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Title	Leaning in or falling over? Epistemological liminality and the knowledges that make a market
Authors(s)	Geiger, Susi, Gross, Nicole
Publication date	2022-05-16
Publication information	Geiger, Susi, and Nicole Gross. "Leaning in or Falling over? Epistemological Liminality and the Knowledges That Make a Market" (May 16, 2022).
Publisher	Taylor and Francis
Item record/more information	http://hdl.handle.net/10197/24229
Publisher's version (DOI)	10.1080/17530350.2022.2058057

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Leaning in or falling over?

Epistemological liminality and the knowledges that make a market

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Published in Journal of Cultural Economy

Abstract

This article describes the experiences of two market studies scholars who became involved in an Applied Research Centre aimed at developing a societally valuable market in digital health - an experience that ended in failure. We introduce the concept of epistemological liminality as a theoretical tool to problematize our own positionality as 'market experts' in this failed academic-industry-government collaboration around a concerned market. Liminality involved entering a transitional space-time in which our academic knowledge as market studies scholars was suspended, but where we failed to successfully move into a new epistemic space of 'applied market studies'. This state of suspension - and frustration - is a cautionary tale for the difficulties of linking different (and often contradictory) epistemic communities that meet in applied research. We stop short of providing a moral to this market (non)performance tale, but we do highlight the need for openness and debate on the knowledges that come together to make a market in such collaborations.

Keywords: Market studies, auto-ethnography, epistemological liminality, applied research, academic-industry collaborations.

Introduction

As this Special Issue demonstrates, researchers who are engaged with 'real life' markets cannot sit back and observe. Through the simple act of studying, they have already become entangled with the market, its actors, and its devices (Roscoe and Loza 2019). In these entanglements, academics are sometimes asked to become market 'performateurs': to meddle in marketshaping activities, thus becoming part and parcel of the expertise that makes markets through the knowledge inputs and scoping devices it provides (Callon 2007; Muniesa et al. 2007). This paper reflects on the peculiar situation in which the two authors – both market studies researchers - found themselves between 2013 and 2017. Through our engagement in a government-sponsored Applied Research Centre (ARC), we had hoped to "write a market of the future" (Roscoe and Loza 2019, p. 217) in the area of digital health. As researchers of markets who had often felt all-too-theoretically concerned, we had been eager to 'lean in' to this multidisciplinary research centre, envisaging that we would become conduits for voicing different actors' concerns in order to shape markets at a crossroads of industry, public, and government interests (Geiger et al. 2014). What we ended up with was a situation in which we were tasked with 'unlocking the market' – as though there was a magic key that would allow us to do so - but where this task revolved around helping a narrow set of actors to reach an even narrower set of goals. Instead of widening the breadth of actor concerns taken into account, we served to essentially close them off. Perhaps naively, we had not been prepared for the difficulties associated with voicing our own concerns about this new market. More fundamentally, we were not prepared for the sense of epistemological liminality that we were catapulted into as a result of this involvement. As this essay illustrates, we had left the central questions of 'what is a market', and what expertise it takes to know and make one, unasked in this epistemological encounter of industry, funders, and market studies scholars.

This paper is a narrative post-mortem, featuring two accounts – Susi's, who was involved in the ARC at a strategic level, and Nicole's, who was involved at an operational level. We both reflect on how epistemological liminality was generated in this centre, and we consider what the centre's arguable failure meant to our knowing (researcher and marketer) selves. Our argument proceeds through interweaving two layers of thought: the first layer engages with the trials and tribulations surrounding university-industry collaborations. From this prism, our narratives are about the promissory contents of funding proposals, mismatched expectations and timeframes, power differentials, lack of wriggle room to negotiate research opportunities, and the strictures of accountability in funded research. The second layer reads these trials and tribulations as clashes between different market performativities and ways of knowing the market. In these clashes, epistemic differences in what counts as knowledge of a market become apparent, what material forms these knowledges take, how they are valued and accounted for, and who gets to speak on their behalf. We utilise the notion of epistemological liminality to connect these two layers conceptually and to analyse the 'fish out of water' situation in which academic researchers may find themselves when put to the market test. We draw conclusions by thinking through what epistemological liminality means for those academics among us who wish to become researcher-cum-practitioners of concerned markets. We also use our experience to reflect on the role that we as researchers can play in building, shaping, and organizing these markets.

Knowing a Market – Knowing Ourselves

At its most fundamental, this paper grapples with the question of what knowledges it takes to shape a market, and how these knowledges can extend to include the concerns of a broader variety of actors – including academics. Of course, ever since Michel Callon's (1998) seminal

volume describing the 'Laws of the Markets', we know that the knowledges that come to count in a market will shape the market's socio-technical *agencements*, which will shape actors' calculative abilities, in a mutually recursive relationship. Market studies researchers have followed Callon in this performative approach to study how diverse knowledges shape markets and their equipments. These knowledges include that of economists, of course, in keeping with Callon's reading of the now-legendary Sologne strawberry market (though see Ossandón and Ureta 2019), that of the data engineer who programs algorithms to 'see like a market' (Fourcade and Healy 2017) and that of various other market professionals (Araujo et al. 2010). With this epistemological backpack, market studies researchers like us surely should be able to contribute to performing markets with their own critically performative expertise!

To reflect on our experiences and extrapolate some learnings for would-be academic market makers, we found the writing of autoethnographic narratives to be a useful exercise (Roscoe and Loza 2019). These narratives are ex-post introspections on how and what we as researchers thought and believed when we were in situ, challenging our assumptions and understanding our fears, defenses, and insecurities (Learmonth and Humphreys 2012; Jones et al. 2016). Naturally, as researchers reflect on themselves, we also make decisions about who we want to be in the written text – the narrative self is a performance, an act of reinvention. In our case, this act of reinvention is exacerbated as our narratives are told in good Proustian fashion from the distance of several years and on the basis of admittedly less-than-complete research notes, diary entries, memos, emails, and all the other documentary remnants accumulated over the course of a five-year research project. In many ways, and in a hopeful sense, "authors ultimately write themselves as survivors of the own story they are living" (ibid. p.10). As survivors, we make decisions as to crisis points and the "morals to the story" (Denzin 2013, p. 4). But by being performative, autoethnographic narratives also become critical practices, which begin with the authors but move outwards to examine discourse and ideology (Denzin 2013;

Hamilton et al. 2008; Pollock 2007). Such writing is cathartic in nature; for both of us, our experience of prolonged liminality in the field has rattled some of our own beliefs and academic certainties, which this account has helped put into perspective. But our stories may also transcend us: by situating our reflections into the broader context of the making of neoliberal markets – and the neoliberal university, for good measure - we hope that future scholars-cum marketers have a better understanding about what it takes to write oneself into a concerned market.

Our reflections are based on our lengthy participation in a government-funded ARC hosted in a European university. This ARC was conceived to help industry and academia collaborate on specific projects in the context of digital health: a field that for many in the early 2010s represented a "technology without a market", as one ARC industry member described it to us. According to its mission statement, the ARC aimed to "carry out industry informed research on the adoption, deployment and sustainability of [technology] solutions and translate this research in a way that can enable our member companies increase competitiveness" (Centre documents). The ARC was funded by a coalition of two state bodies to a sum of one million Euros for an initial phase in 2013, followed, after a retendering process, by a second round of funding of over five million Euros for a five year 'hosting' phase.

By the time the centre was fully staffed, ten academic researchers (three research assistants, six postdocs, and one research fellow), a medical doctor and two nurses as well as five IT team members were managed by five principal investigators (PIs) under the themes of markets, business models, healthcare accounting, clinical issues, and information systems. Centre activities were steered by a group of industry partners, the PIs, and two University Vice-Presidents for Research, Impact and Innovation. The centre, located off-campus in an adjoining industrial park, ceased to exist in 2018 when the government decided not to issue any further funding for lack of progress and outcome (though no decision maker ever overtly admitted to this fact).

The Concerns that Shape a Market

Maybe a good starting point in pursuing our post-mortem is to list the concerns that the individual actors brought into this market making exercise, and how these influenced what market knowledge counted as valuable. To start with, the ambition that the two state bodies had in investing a substantial amount of cash into an applied research centre was to essentially make our little country the hub of a burgeoning digital health industry. This mission, in the eyes of the state agents, translated above all into creating jobs for highly skilled knowledge workers in IT, medical devices, and healthcare – to note, the centre was funded by two agencies belonging to the Department of Enterprise and Employment (one responsible for the development of local entrepreneurship, the other for fostering foreign direct investment), and not the Department of Health. Market making, to that end, equalled attracting and sustaining investments and jobs. Knowing the market entailed "producing" customers for the new technologies that would be developed. It meant "producing" sellers too, or perhaps rather making them visible as a cohort of firms that associate themselves with a specific market, for instance through joining the centre as industry members. Once customers and vendors were thus produced, it meant knowing how to create market positions and linkages. This would translate into corralling diverse networks and specialisms into a market organization that, as a whole, would be visible from afar, thus attracting further sellers and buyers into the country, and so on in a virtuous cycle. To make centre staff accountable for their part in the creation of this market, a list of key performance indicators (KPIs) was provided, including, at the top of the list, job creation, private company in-kind contribution, and network expansion. And way down the list: academic follow-on grant successes and publications. Success along these KPIs was to be measured after the one-year pilot phase for a follow-on funding decision – though it was recognized to be mostly promissory at that point – and at regular board meetings during the five-year 'hosting' phase, where all KPIs were to be charted for purposes of review and planning.

For the firms that joined the centre, relatively unconcerned with the broader economic aspects the state funders fretted over, market making was a much simpler concept – if not necessarily straightforward in its execution. They leaned into this academic collaboration in the hope that we would 'unlock the market' for them: giving them a key to creating products and services that would sell at a profitable price, to customers that could be described, addressed, and interacted with. Success for these companies was mainly measured in revenue expansion and customer numbers. Patients and healthcare providers entered their market horizons either as potential end-customers or influencers. Patient organizations were occasionally drawn into the centre to gain "the patient's" input into creating a flow of market practices that would end up generating sales. This particular expertise represented the 'user experience'. Healthcare practitioners – these all-important gatekeepers of any medical market – played a role too, particularly where they were synonymous with 'customers'. They were also called upon on those occasions when products or services in development needed clinical expertise – which was considered the rarest of commodities, something to be used judiciously. Appearing mostly non-plussed about their own involvement, doctors seemed to look at these technologies as 'nice to have'; as something that was unlikely to kill their patients but that they would really only get concerned with properly once the market was fully up and running. How to get to that point was other people's problem.

And our concerns? We wanted to study how a market was 'made' in the first place, but also help ensure that this market would be 'the best it could', producing a collective good rather than simply private gain (Geiger 2021). Having worked through various facets of 'concerned markets' before (Geiger et al. 2014), we had visions of bringing all stakeholders around the table with equal and honest voices to co-produce the diverse knowledges that (for us) make a

market. Beyond this 'heroic' quest for relevance and transformation as critical performateurs (see Butler et al. 2018), to be frank, we also saw golden opportunities for fieldwork; something that we knew how to make count in our daytime existence as academics. A clear win-win: becoming relevant (even valuable!) *and* getting access to the field! And so we went off and 'leaned in'.

Susi's story

It's a Friday in early 2015, and I have a meeting with the ARC's steering group. A posh board room, fancy sandwiches, and good coffee are awaiting. Free lunch is probably nothing to shout out about for the bunch of real-life managers and CEOs who will also be at the meeting but can still excite a university researcher! I leave my office and make my journey across campus to the two functional office towers just outside the campus perimeter - one housing a large online gambling firm (though ethically questionable, we place a large amount of our business school grads in this company), the other our university-owned applied research centre space, where several of these hybrid entities are housed.

Part of me is still excited to make this journey, to swipe my entry card, and to get into 'grown up' mode upon entering the maze of corridors in what somehow feels like a different world, though the building is still university-owned. In my existence as an ordinary social scientist comfortably locked in my little ivory tower, I'd heard from so many sides that what I do as an academic researcher is of no tangible value, producing nothing but unreadable papers in some arcane journals no-one ever reads (and, courtesy to publisher paywalls, nobody, in fact, can access). But now, with my involvement in this research centre, I'm making a difference, I'm not just talking about market shaping on a theoretical plane, I'm *doing* it: I'm helping to create a whole new market for a new breed of societally-valuable healthcare technologies, making the

world a better place while I'm at it. I am performing (a market)! Or, at least, this was the plan – the one that had motivated me, back in 2012, to put my hand up when the proposal to join an application for a new health technology centre came across my desk; this desire to prove that my knowledge was 'worth' something after all, that I knew how to do real-life (market) stuff too. Having read enough about how economists made markets, now it would finally be my turn!

Back in 2012, the government saw digital health - a technology which at that point not only lacked a market but a stable label too (Geiger and Gross 2017) - as an economic growth area, and it saw our country as a perfect hub for pushing this growth: highly entrepreneurial and boasting a strong presence of multinational technology companies. The plan, concocted by the government's economic support units, was to create a multidisciplinary centre that would bring together IT, healthcare, and business researchers with indigenous companies and multinationals in a space where they could make this market a reality, an objective that was emphasized in the early calls for proposals:

The technology centre will be resourced by highly qualified researchers who are associated with research institutions and empowered to undertake market-focused applied research for the benefit of, and with direct relevance to industry. The technology centre should, over time, build a national competence in connected health technologies and achieve international recognition for the quality and industrial relevance of its research." (ARC Detailed Description of Needs, August 2012)

When I first saw this call for proposals, I asked myself whether I in fact was a 'highly qualified researcher' empowered to undertake "market-focused research". Surely, had I not studied the making and shaping of markets extensively in recent years? Had I not built up a bit of a reputation in this space, published stuff, and actually started to grasp some of the intricate mechanisms that make markets work? Would this not be the ideal opportunity to finally valorise this knowledge by helping to build a market in a societally impactful area – even be

"empowered", as the call for proposals suggested, to write a new market into being? I decided that it was finally time to put myself and my knowledge to the market test. And yes, while undoubtedly naïve as to the ease in which I would be able to slip on the mantle of applied market expert, I was also convinced that once in a role of responsibility in this environment, I would have enough degrees of freedom to make my own expertise count.

And so I joined the team putting the application together as the resident 'market expert', a team that included two other business school colleagues as designated 'business model' and 'economic modelling' experts - funny how certain the writing in such funding applications is. No place here for performative slippage: we are the experts! We would work with a team of postdocs and research assistants alongside IT and healthcare academics by engaging with industry, government, and patient organizations in applied research projects, creating digital health products and services - and creating market structures for them, which is where I came in. As a principal investigator (Principal! Investigator!), I would also be part of the steering board, providing strategic oversight to the Centre, and a smaller management board to direct operational matters. So many different new performing personas were awaiting me!

Fast forward - through the application's success, the recruitment of researchers such as Nicole, who will tell her story below, a year-long pilot phase, retendering, and two years of working with industry on making a digital health market - to this Friday in 2015, and things weren't looking quite as expected. We had already held a number of crisis meetings with the Centre Director; today, we were going to bring the matter to the centre's board. Though really what that matter was remained somewhat foggy to us all. The tensions arising weren't exactly novel or unusual: the state-owned funders insisted on their key performance indicators - network building, revenue creation, and job creation - with graphs charting the centre's success against these metrics at every board meeting. Our academic expertise was indeed put to the 'market test' – but not quite as we had envisaged it: the centre had created a market for projects as our

internal research proposals were evaluated on whether industry partners were willing to cofund our research. The Centre Director, held responsible for achieving the funders' KPIs,
pushed researchers to pitch ever-shorter projects that would 'sell' on this market for industry
member-contributions — a market sizing exercise for firm X, assessing customer demand for
product Y, geoscoping market niches for service Z. Industry contributions in time or money
signalled use value and made the projects plottable on the KPI graphs. For postdocs, who had
to ready themselves for the academic job market, access to the field revolved around these
projects. Unsurprisingly, publications arising from this research — our academic North Star, for
better or worse, and junior academics' career currency —continued to be elusive. In any case,
given the glacial speed of the academic publishing world, they would not feature on the board's
KPI graphs for many moons to come — a timeframe that was simply inconceivable to industry
folk.

Far from dreaming up equitable healthcare markets, we were thus in the market for industry projects through which the yet-to-be-built market would be *known*. How those two markets were related remained quite the mystery. In fact, I felt less and less certain that I knew what a market *was* and if that market was indeed made through our market sizing exercises and scoping projects! Clearly, the few epistemological certainties I had gone into the centre with – how markets were shaped socio-technically and that if they were socially constructed in the first place they could also be reshaped – were not the performances of interest in the Centre. The Centre Director, pistol on his forehead from the state agencies, was furious with me and my researchers that we seemed so unenthusiastic about producing things that he could make count, and I was digging deep to recognize anything that seemed valuable to me in the epistemic objects we produced – case studies, industry projects, and market reports. We clearly were at epistemological loggerheads over the question of how to make a market (known).

The state agencies who had instigated this centre had essentially, if perhaps unwittingly, engineered many of these tensions, by pitting academic timescales, incentives, success criteria, and modes of knowing the world against those of industry. To be fair, it should have been clear to us that the latter would be given precedence over the former as the Centre's terms of engagement revolved around the notion of 'applied' research from the outset. As the quickest perusal of the literature on academic-industry collaborations shows, these tensions had been encountered and explained many times before: differences between action-based organizations and thought-based ones, clashes of cultures and incentives, differential social capital, training, structural issues, and lack of trust. Yet, the sinking feeling I had walking toward the meeting this Friday morning in 2015 was largely unrelated to these institutional issues. Rather, it felt like a personal failure – quite literally, an inability to perform. Though I did not blame myself for the Centre's struggles, I had failed to shape academically and practically valuable research projects out of the fieldwork opportunities we were given; failed to build a space that was sitting any way comfortably between industry's ways of creating markets and my beliefs in what makes markets tick. Despite our best efforts to 'unlearn', it seems that we had remained a bunch of 'academics', a phrase used pejoratively in an email from the Centre Director to all PIs, late in the process when things had truly turned sour. Despite all the self-doubt from knowing the wrong things, this email made me laugh: What else would we be if not academics? How strange it was to be criticized for the one performance I truly knew how to inhabit.

Soon after this meeting, I left ARC to go on a sabbatical. Though I briefly returned to it, the Centre at that point was about to shutter, a year ahead of its formal end date. We managed to extricate most of our researchers into 'proper' academic jobs, and we are still on talking terms with our industry partners. My desire to occasionally leave the ivory tower and get stuck into applied market studies remains, but I am much humbler as to how valuable my market knowledge would ever prove outside university walls. I know what epistemological liminality

feels like - a state of being betwixt and between where knowledge, the foremost academic capital and the core of our sense of self, becomes a thing of questionable value and a source of endless performance anxiety.

It would be remiss to end this personal reflection on my attempt to 'lean in' with my market studies knowledge without thinking about power, and in particular about who has the power to perform a market. Why, to be more specific, did I feel so powerless in this situation, though I was a senior figure in it? Why was I not more successful at resisting industry's desire to know the market 'by tomorrow lunchtime' with a more critically or at least reflectively performative stance? Without wishing to evoke the spectre of economics envy, reading through performativity literature it does seem clear that I failed to summon the assertiveness of those economists whom we often observe in the act of market-making. I think the simple explanation for a much more complicated fact is that those with epistemic clarity over their expertise – and the tools that translate this clarity in simple terms to others – are those who most easily gain epistemic power. Where we as market studies researchers see endless connections in intricate and ever-shifting socio-technical agencements, the Centre's state funders saw job creation and revenue expansion – two single points of measure, easily plotted in a graph that can be wielded as an epistemic tool. What did I have in my epistemic weaponry? A well-thumbed copy of Callon's (1998) Laws of the Markets and a voluminous collection of Journal of Cultural Economy papers – though mighty tools in some circles, they were less appropriate at beating critical market sensitivity into managers' minds.

Nicole's story

It was mid-2013 when I started my new job at a shiny new research centre located at a prestigious university. I had given up a well-paid teaching position in a private college to be here. Why? Because I wanted to be involved in research again, collect data and publish papers

of course, but beyond that, I wanted to be involved in something meaningful. Digital health held the promise to improve healthcare for us all, and a functioning market was needed for it. The profiles and publication records of the researchers at the ARC were impressive, the outline of work was appealing, and having a host of companies readily available for data collection seemed like a gift for any researcher, particularly relatively junior ones. I had felt a little insecure applying to the business model unit as my PhD had been in marketing but I got the job as a Research Assistant at the ARC, and my contract was upgraded to a 2-year Postdoctoral Research position after a year.

The first year of the research was frantic. The scope of the research projects had been predefined by industry together with the PIs, and funding had been allocated for each strand carefully. Expectations were high: we had to generate five business model case studies of digital health organizations, present these back to the technology companies involved as well as writing a number of other reports for them. Diligently, I spent hours on end delving into the business model literature and writing up the cases and reports alongside the other members of my team (one postdoc and two other research assistants). These case studies and reports were meant to generate value as follows: industry members were supposed to understand their business model blueprint better, appreciate the competitive landscape, and learn how to manipulate their business model components (e.g. resources, capabilities and networks, economic logic or customer needs) in order to achieve innovation and profitability. As we know from Doganova and Eyquem-Renault (2009), business models are important epistemic objects: purely by circulating, they can have significant performative effects.

Guided by our PI, we infused the case studies and reports with the latest published business model research. Most of the digital technology companies involved seemed to 'like' our case studies and reports, as academically abstract as they were at times. I say 'like' here quite carefully because as researchers, we had practically no insight into what our reports meant to

the industry members or funders. Instead, we just hoped that the reports, with their critical lens, would produce some kind of 'enlightenment' effect. One exception was, of course, this CEO who threw me out of his office at the presentation stage for telling him that his business model was problematic – the venture-capital funded company had existed for 10 years and never scaled any product successfully (spoiler alert: the unit in question ended up failing a couple of months later and the CEO, in his frustration, blocked us from using the data, thus eradicating any hopes of publishing from the case!). But all in all, we hardly knew what difference, if any, our work made when it came to making, shaping or organizing the technology companies' market activities - were they really performative, and if so, how? Furthermore, with all the concerns about business models, competitive landscapes, and marketing antics, I felt that the 'greater good' aspect of the research, something that had been important to me, had silently slipped away from sight. Within the course of the first year, we came to realize that the business model reports generated for industry were simply not analytical enough to be published in academic journals. Painstakingly, and often in our own leisure time, we had to re-work every case to get it publication-ready. We raised our concerns with funders and industry members that these 'dual outputs' were a huge source of pressure for us all, but these were ignored. Academic publications were, simply put, of no value to them.

On a more personal level, the first year was difficult for us researchers, as we did not know if we would have a job in the following year. The ARC had to go through a lengthy and complex approval process during year one before the funding for the next four years was released by the government. This meant that most researchers were living a typical junior scholar's life of academic precarity, characterized by multiple, short-term contracts. I spent a total of 3 years and 2 months at the ARC, during which time I signed 6 different employment contracts, with the shortest ranging one month and longest ranging one year. The university never made any commitments to keep researchers on past their current contracts, as short as those may be. Not

knowing if I had a job in the weeks to come was terrifying, and to reduce my risk, I started teaching part-time at the university. Of course, a side effect of this strategy was that I had to disperse my focus and thus reduce my 'commitment to the cause'.

After year one, tensions quickly built up. My old PI had left and I had moved to Susi's 'markets' unit. A Centre Director was hired - someone who came from a non-academic background and was firmly positioned to represent industry's interests. The Director was meant to relieve the PIs from the day-to-day operations of the centre, make strategic decisions, and engage with industry to secure research projects. The PIs were meant to stay closely connected with the researchers to work on projects and keep academic oversight of the centre. The reality was very different though. The Centre Director took over the management of all ongoing academic projects, 'weeded out' anything to do with academic publications, and eventually he effectively shut the remaining PIs out of the Centre altogether. Despite our expertise and track record - we had market knowledge, the theoretical type at least – the director did not trust us to have the 'right' kind of knowledge and reserved himself the judgement over what knowledge counted as 'valuable', buttressed by a constant waving of the funders' KPIs in front of researchers' faces. Researchers were asked to take on scattered projects, many of which were funded by government sponsored 'innovation vouchers', representing projects of two to three weeks' worth of work, and of course featuring neither large-scale robust data collections nor conceptual boundary-pushing. What we produced was piecemeal market research, generic strategy reports that outlined how to enter a market, or 'high level' recommendations on how to better sell existing technology products, solutions or systems. The situation became unbearable for us researchers: we had no meaningful way to empirically research the market (never mind building or shaping it), and with all eyes on the bottom line, there was definitely no way to make a difference in society or tackle important concerns in a concerned market: the funding of a public good through private equity-based mechanisms, the lack of fair and

affordable access to healthcare, or the overhyping of digital health as a silver bullet, just to name a few (on the latter point, see Geiger and Gross 2017). One by one, researchers started to leave, and many industry members became disinterested in engaging further projects and collaborations.

I ended up leaving the ARC at the end of August 2016 with the sense that something had gone terribly wrong. On the one hand, I understood that market making and market shaping is highly complex, yet this critical lens was unappreciated by the Centre Director (and perhaps also the industry members and other stakeholders). On the other hand, the reports that I was asked to deliver past year one seemed useless to me (and yes, perhaps also the industry members and other stakeholders). With the captains in this game, the funders, industry members, the PIs and the Centre Director, increasingly failing to agree what valuable knowledge about the market actually is, we, the foot soldiers, were even more at a loss about how to provide it. As junior academics, we got trapped ever more in this state of epistemological unsettlement, feeling powerless and frustrated. My story has a fairly happy ending though. On two occasions, Susi managed to secure funding from elsewhere and bought my time out from ARC to focus on academic projects with a significant theoretical and empirical merit – needless to say, these were purely 'academic' market shaping studies. Engaging in these projects allowed me to publish papers in high ranking journals, an undertaking which allowed me to secure a permanent faculty position in 2017. I am now getting settled into my own ivory tower but not without having developed a deep understanding that the epistemic truths around markets of a market studies academic are very different to those of other stakeholders.

Betwixt and Between

We use the concept of epistemological liminality as a theoretical vehicle to make broader sense of our experiences as applied market studies researchers and would-be-shapers of a concerned market. Liminality means "belonging to two different places, states, etc." (Cambridge Dictionary 2020), or as Victor Turner (1967) described it so succinctly: a state of 'bewixt and between'. The limen is a space-time that is neither one nor the other. Liminality holds a significant transformative potential, particularly if and when old norms and knowledges make space for new ones. However, in our case that never happened: though we surrendered knowledge we were relatively certain of, we spectacularly failed to move into a new epistemological nexus. Our experience of liminality was prolonged and seemingly unsolvable. Liminality is a transitional phase or rite of passage in which the person is stripped of social rank or status and experiences high levels of ambiguity. Liminality serves "... not only to identify the importance of in-between periods, but also to understand the human reactions to liminal experiences: the way liminality shape[s] personality, the sudden foregrounding of agency, and the sometimes dramatic tying together of thought and experience" (Thomassen 2009, p. 14). During times of liminality a person tends to withdraw from their normal modes

temporarily suspended (Szakolczai 2009). As agency dissolves, disorientation is brought about. In the limen, the 'I' is cleansed of its attachments to old performances - but also afforded the

possibility of a 're-agencing' of the self.

of social action (Turner, 1967); as normal activities, conducts and thoughts are being

unravelled, the social and epistemological fabric in which the person exists also becomes

Turner (1967) states that liminal persons go through three distinct phases: separation, margin (or limen) and aggregation. Through separation, the person detaches from social life and culture. In the limen, suspension of normal contexts lead to a state of ambiguity before the person emerges back to a stable state of being and regains "rights and obligations of a clearly defined and structural type" (Van Gennep 1960, p. 47). According to Turner (1967), liminality

is a state of great intensity and impact, thus it must be dissolved. As this transitional phase is accompanied by a heightened state of ambiguity, it cannot exist for too long without the social fabric, practices, and structures that will help restabilize the person's agency (Gross and Geiger 2017). If and when a return to existing structures is impossible, liminal communities may develop. These communities end up developing their own internal social structures or 'normative communitas' (Turner 1969).

A Space Between

Hailed as the hallmark of the new knowledge economy, collaborations between universities and industry sound like perfect win-win situations (Bikard et al. 2019). Innovation scholars tend to emphasize how much firms can benefit from these collaborations by forging relationships, gaining access to academic knowledge, and increasing their R&D output (e.g Lacetera 2009; Owen-Smith and Powell 2004). Indeed, university—industry collaborations have been shown to spur knowledge spill-overs, network benefits, and firms' competitiveness (Lehman and Menter 2005; Ponds et al. 2009; Steinmo and Rasmussen 2019). University—industry collaborations are also said to have advantages for involved academics who gain prestige through grant successes, valorisation through impact (the neoliberal kind), and access to research sites (Bikard et al. 2019).

However, as we experienced first-hand, establishing a true meeting space in-between industry, academia, and government – the famed triple helix of innovation - is a process laden with difficulties (Steinmo and Rasmussen 2019). At the heart of these tensions stands the consideration what public knowledge and private knowledge actually is (Bruneel et al. 2010), to whom it belongs (Shane 2004), and for whom it is valuable. As different institutional norms govern different types of knowledge (Dasgupta and David 1994), the expectations, organizational behaviours, experience curves, and knowledge sources also tend to differ

between universities and industry (Sauermann and Stephan 2012). In the process of 'experimental collaboration' (Sanchez Criado and Estrella 2018), epistemologies, their communities and their practices can collide, and actors may find themselves in a position where their own certainties are tested. When academics engage in a collaboration of this kind (Buford May and Pattillo-McCoy 2000; Lassiter 2005), they tend to go through a 'quasi-'traineeship' as their epistemological nexus is replaced with a new set of knowledge norms (Schiller 2018). Tilbury (2007) found that academics involved in applied projects tend to experience liminality as they have to negotiate different institutions, relationships, and organizational habitats, an experience that can affect them cognitively and emotionally (Hubbard et al. 2001).

Naïve Optimism and the Failure to Perform

The encounter of different sets of knowledges and ways to understand and perform markets is at the basis of all concerned markets, as Geiger et al. (2014) emphasise. Thus, in theory at least, industry-academy-government collaborations such as our ARC are ideal spaces to shape concerned markets. In these liminal spaces, old certainties would be stirred up to give rise to new possibilities. So why did we, in our particular limen, not succeed in bringing all concerned actors around the table to figure out the best possible market for the new technologies? How did we fail to build a space where we as 'heroic transformational academics', in Butler et al.'s (2018) words, could teach a critical market capacity to our willing manager-collaborators? Our stories illustrate how we had bought into the optimism Roscoe and Loza's (2019) expressed as to the performative impacts social scientists can achieve as market-writers. We had hoped to play a critical part in the 'becoming' of a market, wishing that it was *our* knowledge and concerns that would become performative.

Clearly, we were not the only ones with an agenda to perform (a market). The industry actors involved in ARC had hoped that they could pick our brains to 'unlock' the market. They wanted to know how they should construct their business models, how to market their products, and how to identify and approach customers. The very term "market innovation", one that Susi in fact had written into the original tender response, meant a world of different things to these industry folk. To be fair, our ideas of widening the breadth of actors heard in this act of entrepreneurial market creation were not entirely dismissed; they took occasional shape through open days, information sessions, and some patient-focused research. Yes, different voices were floating around in the Centre. Yet, on an operational level, the epistemological gap between us, eager to contribute to the gradual coalescing of the market, the industry partners' quest for us to show them the market, and the funders' desire to see this market 'take off', was evident. Over time, as the focus shifted away from trying to locate the market and towards the (non)performance of the actors (i.e. us), this gap only deepened (Pollock 2007). The marketmaking objective of the ARC started to fade into the background and the relationship of the actors within the ARC deteriorated to a point where it was impossible to develop a new epistemological communitas. We became stuck in limen.

While there is a good understanding that experimental collaborations like our ARC have a tendency to create cultural conflicts and clashes (Schiller 2018), the epistemological experience of liminality that unfolded during this collaborative process is perhaps less understood and the systemic failure to move out of it is not often talked about (though see Tilbury 2007). Standard innovation policy remains wedded to the idea that magic will happen one way or another once academy and industry are brought together to collaborate, and while social sciences have found themselves more frequently invited into these collaborations, their basic format and remit have remained unchanged (Diercks et al. 2018). Some describe university-industry collaboration as a mutual apprenticeship, but part of an apprenticeship is that the state of not knowing is

acknowledged, addressed, and overcome. Yet, this questioning around the vastly different if unspoken conceptions of what market expertise entailed never happened in our case.

Had we and those managers looking to us for our market expertise acknowledged and voiced these differences, we could have perhaps worn the mantle of expert more lightly. We could have maybe even gone the full way and assumed the role of the 'idiot' in the collaboration, just like the 'ethnographer' in Ossandón and Pallesen's (forthcoming) story. In a roundabout way, this would have allowed us to add more of a critical capacity to the project by slowing things down and questioning the other actors' own certainties to allow them too to experience the power of *not* knowing. Given that slowing down was the last thing on other stakeholders' minds, however, it is questionable how welcome 'idiots' would have been in the ARC. On the other hand, had we been more open and assertive about our own (admittedly peculiar) market studies expertise, we could have perhaps added a reflective distance to the market innovation endavours that industry sought to pursue, becoming the critical performateurs we wished to be. But with the two funders, a board of industry members, and the Centre Director looking to us for a particular kind of expertise, neither of us could commit either to the role of the idiot or to that of the critical performateur. In Nicole's case this was impossible because she was reliant on getting to the next contract, so positioning as the expert was a performance she had to assume to avoid academic precarity. In Susi's case, it was a self-fulfilling prophecy: from the get-go she had written herself into the central narrative as the 'market expert', so now she had to inhabit the role she had unwittingly carved out for herself. It turns out that both the critic and the idiot are situated at the side-lines, not at the centre of the action, where only experts and heroes are found!

Without alternative roles to resort to, being looked to as the expert yet not knowing anything of value became a perpetuated state of being. At a personal level, rather than opening up new

performances, unresolved liminality meant prolonged personal and professional frustration, disillusionment, and disconnection. More importantly perhaps, far from the emancipatory writing of future markets that Roscoe and Loza (2019) evoke, our market writing too seemed to get stuck in this liminal space as the state of not knowing took hold. Epistemological liminality clearly reverberated on our capacity to breathe life into a concerned market.

But enough already with this self-pity; we certainly do not wish to warn others off against engaging with 'real life' markets and their makers. So what is the moral of our tale? It is in fact rather simple: more thought needs to be put into exploring epistemological tensions in university-industry collaborations around markets. Their (frequent) performative failures are not often talked about in academia. One evident reason for this silencing is the neoliberal university's reliance on external funding, both for sheer survival and external prestige (Rhodes et al. 2018). Clearly this silencing is not helpful. As our personal stories as well as the trajectory of the ARC have shown, epistemological liminality in university-industry collaborations is almost pre-programmed, and market collaborations are no exception from this. As we have also argued, though, in hypothetical and more reflective versions of these collaborations, liminality could represent a productive time-space for developing a new epistemological 'communitas' (Turner 1969). In our case, this new 'communitas' would have been a creative coalition of academics, government agents, managers, patients, and healthcare providers to think and write digital health markets into being that are fair and equitable for all.

Post-script

The question why we have failed in performing as market experts was perhaps the wrong question to begin with. The more important question is: What did we and the other parties learn through this market collaboration about the ways that market knowledges are constructed,

circulated, juxtaposed and combined, and how could a creative bricolage of these knowledges be made to count? Could such bricolaging, in fact, solve the 'multiple markets problem' that Frankel (2015) has posed to our community of scholars, by making us more attentive to the multiplicities of ways of seeing 'the market'? Whilst it is outside the scope of our paper to expand in detail on how such juxtaposing of multiple market versions may happen in practice, we would like to share some personal lessons learned.

One way to make market scholarly interventions in real markets more practical is to take heed of Butler et al.'s (2018) warning to mind the gap and not to over-expect in our desires to be critically performative when working with managers or others who think differently about markets. We continue to believe that it is vital to engage them in these conversations, as it is exactly these multiple ways of thinking markets that can help us come to grasp 'the market', but when doing so we need to understand the perils and promises of epistemic liminality. The betwixt and between can indeed be a place full of creativity if the epistemic cultures and different temporalities of all parties involved are acknowledged and dedicated strategies to overcome these challenges devised from the outset. In the context of markets, these conversations would hopefully open up further reflections around the knowledges that make markets, whose knowledges these are, and how they are measured. It is only at this point that some of the 'lesser heard' concerns and their ways of seeing the market can be brought to bear in market shaping. Very simply, we should have probably leaned in to our ARC with one simple question, put to a round table of all actors involved: What is a market, and how do you know one when you see one? It is through such problematizing of the fundamental certainties of all collaborators that epistemic liminality can be made productive in practitioner engagements around markets.

The second path of making our market knowledge count is the one that Susi took, namely to engage in more partial academic activism around markets rather than trying to have market 'impact' as it is conceived of in the context of the neoliberal university (Rhodes et al. 2018). Susi's next project grant after leaving the ARC was a bottom-up one with few external performance strings attached – and no KPI graphs in sight. It was also one where she sided from the outset with amplifying those lesser-heard voices in the markets she studies through her research and her writing (e.g. Geiger 2021; Geiger and Gross 2021; Bourgeron and Geiger 2022). Though not naïve about the host of new challenges that come along with being an academic activist (that discussion is for another paper), at least in her personal experience the engagement with activists has relieved her of the need to pose as the 'expert' in these interactions. Time only will tell whether these engagements will contribute even in small ways to make 'better' markets, but for now Susi at least feels more ready to mix her own knowledge of markets in with those of activists and other concerned actors. We thus end on an optimistic note, rejoining our colleagues Roscoe and Loza (2019) in hoping that as market studies scholars we can make our knowledge count in the 'imaginative retelling of market possibilities' – as long as no-one gets stuck in limen or too quickly branded as the market expert.

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Without wishing to digress too far into arguments around the neoliberal university, this conflation of the university's research, innovation, and impact mandates into one *Unio in*

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persona is a high-level mirror image of the liminal space created in the ARC, signalling the purported ease of the unidirectional translation from 'basic' to 'applied' research.