and being situated at opposite ends of the spectrum. While I have done this intentionally with the hopes of painting a relatively vivid picture of what idealism and pragmatism looks like at Blockset, I would be remiss if I suggested that no changes occurred and that those at Blockset were solely anchored in idealism or pragmatism.

The reality of life behind the creation of Blockset is that for the bulk of my fieldwork, it seemed like there was little substantive change in how the idea was being implemented, despite the idea moving through different phases of development. The idealists embraced their preferences, the pragmatists embraced theirs, and a deadlock between the two persisted, though a relatively passive and non-confrontational one. Yet, because key decision makers were largely idealists, the preferences of idealists tended to prevail. However, this was not always the case throughout all phases, not because idealist decision makers listened to pragmatists, but because they possessed some pragmatic tendencies on their own accord at some point.

Nonetheless, while idealists and pragmatists had different preferences with regards to the material manifestation of Blockset, the focal point of tension that repeatedly surfaced concerned representational manifestations. Idealists valued acknowledging the idea's roots and white boxing the technology, whereas pragmatists deemed it necessary to minimize or remove such

practices. Yet, because idealists tended to be in power, attempts to implement representational manifestations anchored in pragmatism regressed to an idealized state.

In this chapter, I explore the last of my key findings and reveal how a select few people at Blockset experienced movement along the translation orientation spectrum over time towards the center of the spectrum. Importantly, I explain how this occurred through two reorientation activities as summarized in Table 8. Some pragmatists moved towards embracing idealism as they immersed themselves in the crypto community and became enchanted – overwhelmingly delighted, charmed, and mesmerized – by blockchain and the crypto community despite their initial pragmatic anchoring in climate. Meanwhile, some idealists began to embrace aspects of pragmatism after their repeated reflections on technological developments and their individual interactions of others and experienced a personal sense of enlightenment, obtaining a deeper understanding of how their almost dogmatic idealism can constrain their pursuit of decentralization. Yet, for both, the journey down each pathway was accelerated for many through encouragement by a trusted ally to overcome fears and doubts. This was particularly crucial for a people that I call the disciples – pragmatists that converted to idealism – who were the most rigid in their ways and embraced a narrow view towards implementation. To illustrate such reorientations at Blockset, I draw on the experiences of two members that went through rather vivid change whilst offering supplemental vignettes in Table 9.

Table 8. Summary of reorientation activities

Reorientation	Accelerator	Activities	Outcomes
Pragmatism → Idealism	Encouragement and guidance from a trusted ally to explore other ideas	Immersion with the idea and its surrounding community	Enchanted by the idea / community, fueling deeper immersion
Idealism → Pragmatism		Reflections on macro developments and personal interactions	Enlightened on the barriers idealistic approaches create for the movement

Table 9. Vignettes of members' reorientations

Pragmatism towards idealism
Clara joined Blockset as a communications professional specializing in climate but had no experience with blockchain. During her first few weeks, she expressed that she believed that Blockset needed to be presented in a way that was not technical and appealed to the layperson. It also needed to be as far away from cryptocurrency as possible and framed as a climate solution that touched the hearts of people. She even brought up the concept of black boxing technology and the importance of "not talking about the blockchain." "Interesting," Clara says skeptically after Leo explains his preferences to do the opposite, "I've never seen that before." About a week later Clara expressed that she was experiencing imposter syndrome. Blockchain made her anxious and scared and the idealistic orientations of others caused her to have doubts about contributing as they did not make sense to her. Clara would go on to contribute to Blockset for nearly five months, and at the end of her contract, while she still stayed with Blockset on a voluntary basis, she said that she was looking for crypto and blockchain jobs. "It's been amazing being exposed to a whole new different way of thinking and approaching communications," she says, "it's really amazing, because it really is possible to talk about tech and the crypto community with users and not have to always hide it." In a matter of months, Clara transformed from a pragmatist with little to no idealistic qualities into someone that distinctively embraced idealism with regards to representational implementations. Indeed, she would even defend and explain these idealistic approaches to newcomers to the organization. Clara overcame her doubt and became excited about blockchain and the crypto community. Week after week, as Clara became more familiar with blockchain, she immersed herself deeper into the community. She spent hours each day watching videos on YouTube and reading articles on CoinDesk to better understand blockchain. Yet, although absorbing content helped her understand blockchain and Blockset, it was not until she engaged in more immersive activities that she got really excited about it, and as she said, "got sucked into a blackhole." Such immersion started with the team helping her set up a crypto wallet, and then sending her some CryptoKitties and a little bit of Ether to play around with. "I spent the weekend learning all about my CryptoKitties!" she says to the team. "Guess what I did over the weekend? I bought Bitcoin! Got my family to get some too!" she says a week later. Then, as she began to participate in meetings with blockchain developers, she started to appreciate their work. "I never realized just how much work goes into this," Clara says in a meeting, "this is really amazing." On the last day of Clara's contract, she states, "Oh yeah! I converted my Bitcoin into Ethereum, do you guys know when Eth2.0 is supposed to come out?" Everyone laughs and smiles, "that's the great mystery of it all…"
Idealism towards pragmatism
Pamela was at Blockset from the beginning. In fact, had it not been for her, the idea of Blockset might not have been conceptualized. She was the person that hosted the creators of CryptoKitties at the local hackers' space where Leo had his Aha! moment for Blockset. Pamela led a 4-month effort to design a system architecture that would form the basis of Blockset. Importantly, she was by far the most overt maximalist of all members and the most vocal when it comes signaling a commitment to an idealized society created with blockchain. If a system was not decentralized, transparent, and verifiable for the benefit of people, it was not worth discussing. Meanwhile, to overlook blockchain's roots in the crypto community and do anything other than put the tech in the users' faces was a big no. "In this day and age when we're seeing so much capture of blockchain," she says, "it's important to stay true to crypto principles, because I know for a fact some grey hat hackers that are just going to mess with a system if they don't agree with it." "What I like about Blockset is that I think that Ethereals and climate activists have a lot in common," states Pamela, "we all value transparency for the greater good." Pamela put together a formal report for Blockset with three recommendations that stayed true to her ideals with regards to both the material and representational aspects of Blockset. A few months later, however, after taking a bit of a break, Pamela recommended two things that no one would have ever expected to come from her. The first was "make Blockset as accessible as possible to whoever is going to use, there's a recommended tech stack and approved user interface and stuff on the government website, I'd honestly just use that because they're used to it." The second was "don't talk about blockchain, you don't really need that word, right?" Pamela's recommended approaches on how to represent Blockset changed drastically. "I've been struggling for a while to figure this out," she says, "I've realized that presenting blockchain to someone in a way that makes sense to them can go a long way in terms of introducing them to this world." "One of my best memories was when I taught a doorman to get some Bitcoin" she adds. Yet, as Pamela revealed in her online profiles and reflections, she abandoned the word blockchain because it has become a "meaningless" to her as people use it in ways that it "does not belong." "The pursuit at the heart of all my work is decentralization for people" she states.

PRAGMATISM TOWARDS IDEALISM

The extent to which people at Blockset embraced idealism was not static. In fact, some of the most idealistic people at Blockset that seemed to reject pragmatism were climate experts that started as pragmatists. When they started, these climate experts believed in making the idea that they were working to create and implement digestible to a lay audience and distinctively tailored presentations members of the climate community with which they were interacting. At the same time, what constituted a real blockchain platform was not narrowly defined. Yet, the perspectives and practices that they embraced and defended changed over time. They became increasingly idealistic to the point where one might call them dogmatic. These people – who I refer to as disciples – began to adopt the idealistic tendencies of the blockchain experts at Blockset. Yet, such disciples were supposed to be some of the key climate experts in the organization.

As a select few climate experts became disciples, they not only increasingly embraced idealism, but also experienced what I call attrition, a diminishing ability to connect with members of their home field of climate. They faced climate experts that were confused to why their fellow climate experts were so idealistic about the technology. To climate experts that were pragmatists, it was understandable that blockchain technologists and developers would be idealistic, but not their fellow climate experts. “People are going to think that you’re crazy if you talk about all that stuff,” says a pragmatic climate expert to a disciple in a meeting. Yet, not all climate experts that initially embraced pragmatism and developed idealistic tendencies became disciples, advocating and defending their idealistic views more than the longstanding crypto native idealists like the blockchain developers and technologists.

What ultimately differentiated the group of climate experts that became disciples from others is that they became enchanted by the technology and the community surrounding it

through deep immersion beyond basic introductory activities that explained what blockchain was in a technical sense. As they began to explore the technology and familiarize themselves with it within and beyond the immediate context of Blockset, they increasingly immersed themselves in the crypto community, interacting directly with the technology and its surroundings. They experienced a new world that differed from what they knew and were mesmerized by it. They developed a new understanding of the perspectives and practices that they previously embraced. There were ways of doing things that differed from what was expected, and they excited them.

Pragmatists upon arrival

The very first event at which I saw Leo present on Blockset was a conference for climate experts from around the world. Yet, these were not just any climate experts. They were practitioners, policy makers, and researchers that specialized in the impact of climate change on global and public health. In an auditorium with standing room only, I sat amongst renowned MDs and PhDs that have worked on the frontlines of the most formidable disaster relief efforts in modern history as Leo introduced Blockset and its work to create Blockset as a member of a panel featuring innovative climate initiatives by not-profit organizations.

"If climate change were a disease, treatment would be straight forward because we know the cause is that there are simply too many emissions," says Leo as he opens his presentation in which he proceeds to draw on an array of medical analogies to present Blockset in a way that resonates with the audience. "We need good medicine," he later states, "and an effective way to measure the dose" as he offers an overview of how carbon offsets work before stating that "the unit of account for our solution is a Blockset, a blockchain-based carbon offset." While the presentation is not without mention of blockchain and the various technological underpinnings of the idea, it is distinctively pragmatic in nature, specifically when compared to presentations in

the future that Leo gives. Indeed, the use of analogies in such a manner by Leo to tailor a presentation on Blockset to the audience would never happen again after this precise event.

The panel is the last session of the day and as the event closes, one by one, members of the audience approach Leo to talk more about Blockset. At one point the woman that was sitting beside me engages Leo, stating in their conversation: "I don't really understand blockchain, but we need to motivate the future generation to own this issue." Agreeing with her, Leo replies:

> Absolutely! You know, in the past fourteen years, I've developed a solid base for explaining climate change and carbon offsets to people. I've explained climate change and carbon offsets to a grade six audience and strive to boil it down to that level of digestibility for everyone. But I'm still figuring out how to do that with blockchain. I'm not there yet, but the goal is to get to that grade six or even better grade one level of explaining it to make it understandable to everyone.

While Leo demonstrated pragmatic qualities at the described event, this was not the only time that he did so. In fact, video recordings of presentations and associated slide decks from events in the weeks and months before I began my fieldwork reveal that Leo embraced a distinctively pragmatic approach to presenting Blockset. Importantly, his embracement of pragmatism was not only limited to performative interactions such as presentations. During meetings in the conceptualization stage, Leo frequently expressed his excitement and intentions to collaborate with various high-profile technologists and business tycoons introducing blockchain to masses and his admiration of their ability to simplify the idea of blockchain for a mainstream audience. At the same time, Leo was not set on any specific technological implementation of Blockset – though he was most familiar with Ethereum – and regularly posed questions about how to tailor the platform to accommodate the needs of climate actors:

> Here's a question. I was talking with someone about the need for security that accommodates people like ActorX. Would it be appropriate if we added an extra level of security for them? I guess what I'm trying to figure out is how do we build a system that reflects their reality and how they do things, how they issue and trade offsets in the real world, so we can maximize adoption.

Yet, over time, Leo became increasingly idealistic with regards to the creation of Blockset.

Becoming idealists

As we arrive back at our accommodation after a long day at the UN Climate Change Conference in Madrid, I ask Leo, "What are your thoughts on working with ClimateX based on that meeting today?" Amidst his response, Leo says "I don't really want to be building on Hyperledger Fabric like those guys having been doing, it just doesn't seem like a real blockchain to me, right?"

ClimateX is a fellow member of Earthchain and is actively working on projects highly related to Blockset. They are also partnered with various high-profile climate organizations that Leo endeavoured to work with in the early days of Blockset. Yet, when members of ClimateX present on their work, they often do not mention the word blockchain or any technology at all, something that has been observed and discussed internally within Blockset. In fact, in many presentations, had it not been a question from the audience, the word blockchain might not have even been uttered. The word crypto also never seems to come up in their public interactions. "You'll never hear them talk about crypto," says Klaus who has experience working with them.

In many ways, ClimateX exemplifies pragmatism as explained so far. At the same time, for most of Blockset's formative years, it is the exact kind of organization that idealists feel are unappreciative of the crypto community and appropriating blockchain. Thus, although several pragmatists at Blockset strongly support collaborating with ClimateX, Leo and other idealists do not feel they are a suitable collaborator and ignore their expressed interests in collaborating several times. "The way they describe or talk about blockchain like that in the article" say Leo to a few members of the team, "it's like a slap in the face to the crypto folks…it's like saying the technology is not important… it gives me the impressions that they probably don't have a real blockchain use case and are just using the technology for something that it shouldn't be used for." Instead, he would rather work with the crypto community and climate organizations that are

a little more crypto and "get it." "We want to be working with people that get it and are at the forefront of it all, right?" Leo adds, "you know, like Benjamin and Altco and Sergei and Uprise, people that get it, what's going on in crypto." In many ways, what Leo tries to explain is an argument by members of the broader crypto community that something can be "blockchain-but-definitely-not-crypto" as explained in an article by CoinDesk (2020).

It was previously mentioned that Leo is the posterchild of idealism at Blockset. What was not mentioned, however, is that he only met such a criterion after advancing through the initial conceptualizing phase. Thus, for the bulk of my field work, Leo firmly believed that the only way to build Blockset is to have it connected to the Ethereum mainnet and that it is neither realistic nor the goal to try and build Blockset to fit into the existing system. Instead, as he explained to me in conversation, "the goal is to build Blockset outside of the system for people that get it to use it." Indeed, he believes in the Ethereum mainnet so much that he rarely looks into private blockchains, even the Ethereum Foundation's own private enterprising blockchains. "It's not the real deal unless it's on the Ethereum mainnet," he once said to a climate expert that was asking about Ethereum's private blockchain ecosystem. In turn, his knowledge about blockchain beyond the Ethereum mainnet is rather sparse, stating in an interview: "You know, I actually don't really know much about the enterprise solutions and Hyperledger." While Leo embraces a specific view of what constitutes a real blockchain platform, more broadly, he believes that the crypto community has what it takes to create the solutions that the world needs:

> I believe that the crypto folks, they're the people coming up with the ideas that move stuff forward. I think our idea is a strong one and it should be eminently usable. But there are also ways that we haven't conceived of yet. There are new developments that will come up into the future… innovations that we can't imagine right now … and there's a reasonable possibility that some of those will make the type of thing that… can really stop climate change. It's likely that those solutions are going to come out of these guys … these are the folks, this is the direction, this is the spirit that we need to be tapping into to really catalyze the work of people in the carbon market and in the climate fight and give them tools to be able to do these transactions better.

However, what is perhaps the most characteristic about Leo is that he strongly believes in acknowledging the roots of Blockset and white boxing the technology. Indeed, as the face of Blockset and the most frequent presenter, Leo almost always discusses Blockset's linkages to CryptoKitties and the crypto community and includes highly technical and nuanced descriptions of the idea. "Blind them with the science, blind them with blockchain, right?" he says to Nabeel.

Immersion

During the early stages of conceptualizing Blockset, while Leo had a basic understanding of blockchain, he often struggled to understand the ideas that blockchain experts were discussing. In turn, although he was interested in blockchain, his understanding of how Blockset was being imagined by blockchain developers was not particularly comprehensive. As I sat in on meetings, I frequently observed Leo struggle to understand the recommendations that blockchain experts put forth with regards to how to create Blockset as this interaction with Benjamin illustrates:

Leo	So, what's actually the proper terminology for what we're creating, is it a fork?
Benjamin	Not really.
Leo	Is it a POA fork? Did I get that right?
Benjamin	Well, so we're forking Ethereum and creating a proof of authority side chain.
Leo	Side chain, side chain, so it's a side chain? Because I've been like: Is it a side chain? Is it a fork? Is it a shard? If it's like hard for you, then that's good.
Benjamin	It's not hard. It's not a side chain if it won't be interacting with the Ethereum mainnet. If it does interact with the Ethereum mainnet, then it is a side chain.

At the same time, many of the suggestions by Leo on how to build Blockset were not feasible given the state of the technology at the time as this response from Benjamin illustrates:

> We're not facilitating the wire of this money. We can't. We have to build this to allow for people to deterministically create these tokens from a tonne of carbon on our platform. Until we close a lot of the loops, which I don't see happening with the technology just anytime soon, we can't do what you just said. I see this as being more of an accounting thing than a holding of real value thing. But once we can facilitate the transfer of value in this platform, then that could be possible.

Yet, Leo's limited understanding did not merely apply to the technology and jargon associated with it. It also applied to general practices that blockchain developers embraced:

Benjamin	At ETH Cape Town, which is about a month away, we plan on hacking Blockset.
Leo	Okay… (sounds hesitant)
Benjamin	So hopefully everything we go over today, hopefully we schedule it in with that in mind, meaning we need to have things pretty firmed up from an idea from like an implementation perspective.
Leo	… and can you tell me (sounds nervous), can you walk me through that, so like you guys land in Cape Town, you do your thing, you start hacking. And then, what's that looks like?
Benjamin	What does a hackathon look like, you mean in general (sounds surprised)?
Leo	Yeah, so what does hacking entail… so like if you were narrating the hacking of Blockset down in Cape Town.

As Leo expressed in conversation with me after this particular meeting with Benjamin, the idea of a hackathon made him very nervous and unsettled. “The idea of hacking out Blockset and taking it to a hackathon,” he said as we had a coffee, “it gives me hives, it makes me really nervous, like panic attack level nervous.” Thus, although Leo knew the basics and occasionally attended events to learn about new ideas, he was relatively unfamiliar with the nuances of blockchain and the practices surrounding it. Additionally, like others, when he encountered these unfamiliar ideas and practices, he found himself feeling nervous, anxious, and even scared. Indeed, for weeks following this interaction, Leo contemplated working with Benjamin and others that wanted to take the idea of Blockset to a hackathon.

Like Leo, a select few climate experts that experienced movement from pragmatism towards idealism were unfamiliar with blockchain and its surroundings upon commencing their work on Blockset. Consequently, they set out to better familiarize themselves with blockchain and the crypto community. Yet, whereas most pragmatists at Blockset read about blockchain via books and articles, Leo and the others immersed themselves in the technology and its surrounding as they worked to create Blockset. Comparatively, this offered more substantive and direct exposure to the technology, its creators and maintainers, and their surroundings. In fact, if I had to choose a phrase to encapsulate how people like Leo were familiarized with blockchain,

it would be “rabbit hole,” and if I had to explain what this means, it would be “deep immersion.” As Joseph Lubin – founder and CEO of ConsenSys and co-founder of Ethereum – states: “For those who understand the profound implications of blockchain technology, there is no turning back.” Overall, as I now explain, such immersion happened independently and collectively at Blockset, and played a key role in moving pragmatists towards idealism.

Independent immersion. To varying degrees, a select few climate experts engaged in what I call independent immersion, venturing relatively independently beyond their own area of expertise and immersing themselves in the world of blockchain. Indeed, while “I went down the crypto rabbit hole” was one of the most repeated phrases that Leo said throughout my fieldwork, other members used similar phrases of such as “discovering a black hole” to refer to their experiences. Such phrases initially described how Leo discovered blockchain and began to make sense of the crypto world. However, going down the rabbit hole was a recurring activity:

> There’s a genesis rabbit hole and then sub rabbit holes related to learning about crypto, and more accurately, learning about how blockchain could be used for climate use cases that led to the pivotal ‘Aha!’ moment, which is really like the end of the beginning of the rabbit hole.

Such immersion enabled Leo to acquire an understanding of blockchain in a contextualized manner and entailed exploring the depths of the world day after day, which was often viewed by pragmatists as being obsessive. Yet, what ultimately fueled the continued immersion and led people “deeper into the rabbit hole” was intense feelings of excitement after overcoming anxiety, nervousness, and fear as they were exposed to new ideas and ways of being that differed from their normal life in climate. All in all, two distinct methods of independent immersion at Blockset that I call absorption and participation were embraced.

First, absorption entailed endless reading, listening to podcasts, and watching videos, a set of seemingly passive activities to acquire a foundation of knowledge. Unlike pragmatist climate experts like Vincent that would skim the odd article on blockchain, like a sponge, Leo

absorbed as much as content on blockchain possible. Yet, since blockchain was in its formative stages of development, time moved fast. What was news one day was old the next. As a developer once said as he introduced me to someone "we've known each other for like two years now, which is forever in blockchain." Indeed, for Leo, reading newsletters, blogs, tweets, and forums and listening to and watching the latest online content were crucial ways to stay updated.

For example, after nearly three months of work led by blockchain technologists Pamela and Kyle which resulted in a plan to build Blockset using a specific token standard, Leo came across a newsletter announcing a newly proposed token standard that allowed them to streamline an otherwise elaborate process. "Holy shit! I found something amazing!" he wrote in a message on Slack, "have you guys heard of ERC-____ yet?" During the transition from architecting to prototyping, this knowledge of the new proposed standard and surfacing of it to Nabeel triggered months of work trying to figure out if the standard would be effective. As Nabeel mentioned, Leo's passion, familiarity with "blockchain, like the actual tech," and ability to talk about the nuances of the technology were critical to the production process.

Meanwhile, participation entailed more active activities to acquire a foundation of knowledge of not only technical ideas but also the norms around such ideas. "The triple threat of community building in blockchain and crypto is called DTT: Discord, Telegram, and Twitter" says Nabeel, "If you're not on DTT, you're not in crypto, but Twitter, that is where much of the crypto and blockchain life live, CryptoTwitter" While I regularly observed members of Blockset, including Leo, on CryptoTwitter – the sub-community dedicated to everything crypto – it is difficult to do justice to such participation: endless scrolling through Twitter, liking and responding to Tweets, laughing at memes, and sending people direct messages or "DMs," behaving in ways that many climate experts saw as a waste of time. In crypto, however, Twitter

is not considered wasted time. It is an important part of everyday life. Twitter is a place that facilitates interactions and where members of the community do their work. “Is Twitter my job? LOL! I spend so much time hustling on it” tweeted Andy, Blockset’s first blockchain developer. Importantly, as Leo explained, in addition to learning about developments and interacting with people in the space, Twitter is where he became accustomed to the norms of the crypto world:

> The other piece of the rabbit hole is CryptoTwitter CryptoTwitter CryptoTwitter… there was a period where I spent hours a day on CryptoTwitter, and I kind of still do. That's where I learned the ability to be the person who can talk to Nabeel and developers and he's like oh this isn't just a stuffy suit jackass business guy trying to do something, haha. Anyhow, so that's an outcome to be sought. But it's also understanding or getting a flavor, getting a feel for, a somewhat native feel for what the blockchain tool can do, what can it do now, what we can expect it to do. And if you have that, and then expertise on the use case … that's what allowed us to you know, spit out a use case… So, that fit is made is brought to you by endless hours on CryptoTwitter.

Whereas many often highlight Leo’s ability to speak about the technology, he attributes this ability to time on CryptoTwitter. As this comment by Pamela also shows, CryptoTwitter is also where Leo and Blockset earned their legitimacy amongst blockchain developers:

> In the crypto community, you've garnered a lot of respect because of your genuine desire to have open conversations with people and like the fact that you've been participating so long in CryptoTwitter and have a presence there. That’s how people know you’re legit. You can literally see history and track record publicly on CryptoTwitter on your Twitter feed.

Figure 15. Benjamin and Pamela presenting at a blockchain conference

Yet, participation was not limited to CryptoTwitter. It also included other settings such as meetups at the local underground crypto hackers’ community, conferences, developers’ workplaces, and blockchain platforms. Indeed, substantial time was spent away from the screen

and office in places outside of Blockset's workspace. As Leo once emphasized, by spending time in blockchain and crypto he "got to see all the great work that people are doing" and "see what is possible or might be possible with this magical technology." Through such participation, climate experts also saw blockchain experts contributing to Blockset in action in their native settings, such as the conference as shown in Figure 15 at which several of the blockchain experts were giving talks on their work beyond Blockset. "It's so amazing see you in action and working your magic," says Leo to Pamela, "I'm always just in awe when I get to see you do your thing.

Importantly, a key type of immersion through participation happened in front of the screen as Leo and others would "play" or "experiment" with blockchain applications and platforms as well as use them more broadly in everyday life to better understand what was possible with the technology and how things worked. For example, when he discovered the major NFT marketplace OpenSea, Leo spent weeks exploring the different NFTs listed for sale on the platform to better understand how people were creating NFT platforms and how they integrated into the broad NFT ecosystem. At the same time, he often created "hacky" or makeshift versions of Blockset via new technologies and platforms to learn what was possible and better communicate ideas to both blockchain experts and climate experts at Blockset as well as those that he encountered beyond. Such versions would be used repeatedly by members to show each other what Blockset sought to be, with CryptoKitties being the first prime example:

> …I've renamed a bunch of CryptoKitties with climate and offset names, haha …anybody who understands CryptoKitties can immediately understand replacing those different cat characteristics with carbon offset characteristics. So, I think it's really helpful for anybody who gets CryptoKitties to be able to mentally template that we have components of this token that make it what it is, and we need to be able to have them travel around with that token. So that's the use for people who understand CryptoKitties.

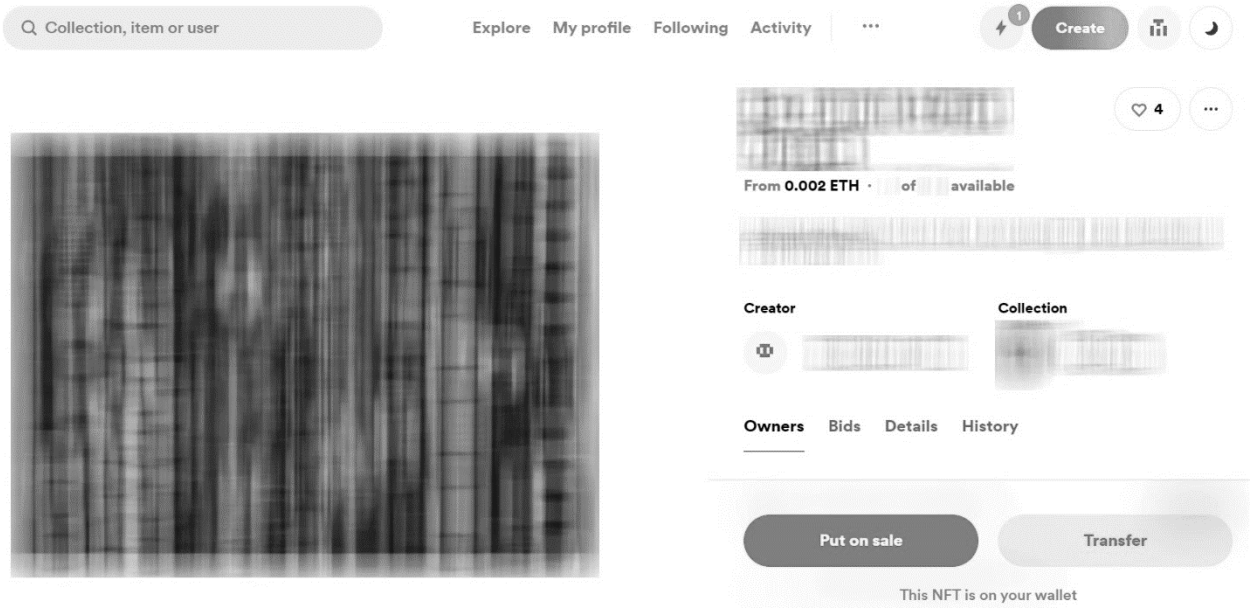
"Guys, you gotta see what I did and what we can do now!!! Have you used PlatformX before?" says Leo to several members after playing around with a new platform that he

discovered. “How did you go from having nothing on Friday to sending out a message and showing this?” I asked Leo. “I was playing around with this platform I read about in a newsletter the other night and realized that it does what we want to do, and it only took about $70 worth of ETH for me to figure it out, haha” he replied before adding the following detailed response:

> I went into PlatformX, and I saw that it's got lots of different things, and I think it was a collectible … I didn't totally understand the difference between these two, but was like, I want to do a multiple and then I got in here and actually made one… So, I made one because it's like free or almost free. But then it's basically you're just making another like it's like you're making a CryptoKitty…

Crucially, the result of this instance of playing around with the NFT platform became a demonstration tool, as depicted in Figure 16 during interactions with the blockchain experts as they worked to figure out what the idea should do given the current state of the technology.

Figure 16. Sample demonstration tool for Blockset created with an NFT platform

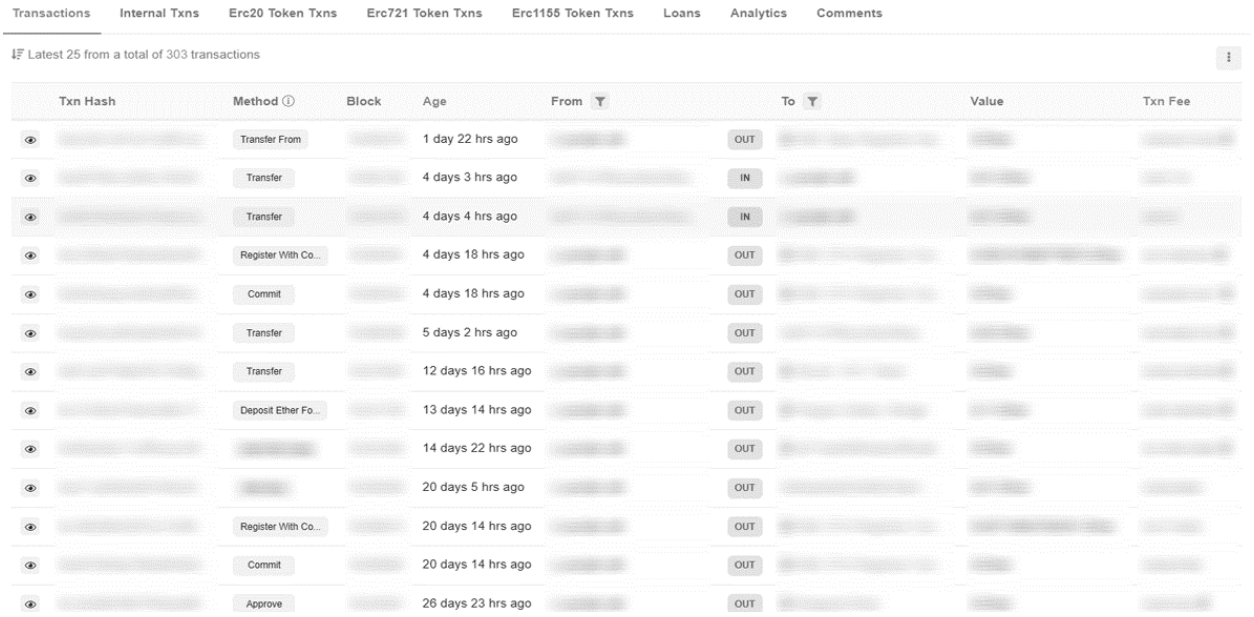


As Nabeel emphasized, working on crypto native platforms that have been implemented works well because they can often be “forked,” which essentially means their code can be copied. Indeed, as I looked at the activity log of Leo’s crypto wallet that he used to send me CryptoKitties as illustrated in Figure 17 – a key feature of blockchain – I could see just how

much Leo was immersing himself in the blockchain ecosystem and playing around with different blockchain applications. Ultimately, as Leo explained in an interview, being immersed in blockchain and its surrounding had a pivotal impact on him, driving him to recognize, appreciate, and form attachments to the ethos of the crypto community that he encountered:

> What I really saw with blockchain landing was the opportunity to kind of go from a single source database custom-built tool to track this really important future commodity to this really vibrant beautiful tool of blockchain and build a system on that that allows us to do it better. And some of the things that really fundamentally popped out around that were, there's a transparency aspect, there's a security aspect, there's an immutability aspect, and then there's a number of je ne sais quoi aspects, one of which is the immense work that's going into the development of the blockchain space and all the different groups, all the different tokens, engineers, coders, business lines, creative minds, working on building the sector and building the tools inside of it. I really got to see the leaps and bounds of development of the blockchain industry.

Figure 17. Leo's public Ethereum log illustrating high level of activity



Collective immersion. Blockset was informally divided into "the climate side" and "the blockchain side," separating members by areas of expertise, and much of the day-to-day activities were done independently, including the activities underpinning independent immersion. Yet, Leo and other climate experts also engaged in what I call collective immersion – immersing themselves in the direct work of blockchain experts at Blockset via inclusion

throughout the development process. Specifically, they would meet with the blockchain side to inform the creation of Blockset and gather information about it so they could better execute their own work independently. Nonetheless, the exchange was mutual. Climate experts were included in the work of blockchain experts and vice-versa. At the heart of such collective efforts across areas of expertise, however, were three key activities: inquisition, imagination, and illustrations.

First, inquisition, which entailed intensive and comprehensive questioning, was a trademark of how climate experts and blockchain experts came to a collective understanding surrounding Blockset, particularly during the early stages of a project. While such inquisition tended to take place in recurring meetings set up for specific projects, they also extended into emails, messages on Slack, and comments on documents. Regardless, it was a central part of routine organizational life at Blockset because via such interactions, people collected the information that they needed to work independently and got updates on pertinent developments.

Benjamin	This is it comes to my last point just before you ask a question is there a real value on the system? ...
Leo	Let's see if I can knock this one down…
Benjamin	My question for you, again, about that is…
Leo	So, I'll parse that a part … Is kind of a bigger …
Benjamin	Yeah, like how do I…?
Leo	No, so you can only be done in full tonnes is an important detail …
Benjamin	I don't know if I necessarily agree… like how you're describing, it sounds like you're describing something fungible versus non fungible… It's like a can of beer.
Leo	Yeah, it's like bottle of wine, that's exactly what I was thinking.

As the significantly truncated dialogue from a subset of a meeting indicates, through deep inquisition involving back and forth, a common understanding of an idea was reached. At the same time, as the following statement by Leo on the way out illustrates, such interactions energized him through excitement:

> Dudes, can you believe what we're doing!? I'm so giddy right now. Being able to unpack all of this with Benjamin and see really what's at the forefront of bleeding edge work in crypto is so exciting. I'm pumped.

What was also common during inquisitions was the provision of maximal information by both climate and blockchain experts in their native technical language that would eventually be whittled down until convergence was met in layman's terms, learned proficiency in the opposing language, and transliteration: attempting to fit a local matching word or concept. For instance, when building a system architecture, convergence was met after a line of inquisition that resulted in the transliteration of key functions. "Okay, so issue equals mint, retire equals burn" whispered Pamela as she worked through her extensive list of questions. Meanwhile, the idea was frequently introduced by Leo with reference to CryptoKitties, through which he would transliterate key attributes: "eye colour equals country, fur equals vintage or year."

Despite the eventual convergence of a common understanding often using "technically perfect, but in layman's terms" centered around analogies (e.g., a vending machine, an e-interac transfer) as Pamela described it, the details were important and requested. Thus, it was common to hear phrases such as "write that down, everything, all of it" and "tell me more, that's not too much." Indeed, surfacing details through inquisition was how the climate and blockchain experts tended to arrive at a common understanding. In fact, introducing an idea in a simplified form rarely occurred, nor was it deemed preferrable as the following dialogue illustrates:

Leo	I always wonder… is there actually a way to like, we we've got the climate complexity and the blockchain complexity, and it's all of this big complex thing, but… I'm usually on the other side of the argument, but this time, what if the whole carbon stuff is actually, so simple that it barely even needs to come into play. And all we're asking for is a system that… [simple explanation]
Pamela	…this is where area of domain does come into play inevitably in a blockchain solution though: What are the ways in which actors in this ecosystem could or would try to game with this? Is there any way that like collecting and holding extra ones would, would let you know quadratically explode the amount of value you can extract, etc. That's kind of like where and what I want to learn. I agree that leaving out the minutiae of it will be really beneficial if we're just thinking of it as a data problem, but…
Leo	Yeah… [comprehensive explanation]
Pamela	Yeah, so, if I'm hearing you correctly, like some of the element here is…

Instead, the modus operandi was to converse in one's native technical language, provide as much detail as possible, and ask questions, which would lead to a common understanding. This is because simplification prohibited people from discerning if critical details were being left out. While this was overwhelming for climate experts just starting, over time, they developed an understanding of the technological aspects and a baseline proficiency in the technical language.

Next, imagining what Blockset would look like and how it would function at different stages in time was also a crucial activity that occurred in recurring meetings between climate experts and blockchain experts. This was particularly important because of the emergent nature of the technology and the fact that not everything was possible yet, something that climate experts learned relatively early as developers repeatedly told them that "the technology is not there yet, so that's not feasible right now." Thus, a key challenge that people contributing to the designing and implementing of the material ideas faced was discerning what would be reserved as extensibilities for future iterations as Pamela summarized in a meeting:

> We've thought about that as a future functionality. I think one great thing about engaging with you is, we have our take and then, if you have any suggestions on the immediate and follow up platform. So, our current take is the best piece to bite off right now is if we can have a blockchain system where you can issue and exchange so you can mint and transfer tokens. Period.

Imagining Blockset at different times enabled agreement on what to include in the prototype in the short-term. Meanwhile, imagining how it could be used at different periods in time enabled the technologists to discern what they might need to build into the prototype to minimize the need to recreate everything: "Thinking in the future, I think it's good for us to think about this in the early architecture," said Pamela. For example, when creating a specification document with Benjamin, it was discussed how the degree of decentralization could change:

Benjamin	Like they could start out with this privilege, but then, you know, we can continue the decentralization process by creating another…
Leo	… makes sense… let's earmark the discussion about seeing where people are going for the future.

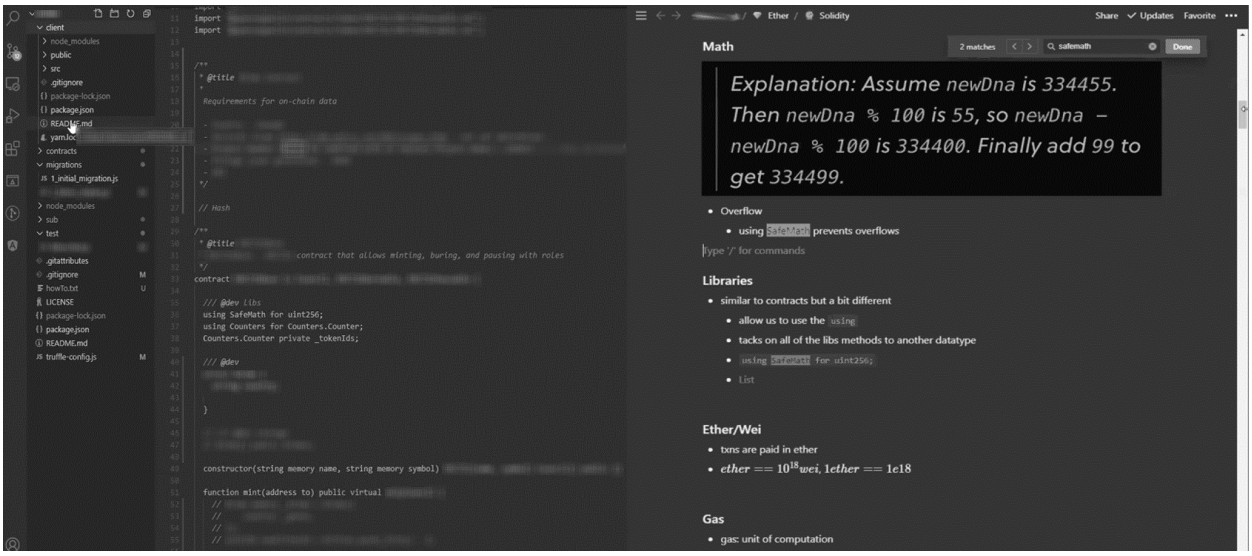
Similarly, when creating an architecture document with Pamela, members agreed upon what did or did not need to be built on the blockchain: “What's cool about kind of the extensibility on the user side for the end goal of this being public and transparent is that we don't necessarily need to use, you know, like blockchain layer stuff for that.” It was agreed with her on what aspects were nice, but not necessary for the prototype: “A good initial unnecessary feature functionality for the immediate first prototype is, for the first transfer functionality system platform, some sort of escrow…” As Pamela explained, imagining what the prototype would look like at different stages in time helped members define the project and have more meaningful conversations.

> Our meetings helped us define the scope and the priorities of the MVP that we plan to see this year vs what the system would be long-term. Similarly, questions around temporality… we had talked about long term vs short term. So, questions of temporality helped us really define that and have a more meaningful conversation and it also helped us discuss what might go wrong which is a really big win for the engineering mindset getting that before you have started building.

More importantly, by imagining what Blockset would look like at different points in time, climate experts like Leo obtained a better understanding of how the implementation of the idea would evolve: “Right, so this is something we need to dig into another time, I’ll kind of put it farther down the priority list… really helpful to see what Blockset could eventually be though.”

Lastly, the illustrating or showcasing of incremental progress by the blockchain experts to the climate experts was a crucial part of the collective immersion experience. Every week, Leo and other climate experts would have a weekly update meeting with any of the given blockchain experts working on Blockset at the time where they would get a detailed update on what was done that week. During such a process, developers would share documents and show others their screens to walk people through what they did. “Remember last week when I said I was figuring out the best way to store and retrieve the data for each NFT” says Nabeel as he walks the team through the prototype of Blockset that he is building, “this week, I started to pin it to IPFS and it’s working really well, check it out, I’ll show you a test Blockset that I created.

Figure 18. Typical screens from a Nabeel's laptop during weekly meetings at Blockset



As shown in Figure 18, which is what Nabeel's screen typically looked like when he gave updates, such illustrations exposed Leo and others to the detailed work that Nabeel did. Line by line the screen would fill up with code and climate experts would see it processing what goes on behind the platform. "Obviously, I don't know what all that code is," said Leo to Nabeel, "but it's awesome to get a behind the scenes look at everything you've been working on and see it running live." Importantly, during such meetings, Leo and other climate experts had the opportunity to ask questions, offer feedback, and contribute to the iterative development of Blockset. Meanwhile, the developers were transparent about challenges that they were facing and included climate experts in their struggles as the follow statement by Nabeel in a meeting shows:

> So, I'm facing a problem right now. I'm trying batch mint at least a hundred tokens, but the sequencing of the IDs is a being weird. I'm talking with a people on OpenZepplin, and they are experiencing it too. We've been trying to get a hold of the guy that created ERC-____, but he's kind of like pissing everyone off and not being very open source or open in general. I'm going to try and figure it out, but we might need to switch over to ERC-____ soon if it doesn't work. So yeah, that's kind of a bit of a roadblock right now, just to let you know.

Thus, while climate experts like Leo were not directly experiencing the struggles, they were aware of them and discussed them. Although Leo and other climate experts were not coders, they were included in the development processes through recurring cross-expertise meetings.

IDEALISM TOWARDS PRAGMATISM

Like pragmatists at Blockset that moved towards idealism, idealists also moved towards pragmatism. In fact, by the end of my fieldwork, all contributors to Blockset that started as an idealist demonstrated movement towards pragmatism. When they joined, such contributors, who were all blockchain technologists and developers, had a specific idea of what a real blockchain platform was and believed that a crucial part of implementation was acknowledging the roots of the idea and white boxing the technology. The goal was to create an alternative solution to exist in parallel to existing ones. Over time, while they still believed in embracing an idealistic orientation in their everyday work, they became less rigid in their ways with the implementation of Blockset. They supported a broader set of ways to implement a blockchain platform, including a growing set of blockchains. They were also less adamant about the representational aspects of blockchain and actually advocated for de-emphasizing the blockchain aspects of ideas and decoupling ideas from the word "blockchain." Why did this happen to blockchain technologists and developers that so passionately embraced an idealistic orientation towards implementation?

In this section, I explain how idealists at Blockset experienced movement along the orientation spectrum after reflecting on the rapidly growing number of interactions that they were each having with people about the blockchain projects to which they were contributing and their own observations about how the field was developing. These idealists were active and deeply embedded in the crypto community, contributing to numerous blockchain projects, and at the forefront of the latest developments in the field. In turn, they were constantly interacting with newcomers and members of society with little to no exposure to blockchain.

First, when it came to the material manifestation of Blockset, specifically what constituted a real blockchain platform, the idealists became more open to a range of system

designs and blockchains, even private blockchains that they had reservations about. This is because technological advancements paved the path for such blockchain systems to interoperate with public blockchains such as the Ethereum mainnet that they originally considered a real blockchain. Thus, blockchains that were not previously considered real now were under certain circumstances thanks to advancements. Importantly, they trusted them to be real because they explicitly contributed to building some of the infrastructural elements that made them possible.

Yet, with regards to the representational manifestation of Blockset, the idealists also experienced notable shifts, moving from defending the importance of overtly acknowledging an ideas roots and white boxing blockchain to advocating for the black boxing of not just blockchain, but also the technology's roots, and making ideas appeal to lay people. The goal was now to visually blend blockchain platforms into the mainstream system that normies were used to and to decouple idea's from "blockchain" in a representational sense. This was because as they interacted with normies and other members of society that were not familiar with blockchain, they found it increasingly fulfilling to introduce them to blockchain and see them get excited about it. "I introduced my landlord to blockchain and Bitcoin, haha," says Pamela, "It's the best thing ever." In some cases, they felt that it was now their duty to do so and that by doing so they were quietly planting seeds for the broader movement that they were working towards.

Additionally, as idealists watched blockchain evolve into an industry rather than a hobby and be captured by actors that they felt were co-opting the technology, they started to identify less with "blockchain" as the word lost meaning to them. Initially, blockchain was synonymous to decentralization for the purpose of empowerment. Yet, it lost this meaning as actors began to use the technology for other purposes. Thus, instead on emphasizing blockchain, idealists believed in emphasizing its affordances: decentralization, transparency, and verifiability.

What ultimately differentiated the crypto-anchored idealists from the climate-anchored idealists – that is, the disciples or climate experts that converted from pragmatism to idealism – is that as contributors to several projects, they were not defined by a single project and viewed Blockset and one part of the big movement. Additionally, as actors close to the technology and contributing to the creation of it, they knew that the most important values to them were already embedded in the code. Everything else – such as the representational aspects – were nice to have, but not necessary. Yet, given the opportunity to implement an idea in a way that is consistent with their idealistic orientations, they would seize the opportunity.

Idealists upon arrival

The first time that I met Benjamin was at the Altco office when he hosted a meeting with Leo and Charles to discuss Blockset. At this time, the idea was still very vague though it was understood that the goal was to create a blockchain platform like CryptoKitties, swapping out kittens for carbon and allowing for higher levels of transactions. Benjamin was one of the most recent people to join Blockset and this meeting was the first time that he and Leo had seen each other since Benjamin approached him at a conference.

As the meeting begins, Benjamin jumps out of his seat, runs past a giant CryptoKitties banner hanging in the office, and returns from behind some monitors with a handful of stickers for all of us. “Here, these are for you,” Benjamin says, handing us an assortment of Altco stickers, including one of a cartoon animal-like creature wearing an Altco t-shirt. “And I’ve got one of these left” he states while handing over a sticker of a CryptoKitty to Leo. “Woah, are the special ones from the launch event?” asks Leo, “Wow, I feel honoured to be a part of the club even though I wasn’t there” – The specific version of the sticker that Leo received was only distributed to people that attended a recent Ethereum-related launch event.

Diving right in, Benjamin talks about global governance and how the key to effective governance broadly and specifically in the case of Blockset is that it needs to empower people. Reflecting his experiences, he states: “Empowerment is key. Fuck the government. Sorry. We need to make Poland as powerful as the USA. Or OrganizationA and powerful as OrganizationB. If we can make Poland or Slovakia feel empowered, then we are on the right track. 100 percent.” Benjamin continues to offer his thoughts on Blockset during which he invokes technical lingo such as “proof of stake”, “proof of work”, “nodes”, “shards”, “sidechains”, and “parachains.”

Can you tell me, Benjamin, what does Altco do?” asks Charles.

“That’s a good question. Sorry, I forgot to explain,” responds Benjamin:

> Altco is an Ethereum and blockchain R&D company that develops blockchain applications for revenue while actively contributing to the development of the core infrastructure of Ethereum 2.0. We are also currently working on ProtocolX and seeking grants to help build that out.

“What does this look like?” asks Charles after Benjamin finishes a detailed explanation of ProtocolX. Benjamin runs to his desk and comes back with his laptop. He opens it and shows Charles the Github page with the code repository for ProtocolX that is open and then says, “we literally work with math on paper and then build it out.” – The screen shows mathematical formulas that Benjamin and his team were using to build out ProtocolX. “That’s wonderful, and how did you get into this? What’s the story?” asks Charles, to which Benjamin says:

> I first started a few years ago just as someone mining Ether. I then met some other developers at a local Ethereum developers meetup and then things just spiraled. We started with just some space in a communal hackers’ space and then over time things eventually evolved to where they are now through governance. We got here through governance and the lived experience of failure by a lack of governance.

“At one time, I was reading this book called ‘Panarchy’ do you know it?” says Benjamin – referencing the widely cited book *Panarchy: Understanding transformations in human and natural systems* by Gunderson and Holling (2002).

As Charles shakes his head Benjamin says, “I’ll order you a copy, what’s your address?”

“What are you thinking in terms of governance with ProtocolX” asks Charles.

“With Blockset, we are building a fork of Ethereum and then bridging it back to Ethereum. The data that we will need is being built into the token and the token is acting as a bridge to the carbon market to or on the blockchain,” replies Benjamin.

“What do you think about people like PersonX and what they are doing?” asks Leo – PersonX is a well-known futurist and business tycoon in technology that is recognized in the mainstream media as an authority in blockchain, having written several books on it.

“Fuck him” says Benjamin as soon as Leo asks the question – I later learn that Leo was planning to have a meeting with PersonX’s team and was talking with people close to PersonX day before. “I honestly feel that blockchain is as important as Papyrus, the first ever record of accounting” says Benjamin, “the ability to decentralize and do things for the greater good.”

“It’s really groundbreaking and revolutionary” replies Charles.

“And what’s best is that it’s not just for the rich, you can apply it to any major problem!” Benjamin says with enthusiasm, “What’s important for blockchain and Blockset is that it is beyond financial technology.” He then adds:

> Altco is a 23-person company, and we are all passionate about blockchain and decentralization and what I have learned is that it requires a new paradigm shift. [Leo and Charles nod in agreement] For blockchain to get adopted, we will need new custodianship and can’t underestimate the value of communication. But it’s important that we don’t simplify or oversimplify the technology, blockchain, and the solution that we are building and that is what PersonX is doing, oversimplifying a concept. He is hijacking a technology and simplifying it in a way that it no longer represents what it is actually all about.

Yet, over time, as Benjamin and others continued to contribute to the technology as it advanced, they would become increasingly pragmatic with regards to the implementation of Blockset and blockchain more broadly. Overall, the blockchain experts that moved from idealism to pragmatism were those that not only were highly embedded in the field and at the forefront of its development but took the time to reflect on their experiences and adjust them accordingly.

Becoming pragmatists

As contributors to Blockset sit at a table at a blockchain conference, they spot Benjamin from a far as he begins to walk towards to the stage to get prepped for his talk. It has been a long time since anyone has heard from or seen Benjamin and his talk is about his work at Altco rather than about Blockset. Nonetheless, everyone at the conference is excited to see Benjamin talk.

Benjamin takes the stage in the convention center and starts his thirty-minute talk by telling the origins story of Altco, showing pictures of the various physical spaces that they used as an office since the he and his partners met at an Ethereum developers' meetup. As with most talks, he reminds his fellow developers in the room of the importance of recognizing the collective journey of the community of developers working with passion and love to bring blockchain technology to the point it is today. For the rest of the talk, however, as he focuses on the work and experiences of Altco, Benjamin discusses two points that distinctively stand out.

The first point is about making blockchain accessible to both developers and end users that are not experts. Addressing his fellow blockchain developers in the room, Benjamin states:

> We have to check our egos at the door and realize that we are building things for people and not just subject matter experts … What we build is only useful if it is usable and used. I can build whatever I want and so can everyone in this room, but if I can't make it in a way that is usable by others and understandable, if only subject matter experts can ever use the technology, then who are we actually building for and will anyone in the world ever really use it?

He then describes the challenges that he has faced over the past year, highlighting that he feels that blockchain developers – himself included – have created and not addressed unnecessary barriers to entry for other developers and general users of blockchain technologies because they have not wanted to make it digestible to people that are not blockchain experts.

> I can't explain to my non-blockchain but developer friends how they can start to build a dApp because they would need to come work at our company for months. That's a problem, we haven't been addressing barriers to entry. We've been building things, and no one has been using them. I've realized how much of a barrier to entry exists for users and devs, and that if it is diminished, anyone will be able to use the tech if they want to. Isn't that the point of decentralization?

The second point is about contributing to and embracing a broader range of blockchain projects and different blockchains rather than working solely on one. “Again, we need to check our egos and do what we need to do to take all of this technology to the world,” says Benjamin as he explains that he and his colleagues have been increasingly working on interoperability between different blockchains and building bridges between them. He then proceeds to say:

> So today, we are contributing to Hyperledger _____, and I will be very honest with you, I never ever expected to be contributing to Hyperledger. Period. Like I never expected it. So, it’s quite an achievement for that to be something that we want to do as Ethereum developers.

In comparison to the Benjamin that was present during the early conceptualization of Blockset, the Benjamin on this day is remarkably different. He is advocating for making blockchain more accessible to the masses as well as contributing to a range of blockchains beyond Ethereum.

On the second day of the conference, Benjamin meets up with various contributors to Blockset. Gathered around a table in the nearly empty lunchroom while presentations continue in the main room, Benjamin gets caught up on the state of Blockset. “Do you have any thoughts or suggestions” someone asks. Staying much in line with his talk from the day before, Benjamin first talks about making the Blockset as accessible and understandable to a lay person audience:

> You might have noticed from my talk, if you were listening, that my thinking has changed a bit. I honestly think we, and I mean everyone, not just like us here, need to focus on framing and communicating our ideas in a way that makes sense to a lay person, like people in the world that don’t know anything about blockchain. My advice is to work on that. We don’t need to talk about the tech, we don’t even need to mention the blockchain stuff. I mean we can mention it, but not dwell on the technical aspects right off the bat. Just talk about the end goal, what it achieves, and everything surrounding blockchain. It’s funny because if last year me heard me say this, I would have hated it. I would have been like, blockchain, that’s my fucking word, I’ll use it all I want.

He then offers his thoughts on the technical build of Blockset and encourages everyone to explore the different blockchains that people have been working on and come to him again later:

> I really recommend that you do a bit of homework and read up on some of the things that have been coming out lately. Like a lot has change in blockchain over the year. Do you know Polkadot? You should definitely read up on it a bit more. I think it could be a really good option.

Leo states “I don’t really know much about Polkadot, I’ve always assumed that we’re going with Ethereum and stuck to that, it seems like that’s the place to be,” to which Benjamin responds:

> I mean, you could also build on Hyperledger _____ too, right? I mentioned it in my talk a bit and how we’ve been contributing to it. And like I said in my talk, I never imagined that I would have been contributing to Hyperledger – like an enterprise blockchain project and private blockchain, right? – but Hyperledger _____ is different from Hyperledger Fabric, right? _____ runs on the Ethereum mainnet, so you can technically say your using Ethereum. It’s an Ethereum client.

As Benjamin gathers his things, he says “do a bit of homework, check out Polkadot and _____, and when you’re ready, we can set up a meeting when I’m back from Japan, I leave tomorrow, but if guys are free tonight, you’ll probably find me at Shift.”

Reflexivity

Like Benjamin, all members of Blockset that began as idealists anchored in the crypto community experienced notable change in terms of their approach to implementation. Each of them worked on different projects across the different stages of development and demonstrated that they became less rigid in their ways, recommending different material implementations and advocating for black boxing the technology and focusing on everything around it. Yet, each of these idealists experienced such change at different points during the creation of Blockset.

During the early stages of conceptualizing Blockset, Altco was a modestly sized blockchain development shop that had worked with a few clients on non-blockchain based projects outside of the crypto community to generate revenue, but the bulk of their work was for blockchain developers and companies within the relatively immediate context of crypto. As co-founder and CEO of Altco, Benjamin stated in a public interview at the time in response to a question about who he has tended to be working with through Altco:

> Most of our work comes from the blockchain industry if you want to call it that. We don’t see much else externally. We see a lot of blockchain specific work, which I definitely find more interesting. We help blockchain companies create their own bespoke environments that have access to the Ethereum mainnet rather than enterprising solutions that operate on their own.

Accordingly, the interactions that Benjamin tended to have were with people that already understood blockchain, were convinced of it, and were using the technology. Indeed, as an early adopter of blockchain, Benjamin mainly interacted with – by virtue of the field being in its formative stages of development – people that were also early adopters of the technology. "For the most part," Benjamin said in a conversation with me, "the end user that I'm building for is other blockchain developers, we're using the technology that we're creating and creating the technology that we want to be using." Thus, because most early adopters of blockchain were developers and the tech savvy, talking about and showing technology was a natural part of the blockchain industry. Conversations and presentations were filled with technical lingo and references from the crypto community because most people were blockchain developers.

Over time, however, as blockchain as a technology and a field grew, Benjamin increasingly interacted with people from beyond the relatively small but vibrant community that he was a part of. These people were not as familiar with blockchain and did not necessarily have deep technical knowledge about blockchain, Leo being a prime example. As Benjamin explained, when he entered the blockchain space and more specifically Ethereum "it was very much a hobbyist type of space rather than an industry or professional space" and when he went to Ethereum meetups, "most people there were curious about the technology and developed a passion and love for it that kept them going… there were only maybe two people that would show up that were doing it professionally, like getting paid to build stuff for work."

Frequently described as one of the top Ethereum developers in the country leading a blockchain company building cutting edge blockchain technologies, Benjamin had no shortage of projects to work on. He was regularly approached individually and through Altco to work on various projects but only agreed to ones that were consistent with his values and what he felt was

the intended use of blockchain. “I fell in love with this technology because it was created to empower people like you and me and everyone else through decentralization for the betterment of society and not the betterment of powerful centralized entities that currently control society,” said Benjamin during a conversation with me at lunch, also adding:

> Any project that I work on, that is kind of my minimum filter, does it empower people through decentralization and for the betterment of society? And I really believe that Ethereum is where that is happening. I’m not here to just build someone else another ICO or some new coin or some business an internal solution to help them make more money. Unfortunately, I’ve learned through bad experiences in the past and projects that I just had to leave because they turned out not to be about decentralization for the betterment of society and people. There are so many great blockchain projects out there, but there are also a lot that I don’t agree with. Obviously, some are scams unfortunately. But others are using blockchain for centralization and not decentralization, which is kind of the opposite of why the technology was created in the first place.

Yet, why did all the crypto-anchored idealists change and begin to adopt more pragmatic orientations? While my fieldwork that afforded the opportunity to follow members within and beyond the immediate context of Blockset revealed that a changing macro landscape (e.g., entry of big businesses, advances in technology) and increased interactions with normies played an important role, these factors in themselves did not trigger change. Instead, it was reflexivity – that is, personal reflections by the idealists – on such factors and a reassessment of their values that triggered change. At the same time, what enabled such reflexivity was time away from Blockset and any given project that they were working on, and condition that was less likely for disciples who increasingly worked on Blockset. Indeed, unlike with the blockchain experts, Blockset was the only blockchain project that disciples were working on. I now continue to explore Benjamin’s experiences with regards to technological advancements and interactions with people and examine how reflexivity on such guided him towards pragmatism.

Technological advancements. When Benjamin joined Blockset and started to contribute to Blockset during the conceptualization stage, all the projects that he was working on were connecting to the Ethereum mainnet in some manner. While various private blockchains such as

Hyperledger Fabric existed and were being implemented by various enterprises and being recommended by people at Blockset like Lena and Klaus, Benjamin was not particularly excited about such blockchains because, in his mind, they were not necessarily in the purpose the betterment of society. “Where Hyperledger Fabric breaks from some other blockchain systems is that it is private and permissioned” as stated in the Hyperledger Fabric documentation. “I definitely understand the use case for enterprises, but it’s not necessarily going to benefit the public,” Benjamin said in an early conceptualizing meeting when someone asked about private blockchains and recommended them. Indeed, such a general view on private blockchains designed to serve individual enterprises within their own bespoke environment was shared by all the other blockchain developers and technologists, with the exception of Lena, who was doing an internship at IBM, one of the main contributors to the Hyperledger project.

This was the state of the technology and Benjamin’s mindset during the early days of Blockset, which was baked into early and foundational conceptualizations of Blockset. Ideas were discussed and then detailed in a comprehensive 30-page “specification document” created by the core team at the time and as Leo often said in meetings moving forward, this specification document “really captured a lot of the initial of Benjamin and Altco and built the foundational concept of Blockset that we are working with.” Yet, after this initial contribution, because Benjamin started to get busy at Altco, he stepped back from actively contributing to Blockset.

As I continued to followed Benjamin’s work beyond the immediacy of Blockset, I watched him advance the scope of his work to focus on interoperability between different blockchains, and when I asked him about his growing portfolio of work, he stated:

> There’s an amazing community of blockchain developers working on different blockchains for different use cases and it’s really a waste if none of these blockchains can talk to each other and interoperate, right? We’re getting to a point now where there’s enough stability within different blockchains and can see the potential is each of them and we can shift to focusing on how they can work together, instead of creating these siloed systems, which is just amazing, right?

Project by project, Benjamin and his team at Altco expanded the scope of their work beyond Ethereum, though Ethereum was still their home base. Yet, as he explained, talking with his co-founder and colleagues and reflecting on their work to date reminded them of the bigger goal that they sought to achieve and how focusing narrowly on a single blockchain and believing that the whole community should do the same was inhibiting rather than enabling the movement:

> We're all still focused on contributing to building Eth2 and Web3, but my partners and I have done a lot of reflecting and have spent a lot of time finding ourselves and have had to remind ourselves why we got into this in the first place. There was a time when we were all like so heads up just focused on Ethereum, which was needed, right? We needed to build the foundational infrastructure to get everything to where it is now. But I was talking to my partners about it all, and like it is great because we can keep each other in check. And we talked about how our goals at the very beginning, like when we first met each other at the Ethereum meetup was to create a decentralized society for people and not an exclusive club for Solidity developers only. It's been a crazy journey so far, like I get to build blockchains for a living with my friends, but I've had a lot of time to think about these things and chat with our members when we're on the road.

Indeed, as I followed Benjamin beyond his immediate work on Blockset, I repeatedly observed him, his colleagues, and his fellow blockchain developer friends, engage in deep conversations about the purpose of their work and openly discuss the latest developments in the field and what it means for the decentralization movement.

While discussions in and around events when he and his team were on the road is where much of Benjamin's reflections took place, he also explained to me, the importance of an initiative that he and his partners created for Altco:

> We started doing this thing called Coffee Talk Tuesdays where everyone is randomly paired with someone else on the team to take an hour off and go chat about whatever they want, ask questions, or just to get to know each other. Part of it is for team bonding reasons because we've been growing like crazy, and I needed to have time to meet everyone. But the other is to pull our head out our work, get away from whatever we're building and coding. And in mine at least, we tend to end up talking about this and that random thing that happened last night or the week before, but every once in a while, someone mentions something that gets me thinking kind of on a deeper level. We often talk about why we got into this in the first place, doing that sort of reflecting has really guided and motivated a lot our thinking and our expansion into other areas.

Importantly, curious about what prompted his work on Hyperledger _____ and his suggestion that it might be a good option, I asked Benjamin what motivated such work and suggestion:

> The opportunity came up and we talked about it as a team. You know, I really never expected to be contributing to Hyperledger in my life. And I have had pretty clear positions on it in the past, so I find it personally interesting that we've done so. So, one part of it was, it syncs and operates on the Ethereum mainnet, right? It's not like other Hyperledger projects and expands the scope of the decentralization movement in a way that is good for the community. That was very important. The other part is, and this is something that I've been struggling with, in our work, we come across a lot of egos, and we get tied to our work and community to a point where we don't even look at the potential of other blockchains. We've all be guilty of it. And so, with this, a big hurdle was setting aside that longstanding personal vendetta with Hyperledger and thinking about how this could work and why it might contribute to the whole movement. It's easier said than done and it's been a struggle, but that has been a big part of it.

As Benjamin stated: "The reason that Hyperledger _____ is potentially suitable now is because it is a part of Ethereum now, it is a Hyperledger project that works with the Ethereum mainnet."

Interactions with people. Benjamin was not only at the forefront of developing blockchain technologies, but also constantly interacting with a diverse set of people during his time away from the screen. From hosting and contributing to events for newcomers to the space to doing interviews and presenting at various events around the world, Benjamin was consistently interacting people that were not specifically experienced blockchain developers and/or subject matter experts. At the same time, his non-blockchain friends increasingly became curious about his work and blockchain. Importantly, as Benjamin notes, reflecting on these interactions played an important role in his decision to begin advocating for simplifying and making the ideas that they work on more accessible to the lay person:

> I've reflected on all the experiences that I've had and realized that there are a lot of people that would definitely use this technology, but we've represented it in a way that just makes it hard and like almost hard for the sake of it being hard. We expect people to prove themselves. We can 100 percent make Web3 look like Web2, but for some reason, we've been like deliberately trying not to, which is kind of crazy if you think of it. But I've been increasingly interacting with people are actually interested in this, but just deterred or don't have the time to invest in learning it. We're creating this technology and we can 100 percent make it accessible to others if we want to.

As Benjamin also noted, learning how to communicate and introduce the technology to people without talking about blockchain is a big part of the movement. Indeed, other members often mentioned "demystifying" and "unblocking" blockchain, specifically for friends asking for help.

What ultimately triggered Benjamin's advocating of black boxing the technology and discussing everything around it rather than the technology was his own reflections on interactions where he successfully introduced the technology to people because he had made an effort to make it accessible in the moment. Indeed, several of the blockchain developers and technologist frequently recalled specific interactions where they spontaneously had to talk about their ideas through chance encounters as one blockchain technologist said:

> Friends have approached me and had like heart to hearts with me and been like, 'okay, I don't get blockchain, but can you like walk me through how to get a crypto wallet? I just haven't been able to get over that hurdle' and like after 15 minutes they were the happiest person in the world.

Indeed, as I accompanied Benjamin and his team to a local hackathon where the participants had no prior experience of blockchain, I watched him in action as he walked all the participants in his group step by step on how to install a crypto wallet as pictured in Figure 19.

Figure 19. Benjamin showing participants of a hackathon how to install a crypto wallet

One by one, as Benjamin sent each of them a little bit of cryptocurrency, their eyes light up with excitement. "Woah, hahaha, that's amazing" said one of the participants, "like its right here in my wallet already, it just showed up." Recounting this event in a conversation Benjamin states, "those kinds of moments are the best and a reminder of what we need to be working towards."

Catching up, I told Benjamin that I was a surprised that he told Leo to stop talking about blockchain and to not use the word. He explained how his eyes opened after he started noticing that people that could be using blockchain and wanted to be using it were not because everyone was focused on making it appeal and make sense to their fellow blockchain developers. At one point, we discussed how he once said that "we need to enlighten the people about blockchain," which prompted him to say, "that's true, but we could also use a little enlightening ourselves and reflecting on why we are doing we are doing," a point that he elaborated in a public interview:

> In the beginning, we wanted to build for the end user, but the technology wasn't at the point where we could focus on that. We had to build the infrastructure first, so we could build for the user. We had to focus for a time on blockchain developers, so we could bring this to the masses. But we kind of just got stuck in that headspace and one day realized that not many people are using the tech that we are creating and that everyone in creating. We kind of had a reality check and realized that not everyone has the time to spend on this technology, they have jobs and families, so even if they wanted to, they can't… so it was after realizing that, we made the switch. We're not changing the technology, just changing how we communicate and package it.

Ultimately, like other blockchain technologists and developers, Benjamin remembered that he got into the blockchain space because he wanted to create technology and a decentralized society for the benefit of people, but he realized that over time what he was building was not being used by the people because of how it was being presented. So, rather than focus on the making something feel and look like what he and his fellow developers felt looks like a blockchain platform, he prioritized make it fit into what people are used to on the surface whilst still pursuing decentralization from underneath – that is, through the code:

> Decentralization is a movement for the people and if people aren't a part of it because they face barriers, then who is the movement for really? We can build whatever we want, but it's useless if it doesn't get used. Blockchains don't solve problems by themselves. People using blockchains does though. So, while the code that we write is still for the sake of decentralization, we need to make it accessible to real people.

In sum, there was a distinct shift in the preferences and views and overall orientations of Benjamin and other contributors that distinctly started as idealists towards pragmatism.

TRUSTED ALLIES

A key challenge that persisted throughout the creation of Blockset was that when pragmatists created a manifestation of Blockset and/or made a recommendation that entailed de-emphasizing Blockset's association with blockchain and its underlying technology, idealism disciples who were leading implementation efforts would reject said ideas and not take the expertise of their colleagues into consideration. However, as my fieldwork advanced through the various phases of development, I observed various instances where disciples demonstrated a distinct willingness to discuss, embrace, and even celebrate manifestations of Blockset that deviated from their idealistic preferences and appeared as a carbon offset platform tailored to the climate community. In comparing such instances, what I ultimately found was that for disciples, it was not the actual manifestations of Blockset that caused their vehement rejection, but rather their broader interpretation of them. Specifically, their experiences leading up to the creation of any manifestation of the idea had everything to do with who created it and their experience rather than the material or representational manifestation itself.

Disciples distinctively resisted recommendations to deviate from any of their preference if they came from contributors that they felt did not "get it," despite their expertise. However, when contributors that "got it" made such recommendations, they did not demonstrate such resistance. Indeed, over and over again, the expert advice of climate experts, policy makers, technologists, designers, and even blockchain experts were rejected because disciples believed that they did not get it. Yet, when people that they believed did get it put forth the same ideas, they did not resist them and in many cases, they embraced them. This resulted in an interesting dynamic where climate experts did not trust the expertise of their fellow climate experts and broader experts from which they sought contributions, causing some experts to disengage.

In this final section of my findings, I reveal how disciples at Blockset were more rigid in their ways than the crypto-anchored idealists and that their receptivity of manifestations of Blockset were based on who created them and interpretations of why they created it that way. Highlighting two manifestations that resulted in a platform that de-emphasized all blockchain aspects – with the exception of a tagline "Powered by Blockchain" – I show how such divergent experiences transpired and that the key to getting disciples to relax their idealistic tendencies was to have people that they felt "get it" shepherd them away from seemingly dogmatic idealism.

Rejecting "Powered by Blockchain"

Blockset partnered with a local technology and design organization called TechStation to create a comprehensive visual mock-up of Blockset – referred here as Model-A – that the team could then take to showcase to others. Over a month and half period, a team of four designers from TechStation that were trained in user experience and user interface (UX/UI) regularly met with key members of Blockset to better understand what they should build. They spent hours interviewing multiple members of Blockset, requesting materials, and conducting additional external research, including interviews with potential users of Blockset.

The final build of Model-A was a modern and interactive website designed to appeal to organizational and institutional entities that might use Blockset. Yet, in a meeting after the final presentation, decision makers at Blockset that were disciples felt that it was not "crypto enough" and that a "Powered by Blockchain" tagline made it "seem like blockchain is not important." As one disciple said the day after the presentation: "It's a lot like, kind of a B grade offset registry or like an offset sales platform that already exists... and the world sure as heck doesn't need another one of those." Consequently, Model-A was never showcased to the public as intended nor was it circulated widely across the organization. In other words, it did not get used as intended.

Accepting "Powered by Blockchain"

Several months later, Nabeel joined Blockset as a blockchain developer and was tasked with creating a functional prototype of Blockset – referred here as Model-B – that the team would showcase to others. While part of developing this prototype was to create the back-end – the code underlying Blockset – that executes the desired functionality, another part was to create the front-end – the visual interface of Blockset – with which the users interact. Nabeel spent most of his time on creating the back-end code, however, for several weeks, he also allocated time to creating a front-end user interface. "I can definitely do front and back-end development," says Nabeel to the team, "but I am definitely more of a back-end architecture kind of guy… front-end user interface stuff, like UX/UI is definitely not really my area of expertise, I'll try my best though." When Nabeel started, he was given a folder with all past materials, such as documents, diagrams, and mock-ups, including Model-A previously created by the designers at TechStation.

Having been sent Model-A that the designers created, during the development process Nabeel proclaimed "I've really just used that one that TechStation created and turned their design into code." Thus, the visual mock-up of Model-B was largely a replica of Model-A with some very minor adjustments. Notably, just like Model-A, the user interface of Model-B included the same tagline "Powered by Blockchain." However, this time disciples responded with "I love the powered by blockchain thing" and began showcasing it to people as soon as possible, offering a stark contrast to their reception to the tagline when the designers put it forth.

Interpretations

In an objective sense, the visual manifestations put forth in Model-A and Model-B were nearly identical. Even Nabeel stressed that he recreated Model-A and focused on coding it. However, disciples responded negatively to the former and positively to the latter to the point of rejection

and acceptance. Yet, this was not the only time that nearly identical suggestions were rejected and accepted. For example, a comparison between the underlying architecture that Nabeel proposed and one proposed by a newly founded blockchain development shop Ozark showed were nearly identical. Nonetheless, whereas the one by Ozark was rejected and forgotten, the one by Nabeel was accepted and implemented. Indeed, when disciples discussed the proposal by Ozark, the discussion centered around "are they crypto enough?" and "do they get it?"

Why did such divergent responses from disciples happen at Blockset? While several factors go into making decisions, my fieldwork revealed that a distinct pattern was that disciples only discussed and accepted ideas that were put forth by actors that they feel "got it." Whether or not someone got it greatly influenced how disciples interpreted any manifestation put forth. In the case of Model-A and Model-B, however, as I explain in the remainder of this section, "Powered by Blockchain" was interpreted as concealing blockchain with Model-A and illuminating blockchain with Model-B, based on disciples' interactions with the creators of each. These interactions shaped disciples' perception of the creators, which then shaped how they interpreted the "Powered by Blockchain" tagline. Overall, while such a tagline may seem like a minor detail, it is a distinct illustration of a key tension point between pragmatists and idealists throughout my 24-months of fieldwork centered around distancing Blockset from blockchain.

Concealment. In various interviews with both pragmatists and idealists that interacted with the designers to create Model-A, I asked them shortly after they saw Model-A what they thought about it and the work of TechStation. "Like I've said in the past, something like 'Powered by Blockchain' or 'Powered by Ethereum' is the perfect way to go," said a pragmatist. "The whole 'Powered by Blockchain' thing seems kind of like an attempt to hide that this is a blockchain platform," said an idealism disciple, "I'm pretty sure they don't get it, what we are

doing, and blockchain too." To understand why disciples interpreted the tagline as an attempt to hide the blockchain so to speak – that is, viewed it as an attempt of concealment – we need to explore the interactions leading up to the final presentation.

While the designers followed a standard discovery process that many businesses and consultants follow in which they received documentation provided to them and gathered information from a variety of sources to better understand what they were to be building, a distinct topic of tension emerged early in such a process surrounding "talking about and showing the blockchain." Meeting after meeting, after acknowledging that they are not familiar with blockchain, the designers expressed concerns over referencing blockchain on the final build. "I start digging into blockchain and I honestly think it might scare people if we emphasize that this is a blockchain platform," said the lead designer. "My concern is that people might not understand it," said another. Meanwhile, one of the designers repeatedly mentioned that they felt that "blockchain is affiliated with Bitcoin, which will confuse people."

Yet, the designers' concerns over showing and talking about the blockchain were not unsubstantiated. Beyond reading about blockchain and looking into other organizations offering blockchain-based climate solutions, they based their recommendations on various interviews that they conducted with potential users of Blockset and systematically tested various iterations of the platform with test users, points that were brought up several times.

> We interviewed climate professionals – you can actually find the raw interviews in our folder – and they really told us not to emphasize the tech, one of them told us, 'it's best not to talk about the technology, focus on the business side, the value added by the solution, and the blockchain part won't matter.' So that is why we are making these recommendations. We also did several rounds of A/B testing with different users to improve the user interface and experience.

When such concerns were raised in group meetings involving anywhere from one to five members of Blockset and all four designers, disciples tried to justify their rationale for wanting to emphasize that Blockset is a blockchain platform. At the same time, however, pragmatists that

were participating sided with the designers and offered justification on why they felt that the blockchain aspects should be de-emphasized or even avoided altogether. While such responses from both pragmatists and disciples tended to be made diplomatically, over time, tensions developed, and several disciples became visible frustrated. Indeed, some started to disengage during the meetings or to interject when the topic came up.

Ultimately, while all the designers indicated in interviews that they sought to "highlight" the blockchain with the "Powered by Blockchain" tagline, disciples indicated that they felt that they resorted to "demoting" the technology to a "minor text" due to a lack of understanding and a lack of appreciation for blockchain. Indeed, as one disciple stated in an interview: "They don't get it, they included the powered by blockchain bit because they don't get it."

Illumination. When Nabeel joined Blockset, he emphasized that although he was passionate about addressing climate issues in his personal life, he had never worked in the area before. Thus, while he was confident that he would learn the essentials along the way, he would be relying on the climate experts on the team for input, while he focused on making sure architecting a robust blockchain system and putting it into code. Nonetheless, when he started, he followed a similar discovery process as the designers that created Model-A. Yet, there was a stark contrast with regards to interactions surrounding "talking about and showing the blockchain." Meeting after meeting, Nabeel and other developers that joined here and there openly discussed how to they could "show the blockchain" whilst communicating that they often found themselves torn when dealing with the task. Indeed, as Nabeel stated:

> I talk about this with my friends all the time, my blockchain friends and my non-blockchain friends… like abstract it away or not… and part of me is like abstract it away and overtime show it people, but the other part of me is like shove it in their faces and force them to adapt.

As weeks passed, Nabeel and several other members of the team continually revisited the topic and brainstormed ways to "highlight the blockchain" even in the most subtle ways. "Check

this out" said one of the developers as he zoomed in on a tiny icon, "I put a little hidden Bitcoin symbol here, haha, I also changed this background triangle thing to the Ethereum logo." Yet, despite such efforts, on many occasions, Nabeel as expressed his concerns about showing the blockchain on the user interface and his willingness to do so:

> You know, I'm definitely not a designer, right? Like if the designers have been telling to de-emphasize the blockchain and stuff for the UX/UI, it's probably the way to go. At the end of the day, I'm developer and while I love that we are trying to figure out how to force blockchain on people, I have years of experience just abstracting everything away to create a seamless tech experience for the user right. Like that's what developers do. They literally teach us to abstract the tech away in school.

Importantly, in response to such open discussions and testing out of ideas, idealists, including disciples, expressed how they "really appreciate" hearing what Nabeel had to say on the topic. Indeed, in comparison to the experience with the designers of Model-A, there was a distinct positive air to the interactions with Nabeel: "I love it man, it's really great to pick your brain on the topic and see what crypto Nabeel thinks about the topic."

All in all, when Model-B by Nabeel was unveiled with the "Powered by Blockchain" tagline, disciples stated that they "love the tribute to the blockchain" and "the hat tip, the homage to blockchain with the little powered by blockchain." At the same time, they did not realize that the user interface was almost a perfect replica of Model-A created months earlier. To disciples, it was a newly created front-end user interface created by Nabeel. Curious about why some of the idealists responded so differently, I asked them, and the response that I received was as follows: "Nabeel did it because he gets it, he understands it, but the TechStation guys did it because they don't get it, they don't understand it."

PART III:
DISCUSSION

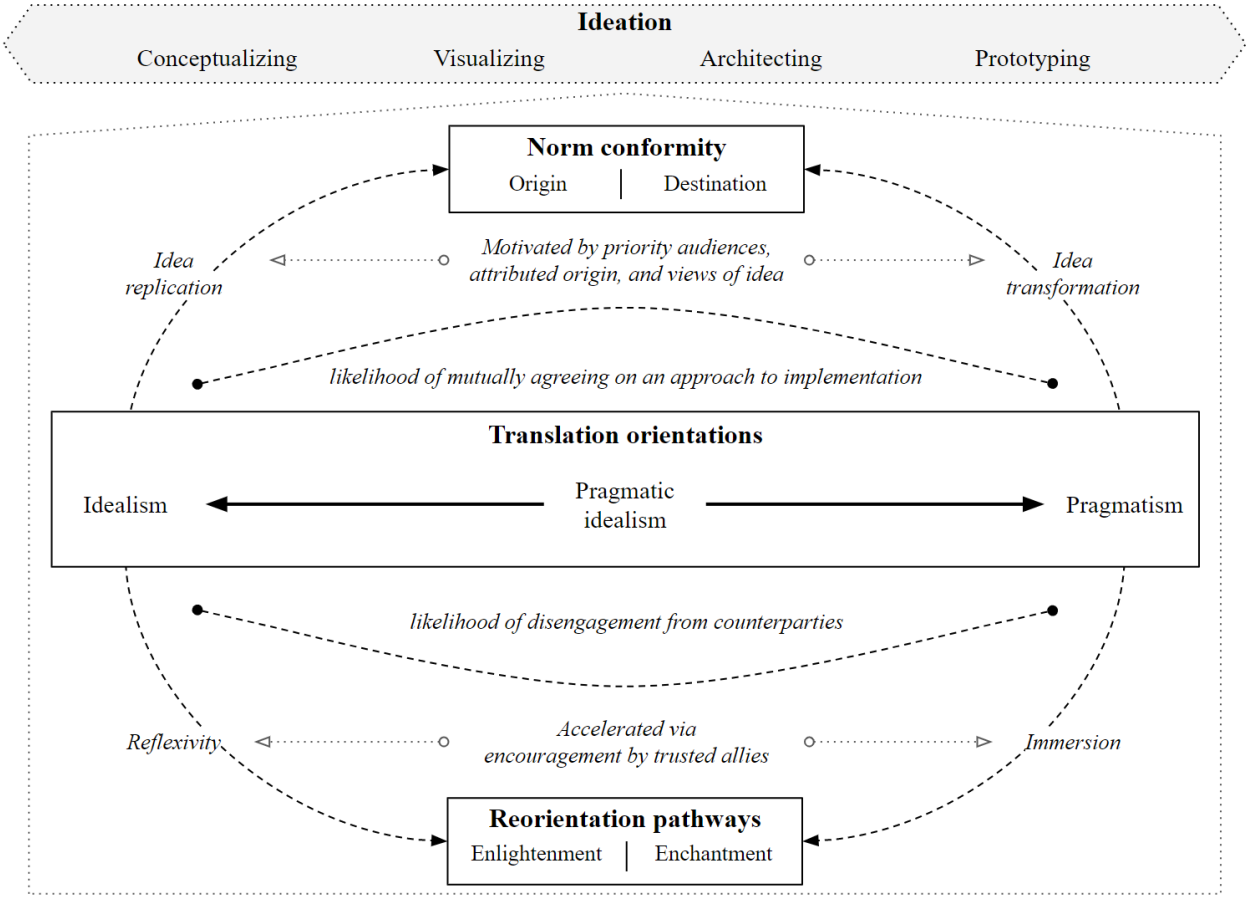
CHAPTER 6:
AN ORIENTATION-BASED MODEL OF IDEATIONAL TRANSLATION

Ξ

In this chapter, I discuss the findings from my ethnographic study of life behind the formative creation of Blockset in further detail. My aim with this dissertation is to explore translator heterogeneity and the diverse lived experiences of actors facilitating the travel of novel ideas to advance our understanding of the microfoundations of new venture ideation through translation, referred to as ideational translation. In the end, progressing through ideation to the point of creating a functional prototype of Blockset entailed contributions from actors that possessed both diverse expertise and diverse translation orientations, general beliefs in how to execute the adoption of an idea. In what follows, I explore these findings surrounding translation orientations by developing an orientation-based model of translation, as shown in Figure 20, which delineates key microfoundational aspects concerning translators' orientations that underpinned the ideation of Blockset throughout each phase: conceptualizing, visualizing, architecting, and prototyping.

Overall, given the basis of this model in an ethnographic study that sets out to generate context specific insight, I do not make broad sweeping claims that this model is generalizable beyond the immediate context of my study. Yet, I posit that parts of the model might have degrees of generalizability to cases involving the adoption of broader novel ideas beyond their origins that are rooted in niche communities that possess a specialized skillset. However, even within such contexts, I have reservations given blockchain's rootedness in the decentralization and open-source movements. Nonetheless, recognizing these caveats, I now explore the model.

Figure 20. Orientation-based model of ideational translation



TRANSLATION ORIENTATIONS

The first and foundational aspect of my model is that in the context of ideational translation, an important delineation of translator heterogeneity is the translation orientations that translators embrace. This foundational aspect is grounded in the ethnographic fieldwork that enabled me to observe and interact in close quarters with contributors to Blockset to better understand who they are and how they viewed and approached the adoption of the idea at any given point in time throughout the various phases of ideation. Like political orientations, translation orientations are best understood as being situated on a spectrum, and when dealing with a novel idea like blockchain rooted in broader social movements, particularly useful bases to anchor such a spectrum are idealism and pragmatism. While idealism is associated with implementations that

conform with the conditions of a context that a translator considers an idea's origin, pragmatism is associated with conformity with an idea's so-called destination. Importantly, my decision to associate idealism with an idea's origin and pragmatism with its destination was grounded in empirics. At Blockset, practical and pragmatic behaviour was associated with an end user or consumer-facing audience of and conformity with the status quo within the climate community and society at large. Meanwhile, idealistic behaviour was associated with conforming the norms and expectations of members of the crypto community, particularly blockchain developers.

Yet, because translators might not wholeheartedly embrace idealism or pragmatism – that is, they might not be situated at the far ends of the spectrum – I stress that they might embrace a hybrid orientation that I refer to here as pragmatic idealism. While a range of pragmatic idealism orientations may exist and favour either side of the spectrum, such an orientation ultimately blends elements of idealism and pragmatism in various fashions and situates a person on the inner bounds of the translation orientation spectrum. That said, I argue that an orientation that places relatively equal footing on both idealism and pragmatism exists at a theoretical midpoint between idealism and pragmatism. Importantly, at Blockset, pragmatic idealism rather than outright idealism and pragmatism became more evident over time as the translators contributing to Blockset moved away from the polar ends of the spectrum for some or all aspects of ideation. [§]

Ultimately, the core argument that I make is that translators contributing to an idea are not uniform in how they approach implementation. While an idea may be implemented in a specific way, there is often a set of diverse translators behind said implementation that embrace different general beliefs in how the idea should be implemented, and an idea might have been implemented the way it was for several reasons. Theoretically, an organization could consist of a

[§] Pragmatic idealism rather than idealistic pragmatism lies at the theoretical midpoint on the orientation spectrum because, semantically speaking, idealistic pragmatism may be confused with extreme pragmatism. Meanwhile, pragmatic idealism does not bear such ambiguity.

uniform set of translators that embrace the same translation orientation if they, for example, have a recruitment process designed to attract, identify, and retain a specific type of person such as consulting firms. Indeed, there are many organizations that have such processes that entail multiple tests, interviews, and other evaluations. Yet, others have no such endeavours or processes in place. At the same time, many organizations that have systems in place do precisely the opposite as they seek to reap the benefits of diverse perspectives. Thus, to reiterate, the first finding and aspect of my model is that translators within a given organizational setting can be heterogenous and an important delineation of heterogeneity is their translation orientation.

NORM CONFORMITY

The second but already implied aspect of my model is that translation orientations shape how ideas manifest as they travel into new contexts because they are anchored on preferred approaches to implementation that stress conformity to different norms. While manifestations of ideas may change over time, the argument that I make is that they are enactments of translators' orientations and that it cannot be assumed that all translators within a case of translation seek to prioritize conformity to the destination context. Indeed, although pragmatism emphasizes transforming an idea in such a manner, idealism stresses replicating an idea in a way that maintains conformity to an idea's origin. I make such arguments directly from the findings from my case on Blockset, which illustrates that the various manifestations of the idea that were created and introduced to the world – and in some cases, not introduced to the world – conformed to the norms of different communities. People that were distinctively idealists produced manifestations of Blockset that clearly conformed to the norms of the crypto community. Meanwhile people that were distinctively pragmatists produced ones that clearly conformed to the norms of the climate community.

Additionally, those that fell within the inner bounds of the spectrum and could be categorized as pragmatic idealists – which tended to emerge over time as idealists and pragmatists were reoriented – produced manifestations that had a degree of conformity to both the crypto and climate communities. For example, the implementation document that one pragmatic idealist created recommended a user interface that drew on a suggested developer library offered by a government entity, which would make it look like any other government platform and not a blockchain platform. Yet, the suggested system architecture was based on the Ethereum mainnet. In turn, the manifestation of Blockset created by this pragmatic idealist entailed a representational manifestation that was pragmatic but a structural manifestation that was idealistic, masking the idealistic inner workings with a pragmatic interface on the surface.

In the end, because the case of Blockset deals with formative creation of a new venture through translation, my model indicates that when new organizations are created through ideational translation, whether and the degree to which they transform to conform to an idea's destination is a function of a translator's orientation. Crucially, based on my findings from Blockset, I argue that translators' preferences for conforming to the norms of its origin or conforming to the norms of its destination are motivated by micro factors like who they consider their priority audience, what they attribute as the origin of an idea, and their own views of the idea at hand. Indeed, as the profiles of idealists and pragmatists at Blockset reveals, such micro factors had a foundational role in shaping translators' preferred approach to implementation.

REORIENTATION PATHWAYS

The third aspect of my model is that the makeup of a set of heterogeneous translators may change not merely because of turnover but because the orientations that translators embrace can change. Such a finding was based on observed changes in the contributors to Blockset as they

progressed towards creating the first functional prototype. Specifically, with this aspect of my model, I argue that translators can be reoriented along the spectrum. While movement can entail a relatively dominant orientation becoming stronger in that a person moves farther down the spectrum on the side that they favour, reorientation entails a dominant orientation becoming weaker in that a person moves in the direction of the opposing orientation that they favour.

Crucially, my model theorizes two pathways through which translators can experience reorientation. First, a pathway to being reorientated from pragmatism to idealism is what I call enchantment – the process of becoming overwhelmingly delighted, charmed, and mesmerized – with an idea and its surroundings in its originating context. Such positive feelings can be so powerful that they motivate a translator to immerse themselves in an idea and its surroundings to the extent that those that are not enchanted think you are obsessed and/or lost your way. Importantly, in the case of Blockset, immersion in the crypto community and the work of blockchain developers served as a key mechanism of enchantment, showing that immersion and enchantment have a recursive relationship. Indeed, being enchanted by blockchain and its surroundings is what sustained the immersive experience and motivated translators to go deeper into "the crypto rabbit hole" and the more deeply immersed translators became, the more they were enchanted by the idea and community. For example, it was not until Clara was euphoric and had her first positive experience with blockchain that she was motivated to immerse herself in it. "Oh my god! I'm so happy!" she screamed when received her first CryptoKitty, a stark contrast from her withdrawal and hesitancy to engage blockchain in any fashion when she was deeply skeptical of the technology and was in constant fear of being hacked.

Importantly, as I observed with multiple translators, although enchantment is an individual experience, it can transpire through individual and collective means of immersion.

Indeed, much of the enchantment that translators experienced happened independently as they immersed themselves on their own time and at their own accord. Yet, it was also shown that collective immersion within the immediate context of Blockset and with other contributors through cross-expertise meetings was powerful for facilitating such a pathway of enchantment.

Next, as witnessed with virtually all blockchain developers and technologists at Blockset, a pathway to being reoriented from idealism to pragmatism is what I call enlightenment: the process of obtaining a deeper understanding of one's sense of purpose and how idealism can constrain their ability to reach this goal. In the case of Blockset, while it was illustrated that technological advancements and interactions with broader members of society that were normies had an important role in all blockchain experts' movement from idealism to pragmatism, they were not the mechanism that enabled a sense of enlightenment amongst them. Instead, the key mechanism of enlightenment was reflexivity as evidenced by idealistic blockchain experts' constant and deep reflections on the topics.

Reflexivity in the case of Blockset was focused on the practices associated with the preferred approaches to implementation that idealists embraced in parallel to their beliefs and assessments of whether such practices were in fact consistent with each other. Unlike idealists that did not experience major reorientations, the enlightened idealists regularly carved out time to reflect on their own experiences. For example, Benjamin regularly met with his business partners and colleagues to do so and found much time to engage in reflections during his travels and as he prepared for the numerous speaking engagements that he did. Meanwhile, Pamela maintained a series of video style diaries that she posted online under an alias during which she would deliberately reflect on her experiences, and like Benjamin also found much time to reflect during her preparations for various speaking engagements or media articles that she contributed to. Yet,

what all enlightened idealists mentioned was the importance in setting aside their egos or desired identities during such reflections and confronting the struggles that they have encountered.

While my model theorizes that enchantment and enlightenment are pathways to reorientation, it also stresses that the key to unlocking such pathways is the presence of a trust ally that enlists or encourages one to explore such a pathway. Without a trusted ally, people may be hesitant and/or not motivated to because they have doubt and/or concerns that they are only one. For example, I saw extreme doubt and the experiencing of imposter syndrome by Clara which was overcome through engagement and mentoring by members from within. At the same time, Benjamin made a major shift once he was approached by a long-time friend in the field to begin exploring a different set of blockchains. Thus, although I do not posit that encouragement by a trusted ally is necessary, I do posit that it is an important accelerator for the process of reorientation, whilst emphasizing that the presence of a trusted ally may be particularly crucial when dealing with the recently converted attached to idealistic practices.

This aspect of my model surrounding reorientation has crucial implications as it suggests that translators may change over time in ways that directly impact how ideas manifest, particularly with regards to the norm conformity. Thus, how an idea manifests over time can also change within a single context, which highlights the importance of temporality in translation. Indeed, the iterative and negotiated nature of translation is not merely a product of changes to accommodate conditions faced within a context, but rather changes that translators experience.

ORGANIZATIONAL DYNAMICS

The fourth and final aspect of my model surrounds the impact of orientation-based translator heterogeneity on the internal dynamics of organizations. First, my model posits that when an organization is comprised of translators that span the translation orientation spectrum, the

likelihood that they will agree on a manifestation of an idea follows an inverted-U shape that traces a manifestation's placement on the spectrum. This insight is based on observations on the enduring pattern of how translators that favour idealism and translators that favour pragmatism perceive opposing orientations, the pressures that they exerted on their counterparts to modify their approaches whilst defending and justifying their own, and their engagement in practices – targeting the wise and rapid implementation – that allowed them to circumvent opposing expectations. It is also based on observations that as manifestations moved closer to the middle of the spectrum, translators at the ends of the spectrum were more likely to make concessions and accept them. Accordingly, my model posits that a theoretical inflection point or plateau – represented by the top of the inverted-U – at the center of the spectrum that spans the area where pragmatic idealism that gives idealism and pragmatism equal footing would be situated.

While idealists and pragmatists may attempt to sway their counterparts to embrace their orientations and adjust manifestations, the intensity of their attempts to do so is noticeably reduced in the middle portion of the spectrum. In this model, it is posited that the likelihood that mutual agreement between heterogenous translators is more likely with manifestations that reflect pragmatic idealism. Yet, what is important to recognize is an explicit emphasis on such an argument under conditions of relatively equal power distribution rather than asymmetric power distribution. This is because it was readily observable during my fieldwork that translators that occupied key positions of power ignored the requests, work, and preferences of others even though their own preferences were distinctively a minority within the organization.

Yet, an important finding from my fieldwork is that manifestations of ideas may gravitate towards pragmatic idealism over time as idealists and pragmatists are reorientated and move away from the ends of the spectrum. Indeed, at Blockset, I saw even the most extreme idealists

demonstrate pragmatic qualities over time. While many of the pragmatists did not make notable movement towards pragmatic idealism, some did and even overshot it. Thus, the movement from pragmatism to idealism and thus becoming what I refer to as disciples may be a slippery slope.

A second part of this final aspect of my model goes hand in hand with the first concerned with mutual agreement and posits that the likelihood of disengagement from counterparties – that is, those on the other side of a theoretical midpoint of the spectrum is the lowest at said midpoint reflecting pragmatic idealism. In other words, pragmatists are more likely to disengage in efforts that are overly idealistic, and idealists are more like to disengagement in efforts that are overly pragmatic. In the case of Blockset, the former was eminently observable as several pragmatic contributors disengaged completely and left the organization because they had a distinct sense that nothing would get done and that the endeavours were unrealistic. Meanwhile, although I did not observe idealists leave Blockset because of pragmatism, I have reason to suspect that they would. On the one hand, the idealists regularly ignore manifestations that distinctively embraced a pragmatic orientation. Rather than disengage and leave, because such idealists were in positions of power, they had the liberty to ignore such efforts. On the other hand, several of the idealistic blockchain developers shared stories about projects that they left specifically because it was not consistent with the norms and expectations of the crypto community.

Thus, it is posited that if either idealism or pragmatism is overly salient within an organization, members that embrace opposing orientations may disengage and even leave an effort. Accordingly, assuming no replacements are found, over time, a heterogenous set of translators may in fact start to look more uniform, appearing increasingly idealistic or pragmatic in nature. In turn, under such conditions it could be argued that an entire organization as an entity embraces a specific translation orientation.

CHAPTER 7:
CONCLUSION

Ξ

In this chapter, I bring this dissertation to a close and reflect on its broader contribution to society. The study underpinning this dissertation entailed a 24-month ethnography of life behind the creation of Blockset – one of the world's first blockchain-based carbon offset platforms – through the formative stage of its incipient ideation as a new venture, which I treat in this dissertation as a case of translation. Yet, consistent with the ethnographic tradition (Van Maanen & de Rond, 2017), I do not endeavour to make broad sweeping claims about the findings and developed model. This does not mean, however, that insights from my study do not contribute to research and theory. Instead, it means that as I explore the broader implications of my study for research and theory, I must emphasize that there are distinct "cautionary remarks that contextualize the research and its conclusions" (Zilber & Zanoni, 2020: 26).

CONTRIBUTIONS TO RESEARCH AND THEORY

Translation has emerged as one of the dominant organizational perspectives to understand the travel of ideas, and this dissertation contributes to it in several ways. First, its core contribution is a detailed ethnographic account of the microfoundations of new venture ideation through translation – that is, ideational translation. Specifically, through such an account and the adoption of a translation lens to advance our understanding of new venture ideation, it illuminates that an important microfoundational aspect of ideational translation is within organization translator heterogeneity delineated by translators' translation orientations. Yet, the argument that translators within a translation case are heterogenous is far from new. Research has shown that translation in context of scientific work is heterogeneous and requires "many different actors and viewpoints" (Star & Griesemer, 1989: 387). It has also shown that translators within organizations can have different preferences that reflect "their own personal and professional trajectories in life" and influence how they perceive ideas and aim to implement them (Boxenbaum, 2006: 943). To date, however, the literature has lacked a detailed and sophisticated understanding of translator heterogeneity within organizations rather than across organizations, especially with regards to incipient translation processes underpinning the nascent stages of new venture creation. In contrast to studies showing that translators across organizations can differ in their orientations and receptivity toward ideas and thus approach translation differently (e.g., Powell et al., 2005; van Grinsven et al., 2020), this dissertation reveals that translators within an emergent organization anchored on the travel of ideas may have different orientations towards the overarching process of implementation. In doing so, it identifies idealism and pragmatism as types of translation orientations situated at opposite ends of a spectrum with pragmatic idealism in the middle that can help us better understand who translators are.

In diving into the lived experiences of translators that embrace idealism and conformity to an idea's origin rather than pragmatism and conformity to its destination as stressed in most translation studies, this dissertation also adds to research reminding us that the disembedding and decontextualization of ideas is a gradual process by illustrating that not all translators aim to decontextualize ideas from their origins (Røvik, 2016; Tracey et al., 2018; Westney & Piekkari, 2020). Indeed, my study shows that translators that embrace idealism not only prefer to retain material and representational contextualizations of an idea, but also believe that doing so is socially appropriate. Ultimately, my deep dive into the lived experiences of both idealists and pragmatist and examination of their general profiles contributes foundational knowledge to understand both who translators are and why they embrace different translation orientations.

Second, this dissertation advances knowledge on how translators and translation change within a translation case by revealing that translators' translation orientations are not static (c.f., van Grinsven, 2020). Recent studies stress that translation is an incremental process comprised of instances of translation that form a single concerted translation effort and show that the form, nature, and directionality of translations may change (Lawrence, 2017; Tracey et al., 2018). This dissertation adds to our understanding of the temporal nature of translation by illustrating that translators can experience movement along the translation orientation spectrum and identifying enchantment and enlightenment – achieved through immersion and reflexivity, respectively – as reorientation pathways and encouragement by trusted allies as a potential accelerator. Crucially, while studies highlight how translation ecologies influence the translation of ideas (Nielsen et al., 2021; Wedlin & Sahlin, 2017; Westney & Piekkari, 2020), my ethnographic study suggests how developments in ecologies in themselves do not influence the translation of an idea, but rather people's experiences with and interpretation of them do.

At the same time, my findings resonate with work arguing that differences in the preferences of translators can become "the invisible object of negotiation in the early stages of [a] translation project" (Boxenbaum, 2006: 944). Indeed, this dissertation suggests that over time as new translation efforts progress, translation orientations may begin to converge or settle as orientations change and thus translators change. In turn, because translation reflects the work of translators, translator orientations and translations may experience the most change in the early stages of translation prior to reaching such a settlement. Consequently, while scholars have called for greater attention on the translation efforts over an extended periods to study long-term successes and failures (Claus et al., 2021), this dissertation reveals the importance of conducting research diving deep into the early and formative stages of translation underpinning new venture creation when the flow of ideas is particularly dynamic (Lawrence, 2017; Tracey et al., 2018).

Third, this dissertation contributes to broader and growing interest in explicitly advancing a microfoundations perspective of translation to understand what happens on the ground in real-time as ideas travel across boundaries at the macro-level (Boxenbaum, 2006; Gutierrez-Huerte O et al., 2020; Reay et al., 2013; Surachaikulwattana & Phillips, 2019; van Grinsven et al., 2020; Vossen & van Gestel, 2019). On the one hand, it advances our understanding of the role of emotions in translation, which has only recently gained attention. Specifically, recent studies have revealed anger and empathy as triggering and sustaining mechanisms of translation, respectively (Lawrence, 2017), and intense negative emotions as triggers of rejection that can cause failure (Claus et al., 2021). However, in highlighting the role of replacing intense negative feelings such as fear, anxiety, and frustration with overwhelming positive feelings of excitement and happiness in both the enchantment and enlightenment process, this dissertation contributes to our understanding of how emotions can facilitate the reorientation of translators.

On the other hand, this dissertation contributes to our understanding of the role of power in translation as it shines light on how power imbalances across translators can give audiences the impression that a set of translators embraces a single coherent translation orientation at the organizational level reflecting the orientations of those in positions of power. Indeed, while it is undeniable that powerful actors such as implementation managers, executive directors, and founders have a major influence in how ideas are implemented and may even control the process (e.g., Powell et al., 2020; Tracey et al., 2018; van Grinsven et al., 2020), by focusing on a broad range of translators and illuminating the struggles that they experience because they are not key decision makers in positions of power, this dissertation shines light on a relatively unexplored aspect of internal power dynamics and power asymmetries in translation (Brüggemann et al., 2018). Such a gap in knowledge has been unfortunate as it has been recognized that translation is "political" in nature (Frenkel, 2006) and fundamentally "involves negotiation between parties and reshaping what is finally transmitted" (Zilber, 2006: 283). Importantly, in exploring the lived experiences of pragmatists who lacked power in comparison to idealists, this dissertation shows that one possible way to temporarily overcome power imbalances that inhibit the translation work of those that do not occupy positions of power is to rely on rapid implementation during which powerful decision makers do not have sufficient time to control work.

Meanwhile, my findings contribute to the dominant focus of most translation studies – that is, the microfoundational translation work that translators conduct. Specifically, prior work has shown how translators may draw on an range of tools and practices to engage in "translation work" to recontextualize ideas (e.g., Cassell & Lee, 2016; Wright & Nyberg, 2017) or convert fellow implementers or members of the audience (e.g., Reay et al., 2013; van Grinsven et al., 2020). However, my study reveals that a form of translation work by idealists is the targeting of

the wise – a term graciously borrowed from Goffman (1963) and a practice that resonates with research on the selective targeting of cultural ideas (Sasaki et al., 2020) – and the location of various safe spaces so they can insulate themselves from pressures to embrace pragmatists' approaches. As my study shows, not all translators aim to recontextualize an idea and may even be motivated to engage in elaborate work to ensure they that can minimize the changes done to an idea and/or recreate it in a way that is consistent with what they consider the original. Yet, an internal challenge that may emerge is doubt, skepticism, and disengagement by translators that are not actively exposed to such wise actors being targeted and the safe spaces that they create.

Further, in shining light on how a key difference between idealists and pragmatists was that they were exposed to and familiarized with the idea at hand differently, this dissertation resurfaces the important but largely overlooked argument from foundational theorizing that how translators learn about ideas shapes their translations of them. Importantly, however, it does so by highlighting the role of such variance in learning about an idea within rather than across organizations and translation settings. Specifically, while referring to how translators across organizations vary in their implementation of an idea, Sevón (1996: 56) argues that "variation between actors comes from the fact that actors may differ in what they learn from others and how they learn." Indeed, my study shows that, within a single organizational setting, those that have direct and active exposure to the idea and its surroundings – including its creators and maintainers – distinctively embraced idealism in the early stages of translation. Meanwhile, those that were exposed to the idea passively via intermediated means tend to embrace pragmatism. In turn, this dissertation offers additional support to prior work arguing that direct contact with an idea's origins and/or originators can have a powerful effect on translators (Boxenbaum & Battilana, 2005; Powell et al., 2005; Westney & Piekkari, 2020).

Lastly, this dissertation distinctively contributes to our understanding of two relatively unexplored translation contexts: the translation of novel ideas, emerging technologies in particular, and collective translation efforts involving the originators and adopters of ideas. First, it illustrates that when dealing with novel ideas that rely on technical skills such as the coding underlying the development of blockchain platforms, actors that seek to found new ventures by translating an idea to a new field may not merely be able to prioritize local legitimacy if they lack the resources – namely skillset – required to implement said ideas. Indeed, in my study, the climate experts had neither the requisite skillset nor financial resources to create a blockchain platform, which revealed the important role of resource dependencies (Casciaro & Piskorski, 2005; Pfeffer & Salancik, 1978) when translating emerging technologies. Thus, whereas studies show that founders can improvise the implementation of an ideas (Tracey et al., 2018) or go learn from others (Westney & Piekkari, 2020), in my study, because the founder lacked the requisite resources, there was reason to focus on obtaining legitimacy in the idea's originating context. In turn, my study also reveals how collective forms of translation may be particularly needed when dealing with the adoption of novel ideas such as emerging technologies.

Accordingly, my study also reveals that because the idea of a blockchain platform cannot be severed from its digital underpinnings (Ingram Bogusz, 2018), translators working with ideas based on emerging digital technologies may be constrained in ways that non-digital ideas are not and power imbalances may emerge that favour those with the requisite knowledge surrounding an emerging technology. Yet, it also reveals that because such digital underpinnings are inseverable and controlled by the creators and maintainers of the idea, they may inevitably be more open to representational translations because the most important social-symbolic aspects to them are embedded in the material manifestation of the idea via the code.

When it comes to collective translation (e.g., Dacin & Dacin, 2019), however, my study shows how close contact between the originators of ideas can reorient pragmatic adopters of ideas and turn them into disciples that become dogmatic about idealism to a point where they reject the work of their fellow translators and experts in the destination. Specifically, in my study, we saw that in the pursuit of such legitimacy, the founder and other climate experts immersed themselves in the originating context of the crypto and blockchain community, which prior work has revealed to be an effective way to familiarize oneself with an idea. Yet, what my study also found was that, in many ways, they became disciples of idealism that transposed the idea back to the destination context (Boxenbaum & Battilana, 2005; Powell et al., 2005; Westney et al., 2020) with the goal to replicate the idea as they encountered it in its origin. Crucially, my study found that disciples can be more attached to an idea's origins than its originators as blockchain technologists and developers were more willing to make compromises than disciples were. Meanwhile, disciples no longer trusted the expertise of their colleagues, revealing an unexpected and potentially detrimental consequence of such close encounters with the originators of ideas and immersion in an idea's originating context. Thus, whereas studies have illustrated that people that go away and "come back" and transpose ideas are well-equipped to implement them (Luo, Chen, & Chen, 2021), this dissertation reveals a distinct challenge of transposition based on deep immersion. Moreover, whereas studies have shown that a distinct challenge of collective translation is that originators or ideas may seek to control its implementation (Brüggemann et al., 2018), this dissertation illustrates through close encounters with originator and deep immersion in the originating field of an idea, the so-called adopter of an idea may instead be a key inhibitor of change. It also shows that originators, due to their positions as trusted allies, may be the key to easing such an inhibitor.

PRACTICAL IMPLICATIONS

In the face of grand societal challenges and systemic change, practitioners, policy makers, and researchers are increasingly being called upon to mobilize across disciplinary boundaries to design and implement innovative solutions to said challenges (Clarke & Crane, 2018; Ferraro et al., 2015; George et al., 2016). Indeed, many ascribe to the belief that innovation is the key to solving the seemingly insurmountable challenges that we face in modern society, many of which concern the United Nations Declaration of Human Rights and Sustainable Development Goals. With such challenges and efforts as well as broader interest in advancing our understanding of how to enhance the impact of multi-stakeholder efforts (van Tulder, Seitanidi, Crane, & Brammer, 2016) in mind, this dissertation offers several practical implications that stem directly from my ethnographic study's fundamental finding surrounding translation orientations.

First, the fact that translation orientations served as a key point of tension that inhibited agreement between translators is a reminder that merely bringing together leading experts will not in itself suffice for devising innovative solutions. What my fieldwork showed me is that devising innovative solutions is every bit as much a cultural problem as it is a technical problem. Thus, while it is possible that bringing together experts that embrace different cultures or worldviews can lead to fruitful collaborations, when time is of the essence, it may be advisable to invest time up front to ensure that experts also embrace a similar basic world view. Indeed, it took nearly the entirety of my fieldwork for the contributors to Blockset to settle on the representational aspect of "Powered by Blockchain" due to divergent views on said aspects. Thus, specific to the issue of climate change, while it is known that the climate debate is a cultural one (Hoffman, 2012, 2015), it is important to recognize that even among those committed to the cause, a cultural divide may exist when it comes to implementing solutions.

Second, research based on deep ethnographic fieldwork has shown that there are distinct benefits of cross-expertise interactions and familiarizing oneself with the expertise of colleagues (Bruns, 2013). However, in my fieldwork, consistently seeing climate experts go deeper into the crypto rabbit hole and struggle to return to their supposed own subject matter expertise signals the importance of finding means to prevent actors from "going native" as they say in the world of ethnography (Barley, 1990). Prior research has noted that practitioners may want to establish organizational structures that allow for anchored personalization (DiBenigno, 2018). Yet, this dissertation highlights how in the absence of such formal organizational structures, practitioners may benefit from deliberately reflecting on their work in relation to their overarching goal on a regular basis as it may help them stay focused on their goal. At the same time, as my study illustrated with pragmatists that became idealism disciples through immersion and enchantment, encouragement from trusted allies can accelerate such transition back to one's home domain.

Third, this dissertation peered into the world of blockchain developers who hail from a community of developers that have poured their blood and sweat into creating a new category of technologies on their own time as a hobby. As society increasingly becomes reliant on developers to create and maintain the digital infrastructure on which society operates, an important insight from this dissertation is its highlighting that to many of the most talented blockchain developers, blockchain is not merely a technology. It is something deeply personal to them and working with them to usher said technologies into new areas of application will be more likely if collaborators recognize such a relationship that they have with the technology. Indeed, there is ample evidence that developers, especially those from the hacker community, view their work as a craft deeply imbued with their personal values (Coleman, 2013). If practitioners treat someone's craft as a merely commodified tool, challenges are bound to ensue.

Fourth, while this dissertation shows that the targeting of the wise and location of various safe spaces that host the wise is a strategy that actors can use to implement ideas in a relatively idealistic way, it also distinctively illustrates that such an approach comes with key challenges. One such challenge is that it may be associated with slower implementation. While going slowly is not in itself good or bad, it may be a distinct inhibitor for actors in the context of grand societal challenges like climate change. To this regard, a key insight for technical practitioners that are highly invested in their practice that emerged from my observations of blockchain developers is that it is important to recognize that there are many people who would like to better understand your area of work and contribute to it, but they might not have the luxury to dedicate their lives to it. In turn, investing time and effort into making it more accessible may be worth it.

Lastly, a rather unexpected practical implication that this dissertation offers is insights on how to deal with members of society that contest the work of experts. Indeed, if issues such as the global climate emergency and the COVID-19 pandemic have taught us anything, it is that people do not always trust experts and that we live in a post-truth world (Hoffman, 2011; Meyer & Quattrone, 2021). Indeed, now more than ever it seems that we are confronted with the reality that tackling misinformation is a grand challenge as it can inhibit broader efforts to address other challenges (O'Connor & Weatherall, 2019). Overall, while my dissertation did not explore misinformation, it rather surprisingly showed that some climate experts no longer trusted the expertise of their fellow climate experts as well as broader experts in society because they felt that they did not "get it." Yet, my dissertation shows that people can be reoriented and the art of persuading them does not lie in the content of the message, but rather the messenger. Indeed, we saw highly defensive experts accept identical recommendations but only from those they considered trusted allies that "get it."

LIMITATIONS AND FUTURE RESEARCH

I opened this chapter by explicitly stating that the purpose of the ethnographic study underpinning this dissertation was to generate context-specific insights rather than broad generalizable findings. Thus, while I believe that the insights derived from my 24-month ethnography allowed me to generate insight that accurately portrays the life of those that I encountered at Blockset, the findings presented in this dissertation may not be directly generalizable to other contexts. Indeed, key boundary conditions may include the context of blockchain and climate, the stage of development that blockchain and non-fungible tokens were experiencing as emerging technologies, and the nascency of the organization as a newly founded startup progressing through the incipient process of new venture ideation. At the same time, distinct boundaries conditions may include the voluntary, part-time, and informal nature of the organization, and the geographic dispersion of the team, many of which are trademark features of what some call the community-form or C-form organization (Seidel & Stewart, 2011). Thus, key insights from this dissertation may be more readily generalizable to other contexts.

One of such particular contexts with which the findings from my dissertation may resonate is the growing interest in craft and craftwork (Bell, Mangia, Taylor, & Toraldo, 2019; Kroezen, Ravasi, Sasaki, Zebrowska, & Suddaby, 2021). Such work covers a broad range of contexts such as beer brewing, watch making, wood working, and an array of artisanal works (e.g., Dacin & Dacin, 2019; Kroezen & Heugens, 2019; Pozner, DeSoucey, Verhaal, & Sikavica, 2021; Raffaelli, 2018; Sasaki et al., 2020) that are often associated with self-expression, broader protest against the mass industrialization of society, and a highly technical skillset (Sennett, 2008). Indeed, there has even been broader research that has distinctively found and argued that to coders, coding is a form of craftwork (Coleman, 2013; McBreen, 2001; Steinmetz, 2015),

which suggests that the findings of this dissertation may have broader generalizability to other forms of craft and craftwork, particularly as they experience increased commercial attention that may put stress on the roots of the ideas. Yet, despite the potential relevance, further investigation is needed to assess such claims of generalizability to the context of craft and craftwork.

While this dissertation offers a detailed look into the lived experiences of translators and the microfoundations of translation, much remains to be explored in the area of translation and the broader topic of how ideas travel. For example, it would be beneficial to expand our understanding of translation orientations by identifying what other types of orientations beyond idealism, pragmatism, and pragmatic idealism exist, in what contexts, and why. Meanwhile, understanding whether other pathways to reorientation beyond enchantment and enlightenment exists would of great use to advance knowledge of the changes that translators and translations may experience over time. Yet, what I ultimately hope to see in future research is more attention paid toward understanding who translators are, rather than what translators do. In particular, directly related to this dissertation's focus on translation orientations, it would be interesting to know whether and how the orientations and lived experiences of translators change over long periods of time, including subsequent stages of new venture creation through translation. Although my ethnographic study covered a crucial 24-month period during the formative stages of translation and new venture creation, research has shown that translation efforts can span multiple years and even decades before they are considered successful or complete. Finally, this dissertation evidently only examined one specific delineation of translator heterogeneity: translation orientations. It would be of great interest to identify and unpack other delineations of translator heterogeneity that shape the translation of ideas, and ultimately the travel of ideas across boundaries into new settings.

CLOSING REMARKS

With this dissertation, I sought to contribute to our collective understanding of how novel ideas travel and are translated in the context of new venture creation by conducting an ethnographic study that offers a glimpse into the lived experiences of the diverse people working on the ground to facilitate such processes. Over the course of a 24-month period, as I followed contributors to Blockset in their day to day lives and around the world in their efforts to create an innovative solution to contribute to the global fight against climate change, I saw tensions emerge between leading experts, struggles ensue, and transformations take place. Yet, what I ultimately learned is that for us to better understand how ideas travel across boundaries, particularly to address pressing societal problems, we need more on-the-ground real-time research that enables a sensitivity to the nuances of everyday social and organizational life.

“Greta’s voyage from invisible schoolgirl to global voice of conscience is an extraordinary one, and looked at more closely, it has a lot to teach about what it is going to take for all of us to get to safety.”

Naomi Klein
On Fire: The Burning Case for a Green New Deal

“Remember how, back in 1990, if you used a cellphone in public you looked like a total asshole? We're all assholes now.”

Douglas Coupland
JPod

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APPENDIX A: MEDIA ARTICLES, REPORTS, AND WEBSITES CITED DIRECTLY

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