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Article

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Meaning in the margins: Tracing global blockchain markets in local configurations

Alex Preda, Julie Valk, and Ruowen Xu

We started writing this a few days after Alex returned from ethnographic fieldwork in Hong Kong. This research trip required being on the road for two months, first doing a washout period in Bucharest, followed by quarantine in Hong Kong, then finally fieldwork itself. This was not Alex's first time in Hong Kong, but in fact the sixteenth. The day Alex boarded a flight back to London, another one of us (Ruowen) boarded a flight to Shanghai for an extended period of fieldwork in China. We plan another round in early 2022 in Japan as well, and in the US too, in addition to the ongoing work in London.

Why do we do all this? We run a research project on blockchain firms: for those readers who are perhaps less acquainted with the field, blockchain is a distributed digital ledger (there are several ways of building such a ledger, each with its own assumptions, modus operandi, and consequences) that, through its very properties, is global in nature. If there is something paradigmatic for global (financial) markets, then it is blockchain: by design, it is meant to facilitate existing global markets, create new ones, and make local markets global, or at least expand their reach. Finance is heavily involved in this process, not least in the flows of venture capital supporting blockchain creation and expansion, but also in migrating (and transforming) insurance, supply chains, art transactions, or systems of exchange to blockchain. It is also an apparently digital process, one that should be perfectly suited for what is called online or digital ethnography. And indeed, it is a process we have been following in online conferences, Twitter feeds, Discord and Telegram chats.

As we have discovered, such apparently uprooted, locality-less, exclusively digital processes – i.e., designing, setting up, assembling, running, and using blockchain – are always anchored in particular local practices, situations, configurations, and epistemic preferences. The boundaries where blockchain technologies interface with specific regional cultures and attitudes to technological change (not to mention with existing financial infrastructure and regulatory jurisdictions) are messy, emerging spaces. It is precisely these boundary spaces that require our presence, to witness them unfold and grasp the lived experience of those who operate within these spaces.

Blockchain is never abstractly global. Social science scholars have more recently pointed to its materiality – to server farms mining assets, transmission networks, and more. These material assets often are concentrated in specific locales, including specific cities around the globe. We should also point out here its anchoring in, among other things, local bodies of expertise accumulated over decades (e.g., with software engineering, financial, or legal expertise); local relationships between software engineers, finance professionals, lawyers, and managers; locally accumulated pools of capital; local understandings of regulatory priorities and of legal concepts.

This brings us to our main point and to the challenge that we want to discuss in this article: global markets, and the creation thereof, are not disjointed from local cultures. There is more than just one local culture involved in this process. How do we, as ethnographers, go about studying a truly global process in relationship to the manifold local cultures within which it is anchored? This challenge is not reducible to studying a (single) culture different from one's own: as we have mentioned, blockchain design, creation, set-up, and operation take place simultaneously in several

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local contexts. It is not reducible to simply working out the particular features of local culture(s) either: the challenge consists in working out how global processes emerge out of manifold local cultures at once.

Having said this, readers will wonder what our understanding of culture is. We will come to this later. We want to discuss first the makeup of our team, because we believe it does play a role in navigating various local cultures while upholding a certain sensibility for global phenomena.

None of us is anchored in a single culture; we all have, at several points in our professional lives, lived not only in different cultures but also in the interstices between them. One (Alex) is Eastern European, with experience of Germany, the UK, and the US, having done fieldwork in North America, Europe, and East Asia. One (Julie) is a dual citizen, British and French, brought up in France by British parents. She has a long-standing relationship with Japan, where she has lived, worked, and conducted extensive fieldwork. One (Ruowen) is Chinese, educated in Hong Kong and the UK, having lived in all these places and with fieldwork experience in mainland China. We all have experience in a multitude of local cultures, both professionally and in our private lives. This makes it easier not only to move across different cultures but also to recognize and appreciate their interstices, overlaps, and boundaries. We can talk meaningfully about the proper ways of handing out a business card in Tokyo or in Hong Kong, the proper way of walking out of an interview appointment in Tokyo, but also about how making interview appointments in Hong Kong differs from making them in London, for instance. In other words, we recognize the importance of knowing local interactional routines, and of adapting to them in our field interactions and beyond.

Nonetheless, we all have a strong interest in technology, materiality, and the digital. We recognize the global dimensions of the digital realm, irreducible to local interactional routines. This is also helped by the fact that one of us (Julie) is a gamer, and she (very usefully) keeps us up to speed on developments in the domain. We recognize that digital objects circulate, that they are exchanged in processes distinct from physically local markets. Take digital art, artifacts used by gamers, or contracts on a wide range of fractional property rights: all these are digital objects circulated and exchanged online within communities that span the globe.

Hence, while we know how to adapt to local interaction formats in our fieldwork, our ultimate interest is in analyzing the processes that create "the digital" as a domain sui generis: not just the "digital" broadly speaking, but digital global markets that deal in digital entities. During fieldwork, we heard repeatedly from our informants about the emergence of a digital world or, better said, worlds (supported by blockchain) that are not mere digital representations of physical processes, but something different. It is less relevant in this context whether our informants – software engineers, venture capitalists, business developers – are right or wrong. What is relevant, and worthy of investigation, is that they pointed us to a series of processes that they saw as exclusively digital, as a domain of its own situated next to and above physical worlds. And yet, while saying this repeatedly, our informants worked within particular, specific local contexts and local relationships and sustained a whole range of face-to-face interactions. Prima facie, there is a tension here, and it is worth investigating.

When we started this project, as a first step we wanted to better understand expertise. In a certain sense, what we are doing includes as a baseline an ethnography of collaborations between various forms of expertise: every blockchain firm requires a durable collaboration between software engineers and finance experts. And then legal expertise, business development expertise, and so on is added to them. Each and all these forms of expertise are local, in the sense that they are embedded within particular locales, in particular configurations. To give an example, London, New York City, or Hong Kong are nodes of financial expertise, given the sheer number of finance professionals working in these locales. However, they are also nodes of software engineering expertise. London is one simply because of the presence of software engineers graduating every year from a significant number of universities situated in a sixty-mile radius from central London and being absorbed into local fintech firms (not to mention inflows of expertise from outside London). In 2018, London was home to more than 350,000 engineers, the highest number in Europe (second was Paris with 268,000, see Ranger 2019). Knowing a local culture of financial expertise or of software engineers in blockchain became critical for our project. As we discovered, such cultures are not the same everywhere: the ways in which these two bodies of expertise relate to each other, the ways in which they perceive each other, and the ways in which they work together (or apart) are locally determined by a manifold of factors including flows of capital, perceived priorities in developing specific blockchain projects, and specializations decided in the local academic sector, to mention just a few.

When Saskia Sassen's *The Global City* was published thirty years ago (1991), she made the argument that global cities were agglomerations of service industries coalescing around and servicing core sectors such as finance. However, we can see global cities in a perhaps more decentralized fashion as local cultures

of expertise relating to and interacting with each other. This certainly seems to be the case for blockchain.

Take for instance software engineers: as we discovered during our fieldwork, there are differences among local groups of software developers involved in blockchain enterprises in London, Hong Kong, or Tokyo. Tokyo, for instance, being an early adopter of cryptocurrencies, has a predominance of crypto trading platforms. Hong Kong, where regulatory barriers were kept up for longer, has fewer crypto trading platforms but more companies with expertise in gaming, which has become very relevant for some sectors of the blockchain economy. Compared with Hong Kong, London has less expertise in blockchain conjoined with gaming but significant expertise in payments, supply chain, or cybersecurity, among others. Additionally, while software developers tend to concentrate in London, Tokyo seems to outsource much of this work, while Hong Kong seems to collaborate more across the border with developers based in Shenzhen. This means that while each of these locales can be seen as a node of software expertise in relationship to blockchain, there are in fact significant differences in the ways this expertise is organized and oriented toward particular activities. As software developers in Hong Kong have expertise in blockchain and gaming, they are active in the field of NFT-based digital art and of collectibles as well. NFTs are non-fungible tokens, unique digital identifiers of digital objects that can be transacted online, supported by blockchain (a large amount of NFT transactions take place on the Ethereum blockchain). We do not see the same orientation of software engineering expertise in London or in Tokyo: a consequence of this is that Hong Kong seems to become (among others) a hub of NFTs and digital art, attracting not only venture capital but also prominent auction houses from around the globe.

A consequence of such orientations is that they generate particular issues, to which other local nodes of expertise will have to respond. Take cultures of legal expertise: both London and Hong Kong are common-law jurisdictions. With regard to blockchain and crypto assets, both jurisdictions share legal concerns about anti-money laundering and transaction transparency. Yet, in addition to these, the emergence of Hong Kong as a digital art and NFT hub raises specific legal issues that do not have a similar prominence in London. As we have mentioned, NFTs are unique identifiers of unique digital objects. A problem debated by legal practitioners in Hong Kong as a digital art hub is whether ownership of the unique identifier is the same as ownership of the unique digital object or not. Imagine you buy a pair of unique jeans and obtain a unique receipt. The receipt identifies the jeans as unique. What have you bought, legally speaking: the unique sales receipt, or the unique jeans? These are issues that have significant legal and financial implications, and that can redefine what it means to own art. In London though, other legal issues are at the forefront, related more to fractional ownership, use of NFTs in legal evidence, or cybersecurity, all domains where London's software developers are more active and have a significant presence. In Tokyo, as far as we have seen until now, issues of cybersecurity have been dominant with regulators, among other things due to some prominent hacks in the past. Thus, different (legal) perspectives and priorities arise as responses to what nodes of other expertise are doing.

These local cultures – be they engineering, or legal, or financial – have to be investigated close up if one wants to understand how blockchain develops and why some projects are situated in particular centers and others are not. The internal dynamics of blockchain firms, the ways in which they organize workflows, also depend on such local cultures and how they stand in relationship with each other. For instance, one of us (Alex) going to Hong Kong and making the rounds of various blockchain firms simply allowed us, as a baseline, to map the location of various firms upon the city: we learned where the engineers sat and where finance professionals sat, and where they overlapped. We learned where software engineers were recruited from. We learned about their interactions with each other, how they perceived each other, and how such interactions and perceptions impact the organization of firms. In parallel, other members of the team (Julie and Ruowen) were attending blockchain conferences in London, interacting with practitioners who build and use blockchain applications. We could swap notes in real time about the differences we were observing; for instance, about the involvement of large investment banks in blockchain efforts in London, which was different from what we were observing in Hong Kong.

This should have made clear that, for the purposes of the project at least, we do regard local cultures as locally evolved constellations of professional skills and relationships within and among groups of experts, together with local constraints and resources. These are provided among other things by flows of investments, perceptions of what is locally important and needed by way of blockchain projects, as well as local understandings of regulatory needs. Understanding how blockchain develops means understanding how these cultures have evolved and what their dynamic is, as well as how they stand in relationship to each other. These local cultures achieve gravitational force, not only in the sense that they manage to attract more capital and more expertise but also that a series of relevant activities gravitate in their orbit. For instance, to

give but one example, some engineering expertise is outsourced to places like Vietnam or Eastern European countries, but this does not happen based on costs or on the convenience of being in the same time zone (or not exclusively in any case). It happens based on the gravitational pull local firms have developed, as well as on whether the outsourced expertise is core or not with respect to the firm, and on whether there is a need or not to intermediate between the forms of expertise involved in blockchain firms.

How do we, as ethnographers, get access to local cultures of expertise, be they in finance or software engineering, in various locales? These are cultures of professional groups that, to a large extent, are cosmopolitan and internationally mobile. While doing fieldwork in Hong Kong, for instance, one of us interviewed not only local software engineers who had worked in London or in the US for many years but also expats from Western Europe and North America who were working in Hong Kong. Accessing local financial or software engineering expertise is supposed to be difficult, either because of the busy-ness of the former or because of the "supposed shyness" of the latter. As we discovered, accessing local cultures of expertise is largely shaped not only by local interactional conventions, but also by the makeup of these cultures. For instance, being introduced to informants by a local professional organization can be essential in some locales. In some other locales, it may matter less than a network of personal and professional connections. Having a clear, public academic profile and a history of relevant academic work matters too. It also matters if the ethnographers have acquired a certain degree of conversational ability in the languages of the domain, such as finance or software engineering. When we started this project, we took (online) introductory classes in computer science. We also attended several online conferences on blockchain. Some of us at least had conversational ability in finance due to previous work on financial markets. All in all, accessing a local culture of expertise requires a certain degree of interactional expertise, i.e., the ability to speak the language of a domain (Collins and Evans 2007).

If we regard getting access to the field as intrinsic to the ethnographic work, then we had to situate ourselves on the margins of several expert cultures, in several locales, by connecting to professional networks, but also by acquiring basic abilities in speaking the languages of the domain (i.e., finance and software engineering). In this regard, it was relevant that we had, through our biographies, lived in several cultures. This was relevant not only with respect to recognizing and following local interactional conventions but – perhaps more important – with respect to the ability to situate oneself on the margins of a professional culture different from one's own, in a place different from one's own.

Conclusion

At least for the case at hand, we can make the argument that digital global markets in digital objects are emerging – we see them at work in the processes of designing, setting up, and running blockchains for finance, art, real estate, supply chains, and many more. This makes our investigative journey truly exciting. Yet, when talking about global markets, we should not forget that these are not untethered enterprises. They are anchored in local expert cultures that involve collaborations between different professional groups. Key to them are finance, software engineering, business development, and legal groups. Accessing these local cultures ethnographically can rarely if ever be done exclusively online. It requires mobility. It requires interactional expertise on multiple levels, from knowing local interactional conventions and routines to speaking the languages of these cultures, and the languages of these locales. It requires building professional connections and inserting oneself into professional networks, even if only on their margins.

Key to our project, and perhaps any project that deals with the tension between the global and the local, is the capacity to sit comfortably in the "spaces between" and the ability to stay with ambiguity. Much about blockchain has yet to be written in terms of exactly how it can affect the world as we know it. As we edge closer to seriously considering the propositions of this technology, analyzing how different locales, cultures, and professional pockets change, adapt to, and react to blockchain will be a task better undertaken from the front row seats, rather than simply on a screen. It is through the exploration of the nuance of different local cultures and local realities that we piece together the global blockchain market.

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