Agency and AI in Consulting
Pathways to Prioritize Agency-Enhancing Automations

CENGIZ CEMALOGLU, *ReD Associates*
JASMINE CHIA, *Oxford University*
JOSHUA TAM, *IBM*

Amidst the advances of AI and automation, this paper provides a framework for ethnographic methods and insights to enhance human agency at work. Through analyzing data collected from ethnographic immersions in three different consulting firms (a professional services firm, a management consultancy, and a boutique insights agency), human-agent decisions are isolated in case studies and the pathways of unlocking the potential of automation to enhance the agency of individuals rather than constraining it are highlighted. Through drawing a distinction between thinking agency and executional agency present in the work of a consultant, this paper argues that automations that preserve thinking agency while maximizing productivity and accuracy are the solutions that should be adopted. Through vetting workflows sourced from ethnographic immersions with the established criteria, a framework for consultancies – and more broadly businesses – to better employ AI and automation is laid out and substantiated by an account of how anthropological approaches can be brought in to assist the process of prioritization among contextual automation processes.

PART 1: SETTING UP THE STAGE

Mergers and Automation

The merger was a complex one. Two pharmaceutical companies were coming together – each with varying overseas footprints, each having molded their companies to face different regulatory environments. As their disparate US-based businesses were brought under a large parent company, they hired a management consultancy to capture the *"synergies."* In other words, the consultants were hired to figure out a way to take as many costs as possible out of the merged company through removing duplicated resources and processes. *Naturally*, the first place to start was in the organization itself – deciding which employees to keep and which ones to let go of.

In the highly precarious process of a merger and an organizational restructuring, one thing was made evident – the corporation gave its very own employees very little agency in deciding their own futures. Yet, the executives of the same corporation chose to vest in consultants the power to advise on who gets to keep their job. In the business world of today, decision-making power is often concentrated at the top, and is distributed horizontally to other stakeholders – partners at consultancies or managing directors at banks. The consulting industry in 2017 generated $63.2 billion (Shumsky 2018) from American institutions alone. Yet, the decision-making power so often delegated to the consultants is so rarely delegated downwards – to employees themselves. Therefore, under the boundaries of modern capitalism, the agency of the employee is often intimately intertwined with the work of a "consultant." The consultant's own agency – or their lack thereof – has more than significant downstream effects that ultimately reach the many thousands of employees in the businesses they consult for.

In the case of the pharmaceutical merger, the timeline for the restructuring was tight and it was a large, complicated organization that had a multi-country structure with similar business units in every country. Instead of thinking through a model change that might have driven a more optimal way of working - centralizing some core functions in the US business, moving to a shared services model for transactional roles, or changing their sales force structure - the consulting firm, with Excel as its only tool, took shortcuts to get to the reduction targets that the executives wanted. They fired managers who earned above a certain amount or directors who managed fewer than a certain number of people. Ultimately, the cuts were deep, but did not change the overly complex company structure – it only reduced the number of people at each given level.

Gaps began to appear a few months later, as it became evident that too many managers had been let go of, and ultimately the company's stock began to fall later that year as the firm began to experience severe shortages since their production lines had been disrupted.

Unfortunate stories like these are rumored to be becoming less and less frequent as consulting firms promise to become more technologically sophisticated. In the case of organizational restructuring, new AI tools like Anaplan or Orgbuilder allow consultants to run far more complicated models in envisioning the way a business might be structured in the future – creating opportunities for deep model changes like agile transformations. However, consultants increasingly find themselves less able to control all aspects of the data analysis, reducing their sense of agency. (Beck and Libert 2018) In an ideal universe, as the repetative analytical elements of a consultant's labor begins to get increasingly automated, consultants could find new avenues to contribute – focusing on taking employee input into account, working with the employees themselves to improve their working lives, and other more human-facing functions. Yet, the way in which AI and automation is currently situated to impact the consulting industry is far removed from the optimistic aspirations of what AI will enable consultants to focus on. (Frank et al. 2017) Without prioritizing what types of AI can have the highest positive impact on consulting projects and instituting a set of expandable boundaries on what should and should not be automated, the impact is likely to be much more irreversible than consultants and technologists may have thought.

This paper explores how *agency*, agency of the consultants and indirectly the institutions and individuals they consult for, are affected by increasing adoption of AI and automation in the world of consulting. The paper differentiates two distinct forms of agency at play and structures the existing and potential effects of AI and automation on what we call *"thinking agency"* and *"executional agency."* Thinking agency is defined as the ability to freely ideate, while executional agency is defined as the ability to execute on or implement the agent's thoughts and ideas. The paper argues that the problemata in consulting is that oftentimes thinking agency is limited by executional agency, where unsophisticated tools of analysis impose artificial constraints on the answer set for a consultant's ideas, limiting and automating the possibilities of their recommendations and their ramifications. Stripping thinking agency, often also means stripping executional agency – not only indicating a lack of meaning and agency for the consultant, but an even more intensified lack of agency for the employees whose lives are being impacted.

As the financialization of the global economy accelerates rapidly, with corporations continuing to be bought out by private equity firms that then hire consultants to run these companies, it becomes increasingly apparent that AI and automation can easily remove even more human decision making out of the process, and out of the lives of the many employees

whose lives palpably change with acquisitions, reorganizations, and strategy shifts. (Libert and Beck 2017) It is our conviction that perhaps one of the few ways to forego such risks is to enable the adoption of technologies that retain, if not increase, the thinking agency of the consultants to ensure that the already very limited agency working professionals have left in their hands, isn't further limited.

Literature Review

Agency is a tricky, powerful concept. In the face of society's totalizing regime of self-discipline, Foucault saw agency as the ability to subvert the *"micro-physics"* of the disciplinary regime. Power, in Foucault's conception, is not exerted by a single individual or group of people but rather produced and exercised by society as a whole. According to Foucault, *"each society has its regime of truth, its "general politics" of truth: that is, the types of discourse which it accepts and makes function as true, the mechanisms and instances which enable one to distinguish true and false statements, the means by which each is sanctioned; the techniques and procedures accorded value in the acquisition of truth; the status of those who are charged with saying what counts as true."* (Foucault 1980, 109-133)

Therefore, agency in the face of this regime of truth is not simply a matter of finding a superseding *"absolute truth"* (as truth is a socially produced power) but a matter of constantly *"detaching the power of truth from the forms of hegemony, social, economic and cultural, within which it operates at the present time."* Within the regime, power can be contested through evasion, subversion of contestation. Yet, agency, the belief of having agency, and the aspiration to attain it are also the *"truths"* of the Western societal canon, reified by the Bible all the way to self-improvement books of our modern days.

Therefore, agency is not exercised independent of disciplinary power, but within the context of existing structures and constraints of power. The freedom of choice and ability to act independently produces incremental effects on the broader system of self-discipline, creating *"localized episodes inscribed in history by the effects that it produces on the entire network in which it is caught up"* rather than through *"the law of all or nothing...not acquired one and for all by a new control of the apparatuses nor by a new functioning or a destruction of the institutions."*(Foucault 1995, 27)

On the other hand, De Certeau, influenced by the likes of Bentham and Foucault, equally saw subjects bound up in broader systems that produced specific forms of practice to exercise agency in the face of domination. For De Certeau, there are two forms of practice: strategies and tactics. Strategies are employed by subjects with *"will and power"* due to their status in society giving them the ability to objectify others. *"A strategy assumes a place that can be circumscribed as a proper (propre) and thus serve as a basis for generating relations with an exterior distinct from it (competitors, adversaries, "clienteles," "targets," or "objects of research)."* (de Certeau 1984, xix)

In contrast, those who do not possess the *"will and power"* to employ strategies to shape external relations instead begin to assume a mode of practice that is tactical rather than strategic. Tactical agents express their agency through commonplace activities like reading or – in the case of workers – taking breaks at work, which re-signify and disrupt the order of activities dictated by the strategic practices of those in power. Therefore, there are infinite possibilities for contesting social order in the micro-physics of conflict taking place between the strategic and tactical practices of everyday life.

This is particularly relevant when thinking of agency within the corporation as workers remain deeply bound by the power structures beyond themselves and are consensually bound to mechanisms of self-discipline and self-surveillance that structure their agency. Within that, there is the constant opportunity to resist with a tactical mode of practice - to find ways to detach power from regimes of truth, and to temporarily invert power relations at continually arising points of conflicts. Therefore, when we discuss agency - the ability to make free choices - and losing agency - the perception of losing that capacity for making free choices and acting independently - we do so within the context of broader disciplinary forces that both constrain and create opportunities for resistance.

Taking into account the relevant literature, the phenomenon of "agency" for the purposes of this paper is then defined as:

> *"the perception of a certain capacity for individuals or collectives of individuals to make free choices and to act independently within the existing societal structures and constraints of power."*

First of all, agency is defined as a *perception* – as individuals and communities believe themselves to be agents as long as they are perceptive of their own agency. Additionally, the data collected through ethnographic methods and structured interviews can only verify or reject the perception of a certain capacity rather than the existence of lack thereof the capacity itself.

Agency is a *capacity* – it does not have to be enacted upon to exist, one merely needs to possess the potential, the capacity to enact upon it. That very capacity then in return enables the individual to feel the agency – an agency without the capacity is not agency, it is merely a wish or a will to have agency.

Agency can be possessed by *individuals* and *collectives* alike – individuals can have their own agency, yet collectives of individuals, or collectives of collectives may have their own as well. Countries, governments, institutions or businesses are a good example of this – where the collective agency of individuals is different than the agency of the community, the collective itself.

Agency is entirely about *free choice* and *independence* – it is about possessing the capacity to enact one's own choices – with or without regard to others' will. One can include others' choices and depend on their acts, yet that choice of inclusion needs to be freely and independently made, at least perceived to be done so.

Lastly, it takes place *within the existing societal structures and constraints of power*, as it is a concept produced, protected, lost and reproduced in part as a part of and in part as an opposition to the existing societal structures and power constraints. Agency, ultimately, is enabled and allowed to exist as an oppositional force precisely due to the very structures and constraints containing the possibility for the emergence of oppositional forces within themselves.

To pursue a consistent analysis of the interlinkage between agency and automation – a precise definition of what is meant by agency is necessary, only through a unified definition, the conversations and experiences of interlocutors can be best analyzed.

What is then to "lose agency?" The process of losing agency is to lose the perception of that capacity to make free choices and to act independently. What is important to delineate here is that it is not about losing the capacity itself – it is about losing the perception of that

capacity. One may still have the capacity to act freely, yet if one has lost the feeling and the belief that one even has such a capacity – for all intents and purposes, agency has indeed been lost.

Methodology

An interdisciplinary research project such as the one at hand necessitated a methodological approach that was, in nature, flexible. (Powers 2017) We borrowed methods, literature and modes of thinking from social sciences – predominantly anthropology – and philosophy and overlaid it with the modes of thinking and theories in computer science in an attempt towards illustrating the complex interlinkage between agency and technology.

The main source of data collection has been participant observation in three different consulting institutions – all of which have a presence in North America and Western Europe – authors delineate the difference between these three institutions by calling them a "a professional services firm," "a management consultancy," and "a boutique insights agency."

Due to the sensitive nature of the ethnographies conducted, all the names of the institutions as well as all of the respondents have been anonymized. Immersions in the consultancies each lasted between two weeks to six months. Unstructured interviews and observational techniques were employed all throughout through spending extensive amount of time with more than 10 respondents in each of the three ecosystems. A conversational and reflective tone has been employed throughout the writing and structuring of the arguments to ensure the accessibility of the content both for academic and non-academic audiences.

The data has been mainly collected to substantiate our definition of *"having agency"* and *"losing agency"* as well as producing a thorough look at what it means to gain and lose agency. The collection of data on how consultants collect, analyze, and disseminate data has necessitated a level of meta-reflexivity – not only a level of reflexivity on our role as researchers studying professionals making decisions in professional environments, but also our role as consultants/researchers who also collect, analyze, and disseminate data in their past or present day-to-day lives. Reflecting on the nature of consulting, as current or ex-consultants, added a subjective layer upon the attempted objectivity of the research inquiry, which then nuanced and further substantiated argumentation.

Sprinkled throughout ethnographic narratives and the more analytical workflow analysis, readers will find evidence of this meta-reflexivity about the nature of consulting – and the present tensions between agency and lack thereof.

PART 2: ETHNOGAPHIC IMMERSIONS IN CONSULTING

Boutique Insights Agency

Insight Co. is a small insights consultancy – merging user interviews with design thinking methods. With approximately 100 employees spread across six offices, the young firm's growth has been relatively stable over the past few years. One of the HR representatives describes the employees of the firm as "*quirky and intellectual – with a refined taste and a broad interest in the world.*"

Besides lunchtime conversations, movie outings, and all-black uniform clothing, the way in which that refined taste and an interest in the world manifests itself during the day to day of the work experience is mainly through PowerPoint itself. One of the associates, Lena, says *"More than 60% of the time, I am on PowerPoint creating slides. I came to love it, but of course I cannot help to still resent it a little bit."*

When employees across different levels arrive to Insights Co. they receive a thorough design and PowerPoint skills education through workshops, online courses, and peer education. *"It starts with small questions – asking one another how to do relatively simple things – like how do you make a text visible on a photo? That's a tough nut."* adds Lena.

With a young workforce, Insights Co. immediately comes across as artistically inclined. The employees are wearing boxy shirts, designer glasses with retro aesthetics and talk about cinema, contemporary art, and new yoga classes in town during their free time between PowerPoint slides they are meant to produce.

During an early Thursday afternoon conversation at Insights Co., Steven, 34, one of the older employees at the firm who has been with Insights Co. for more than 5 years says *"there is joy in aligning things in a PowerPoint presentation, in building slides that look like what I imagine them to look like, in translating my ideas into great visuals."*

An overwhelming majority of Steven's day to day at Insights Co. involves PowerPoint – that is where he writes his sales pitches, that is where he communicates the insights researchers find about the world, that is where he proposes new initiatives or design principles to abide by for the variety of decision-makers at their client sites. *"I even have dreams about PowerPoint sometimes. It is such a big part of my life – in fact, I think of it as the most concrete thing that my job enables me to create – a solid deck,"* he adds.

Overhearing the conversation with Steven, Anne adds *"but PowerPoint is tedious, time consuming and complete waste of time – I'd rather spend time coming up with ideas rather than spending the time worrying over little details on a presentation."*

Anna, 28, comes from a background in Psychology – where she focused her studies and research on sources of motivation in the workplace and outside. While shadowing Anna at work, it becomes apparent that even when she is building a PowerPoint presentation – a task not at the very top of her priorities, she is still *"coming up with new ideas"* through thinking of new design ideas and sharing it with her colleagues.

Towards the very end of the research engagement at Insights Co., Elena appeared in the picture – a recent hire at Insights Co. who has a lot of opinions about PowerPoint from previous experiences. She says that a big majority of her time spent in front of PowerPoint is solely consistent of making small decisions about design, grammar, and content layout – *"decisions that matter but also don't matter at the same time."*

She adds, *"I would appreciate if PowerPoint gave me multiple suggestions for a decision I need to make – this way I could choose between them, and if I don't like any of them, then I could go ahead and build my own thing."*

Elena says that when it is about very small decisions like *"which line should go where, what color the box should be, what picture should I use to illustrate that idea"* she would benefit from a set of automated suggestions. *"A robot can do that, why do I need to spend time on it?"* she asks. She points out a new button that PowerPoint had introduced in her Mac version of the software, *"Insights."* – *"it is funny isn't it, what I do is insights, what PowerPoint does is also insights."*

She explains and shows that *"Insights"* suggest automated design and layout suggestions to her slides – it enables her to quickly build slides that she frequently uses but aren't embedded in the template itself.

Anna comes over when Elena is displaying what the Insights button can accomplish and cracks a brief laugh. She joins the little demonstration and comments: *"I guess we will be displaced by AI sometime soon too."*

"No way," Steven says, *"all those robots cannot think like us – most importantly, they cannot think outside of the box like us."*

What the fascinating interchange between Steven, Elena and Anna discursively points towards – along with many other conversations at Insights Co. and beyond that due to the limited scope of this paper, we have to exclude from depicting and discussing – is a distinction between **thinking agency** and **executional agency**.

Thinking agency is the freedom and the ability to think, to ideate – to come up with an idea independently and freely – discussing the idea, receiving feedback on it, and deciding to keep it as an idea or to bring it further to execution – like sharing with colleagues, clients, or taking active steps to build things out of this seemingly simple idea. What Anna is saying is that she would like to enact her thinking agency more frequently.

Executional agency, in contrast, is to build, and to create things – to execute things in the way an agent-being wants them to be executed. It is the freedom to build things the way one wants to build them. It usually directly follows the thinking agency, and occasionally co-exists alongside it.

What Elena is pointing towards is that she doesn't mind if she receives some help when it comes to her executional agency but would not want her thinking agency to be influenced or interfered with in some way or another.

Our conversations throughout Insights Co. seemed to point towards an implicit agreement across most employees – that it is acceptable for executional agency to be partially reduced by AI, but when it comes to the thinking agency, no compromises are willing to be made. Instead of replacing the thinking agency, technology that provides speed, inspiration, and optionality to assist with executional agency makes one feel that one can still think, create and be the decision maker. That is exactly what Excel and PowerPoint do and did throughout history – they automated bore tasks that employees had to do manually for decades, and now they facilitate what we need to create – and assist consultants in creating mental models of how things should look like.

In the hierarchy of agencies individuals imagine possessing at work, thinking seems to come above the executional – and it the automation of the thinking that creates a loss of agency and consequently meaning at work, yet the loss of executional agency does not – necessarily. Our ethnographic immersion points to the fact that this is the careful line that automation will need to trace to ensure that its power is fully utilized, and its unintended consequences are not experienced widely.

Management Consultancy

With offices around the globe and a well-established reputation – Management Co. is one of the largest consultancies in the world. The institutionalization of the brand that is built around running large-scale *"transformations"* – massive exercises that span portfolio rationalization, cost reduction, new go-to-market and growth strategies, as well as

organizational restructuring initiatives – became apparent already from the first day of our study.

"The business is evolving," commented George, a manager at the company, *"nowadays, we sell bigger cases with multiple partners working on the same account - it's an entirely new business model from the one-off projects we used to sell."*

A key part of a transformation business is organizational restructuring – changing the way a company organizes its people. Especially when the transformation is a turnaround - taking the company from below margin performance to profitability with the help of organizational restructuring is where Management Co. finds the most *"efficiencies"* (i.e. the most money that can be saved for the company in the shortest amount of time) and the biggest amount of business opportunities. Many consultants at Management Co. describe this line of work as their *"most emotional work,"* both for the Management Co. consultants and the executives alike. Another manager, Aaron tells us: *"Organizational work is hard, and a lot can go wrong with it. It doesn't feel good to do it, but at least when we do it, we know that we're doing a much better job than what our clients would do if they were to do it by themselves."*

However, a consultant's ability to be thoughtful about *"org work,"* as it is colloquially termed, is limited by the data available to the consultant and the limitations on how that data can be processed. *"In most companies, a company's annual operating budget plan is directionally aligned with but not connected to a company's HR database,"* Aaron explains. This is a critical data limitation –because consultants make decisions on who stays and who goes based on the HR data with the aim of hitting reduction targets based out of the operating budget. When consultants walked us through a sample project they worked on, it became apparent that when the linkage between decisions made against the HR data on the spend baseline is unclear, consultants had to constantly engage in guesswork in determining how to get to their client's required end results. As a result, consultants at Management Co. tend to *"over-deliver"* on the savings from the organization, which practically means firing more people than needed to hit reduction targets in the budget, to stay on the *"safe-side"* in terms of delivering on their proposed savings. *"We would rather cut a few more heads than have our clients not hit their EPS* (earnings per share) *targets,"* says George. *"If they don't hit their EPS targets, then they're answerable to the street - and coming in below investor expectations could really send a company into a downward spiral."*

A senior manager, Luke, who has been with the firm for over ten years recalls a particular instance during one of our conversations. Management Co. was working on a project at a $10B company with the aim of hitting a particular EPS target through cost reduction in the organization. They had worked with this company before and had completed a large organizational restructuring project for the company just a year prior to this project. However, the company's revenues were still in decline, and they needed to cut more costs to keep profit margins constant.

The company built their annual budget on a "prior-year plus" methodology where they simply took the actual spend from the year before and assumed a certain percentage increase in spend across the organization. However, as a result, the budget for personnel spend had absolutely no connection with the bottom-up build of the organization – *"salary by person view presented huge difficulties in terms of executional agency for both the clients and the consultants."* In the previous round of organizational restructuring, Management Co. had avoided dealing with the data complexity by only using the bottom-up HR data to inform decision-making and

had massively over-delivered on savings from the organization. *"It was touted as a huge win for the client,"* recalls Luke.

As Management Co. set to work on this second phase of the restructuring, however, they attempted to solve the problem they had faced in the first phase by introducing a new AI tool that enabled Integrated Business Planning (IBP). The team took the various existing master data structures and fed them into the tool, which output the data in standardized formats. More importantly, the tool provided a platform with user interfaces for the finance, HR, sourcing and commercial functions that meant the budget-planning could be done using the same bottoms-up methodology across all functions. Management Co. consultants introduced this at the beginning of the company's budget planning cycle, so by the time the restructuring had to be in full swing, the datasets were ready to use.

What emerged from this exercise was a surprising insight on the organization: that the "prior-year plus" methodology of budgeting had hidden the fact that most of the personnel spend budgeted in the annual operating budget of the company was from open positions, roles that had been left vacant by recent exits. Luke explained, *"this became evident as the consultants were able to link the budget costs back to the specific personnel roles that were driving them, only to find out that these roles weren't actually filled by existing employees in the organization."* What had happened was, unbeknownst to the executives at the company, the company had been facing a huge loss of talent as their revenues had declined, and the last round of restructuring had actually left the company vastly under-resourced in terms of delivering on their products. As talented employees began to feel stretched, they began to burn out and leave the company. Because executives hadn't responded to the exodus, employees felt like they didn't care, and abandoned the firm even in higher numbers.

"This insight completely turned around our project, and instead of a cost-cutting exercise the project became an exercise in finding talent and building a leadership structure that could support talent development in the company's near future," Luke adds. People were promoted to positions that were befitting of the responsibilities they had begun to take on in the lean organization, and more aggressive bonuses were put in place to provide incentives for employees to stay on.

Changing the way data was made available to the consultants completely changed the process and the outcome of their work – it enabled them to enable the employees themselves. Data showed how massively crucial it was to address the growing feeling of powerlessness among the employees to voice their concerns about the rapidly thinning organization.

"Once the problem was pinpointed, executives hastened to conduct town halls and leadership forums to hear how their employees were feeling and to institute better policies and processes for employee feedback to reach to the top," Luke recalled.

Results like these are common Luke says, as managers in the organizational restructuring group of the Management Co. increasingly utilize new AI tools – like Alteryx, Anaplan, and Orgbuilder. These tools have been welcomed across the industry by the consultants, and the clients alike – for more precise, and more consistent results.

Foucault had said that *"agency is the ability to overthrow the micro-physics of the disciplinary regime that power exercises on the body through "localized episodes inscribed in history by the effects that it induces on the entire network in which it is caught up"* not *"the law of all or nothing…not acquired one and for all by a new control of the apparatuses nor by a new functioning or a destruction of the institutions."* (Foucault 1995, 27) In line with his definition, in this particular case AI was simply perceived to lead to an incremental discovery which allowed consultants to drive the organization towards

broader change – it enhanced both the thinking agency and the executional agency. No consultant we talked to at Management Co. mentioned any concern about their agency being lost or diminished. *"The AI makes sure that we implement change in the most effective way, it is helping us not replacing us,"* a consultant, Jessica, reflects. Luke adds *"sometimes we have consultants who complain that they feel that the change they bring isn't necessarily positive, in this case the AI helped us bring the most positive outcome for both employees and the corporation."*

When reading between the lines consultants at Management Co. mostly focused on **efficiency** instead – *"AI helps us be faster"* a consultant mentioned, *"it allows us to focus on what actually matters"* another one added. *"With more time in our hands, we can focus on making sure that the change we suggest is implemented correctly,"* adds Luke. Another consultant who worked on the case suggested that the case *"was a favorite of mine – it merged cutting edge AI with a focus on people and speedily delivering the best possible outcome for everyone involved."*

Afterall, the automation at Management Co. illustrates the perceived joys of being effective, efficient, and innovative during a consulting project. A project which can pose to be a perfect metaphor for a corporate structure populated by employees with little agency – co-existing within a Foucauldian panopticon of self-surveillance, self-discipline and normalization of a certain standard of being. A standard of being that is often mediated by consultants who come in from the top and institute top-down policies with inputs from executives, (and now algorithms) which often serve to re-instate the processes of administration, social sorting and simulation. Yet, when done efficiently – in the minds of the consultants at Management Co., efficiency transforms into effectivity – a justification of the labor involved, facilitated by AI, automation, and a host of other technologized interventions. Ultimately, the series of conversations at Management Co. illustrate that perhaps an increased usage of AI can indeed serve to highlight and enable resistance to existing infrastructures of power when mediated through the discourse of efficiency, and consequently to make consultants a force for driving this resistance and finding more meaning in their labor.

Professional Services Firm

Technology Co. is a large professional services firm that seeks to build out and ensure client success through delivery and implementation of technology infrastructure. With more than 100,000 employees across the world, Technology Co. delivers a variety of services across various industries such as building or redefining enterprise software in order to cut overhead costs in businesses, increase employee engagement and productivity in a business, and reduce instability and variance in any given workstreams.

One of the main business lines that Technology Co. offers where many of its best technology consultants work is in implementing AI/Automation services to different clients across different industries and practices. In order to effectively define how technology can improve business processes, a downstream modelling effort is executed to bring these services to different firms.

During our immersions and interviews with Technology Co. consultants, a representative case stood out – a Public Health Client that was looking to completely innovate its best practices and methods on understanding how to predict and prevent adverse events with blood transfusions and vaccinations in the American population.

Jack, a consultant familiar with the project explained *"naturally, one of the first things to do was to do a deep dive into existing technologies – with an unprecedented amount of research being done on oncology and genomics with AI – this would only seem natural."*

In theory, the project was to undertake a simple task of modeling that had shown promise in similar datasets and fields. In reality, there were many different workstreams and personnel that not only utilized automation to increase thinking agency and throughput, but developed automation in a thoughtful yet exacting manner that sought to increase agency for its end users. Similar to Insights Co., thinking agency is opened up by increasing technological processes into a workstream, which promotes and inspires unprecedented growth and creative devices that would have otherwise been undiscovered.

In order to implement AI and automation into predicting how vaccinations and transfusions cause adverse events, one of the main responsibilities was having the Product Owner, Evan (who has a data science background), discuss the direction and strategy of the product. This entailed client management, strategic decision making, and scoping the realistic load of work that was contained. He reflects: *"the core principles of design thinking which include a focus on user outcomes, multidisciplinary teams and restless reinvention were considered."*

Even reflected that, in many ways the Product Owner position was a balancing act of technical and qualitative information. He felt that the he can design and craft narratives to tell a story in a uniquely humanistic way: the direction cannot be altered by AI simply because there is very little work that AI and automation can take on in the job description of a Product Owner. However, Evan also noted that the tools that automation has increased throughput in have helped him organize and collect his thoughts where necessary: *"When I'm working as a Product Owner, there are very few moments where I'm not talking to someone about prioritizing features and targeting correct users. In the moments that I have a chance to catch my breath, I'm really glad that there are tools such as PowerPoint or Trello to save me from manually loading in and recording notes, recordings, or thoughts. And I think it's amazing that while these programs serve as platforms for me to work on, they are using limitless amounts of automation and AI under the hood that helps me categorize my original ideas into concrete and written conclusions."*

Consultants at Technology Co. explain that in order to have an effective product, there must be subject matter experts and social scientists under the product owner who serve as the main point of contacts on user engagement and stakeholder analysis. These subject matter experts, Jenn and Jordan, were often the main drivers in research of current vs future work, as well as how technology will change a doctor's motivation behind using given software. In a given workflow, subject matter experts sculpt a project into a more refined state. But, according to Evan how these subject matter experts extract information has changed dramatically over the past couple years as a result of automation.

Normally, subject matter experts extracted information from various sources across journals, papers, media, and the internet. Yet the way they engage with platforms like Google, NCBI, or Nature is drastically different from how a product owner may engage with the same sources. For example, Jenn explains that a subject matter expertise may ask a question along the realms of *"For a given type of Blood Transfusion, what is the expected duration of the effects before a treatment is in place?"* in order to understand how long of a timespan doctors, and by extension the program, should be wary of when designing features. A product owner, on the other hand, may ask the same question as "*For a given transfusion, how do doctors assess severity and potential adverse reactions?"*

A product owner can guide how a project may steer, but the subject matter experts bring in relevant and contextual information that technologists and AI enthusiasts may not understand from the get-go. In many ways, information extraction is improved from AI and automation in finding relevant and concise sources for specific questions. In the plethora of data available in academia and in business, finding the correct information is a task in and of itself: only when enhanced AI is connected with the right personnel can information be correctly identified and efficiently stored. In other words, increased **accuracy and rigor** enabled thinking agency to be increased by allowing subject matter experts to grab and engage with content that would otherwise be lost in the vast amounts of information available. *"When we know that the algorithm is making no mistakes – then subject matter experts can do a better job at fulfilling their responsibilities,"* says Jordan. *"If the AI can add rigor to our analyses and do it in without errors – that's already more than enough,"* adds Jenn.

Once the ideation and design around how these predictions, platforms, and workstreams are defined, developers and data scientists begin to lay the groundwork of executing the vision. In many regards, working directly with technology is conducive towards automation and AI. For this particular project, Eric, Aaron, and Brian, three men with old-fashioned glasses and firm handshakes led this aspect of the project. Discussing their precise positions within the project with them illustrated a couple important points of discussion. First, data mining and data exploration are a blend of thinking and executional agency: how developers decide what to visualize or what kind of results to query cannot be simply *"inputted into automation with an expected output."* These results must be carefully crafted in order to achieve results that will help the end user. Secondly, as Aaron noted, *"many people expect that technology is going to replace workers in every form of work because of popular media- the truth of the matter is that technology is meant to help us, not hinder us, in designing and creating different forms of work."* We will explore this later in the discussion, but through our preliminary analyses, we have noticed that this sentiment prevails throughout multiple firms and workstreams. Accuracy comes forth yet again – as a more technology-savvy consultant, Brian articulates that for error-free outputs, there needs to be error-free inputs first and embarks on a long-winded monologue to communicate a previously articulated worry about biases and errors in AI technologies (Osoba and Wesler 2017). He says: *"Automation can only help us extract the correct information we need to work only when we, as developers, create the right kind of contextual information. Automation can only hinder us when we incorrectly identify the most salient pieces of information that can help us.*"

In many ways, the modeling and conclusion portion of massive automation projects seem the priviest to automation. Because of the high experience barrier that comes with statistical modeling, one of the many challenges for companies across the world has been designing intuitive and interactive code bases that are flexible in nature, yet intuitive enough for novices in statistics to understand. As a result, technology companies like Technology Co. are creating *"libraries,"* or code bases, that convert thousands of lines of code into digestible chunks that requires only peripheral information to implement. Models such as LASSO or AlexNet (statistical models used to identify and classify different kinds of information), which have taken decades of research to implement and design, can now be coded up in less than 10 lines of code. Eric, who has led the modeling efforts from the development side, notes something about this new wave of code simplification however:

"We don't need to always build [models] from the ground up every time we want to test a model. In many ways, automating model building allows us to test an unprecedented amount of crazy and outlandish models that would otherwise have been either too resource-intensive or too absurd to reasonably test. And in

many ways, we're discovering now that these outlier models that would have otherwise been completely relegated have provided promising, yet slightly unintuitive, results. The journey in automation isn't how can we eliminate work- it's all about how much possible work can we accomplish with new tools at our aide."

Technology Co. and its employees are illustrative of how executional and thinking agency can be deeply intertwined – in their union, agency in implementing automation is inspired by ways to increase the accuracy and the quality of their work. This same inspiration motivates end users of these services to feel that while AI and automation have been thought of as detractors to human labor, when implemented in a prioritized and effective way they are meant to augment thinking and creative processes that are otherwise de-prioritized and crushed under the tedious work that defines an average workday in the current definition of work within Technology Co.

PART 3: PINPOINTING AGENCY-ENHANCING AUTOMATIONS

Four Common Processes and 33 Steps in Between

The relation between agency and automation manifests itself in a variety of ways under the different conditions outlined in the ethnographic immersions. Agency doesn't only interact with automation differently – it is understood differently by the various actors in the process. In Technology Co., agency takes on a temporal element as Evan is empowered by time-saving tools, at Management Co. agency is understood as a deeply relational concept involving both the consultant and the employee. At Insights Co., Ann finds agency in constructing ideas, unlocking a creativity that isn't quite as important for Evan or Management Co.'s Jess.

Amidst these variegated perceptions of agency, its meanings and its effects, how can we find common ground upon which to build a productive typology for enhancing agency – in our original, broad conception – by using automation?

Across the three firms, ethnographic immersions were supplemented with unstructured interviews with provide us a starting point with which to begin this inquiry. From these interviews, we have identified "33 common processes" that take place across each firm and have clustered these processes into four overall categories or 'phases' that a typical consulting project goes through.

In doing so, we attempt to construct a typology for 'agency-enhancing automations' – a way to prioritize automations which we should look to embrace and automations we should approach with particular sensitivity. The goal is for institutions of various types – whether they are more similar to Insights Co., Management Co., or Technology Co., or operate outside of the field of consulting entirely – to understand the breadth of processes that take place at an individual level and how one can begin to narrow down which processes should be automated and which shouldn't.

To that end, a set of steps taken in an average project at Insights Co., Management Co. and Technology Co. have been listed below:

Table 1: Longlist of workflows across three consultancies

Insights Co.	Management Co.	Technology Co.
preparing a questionnaire	writing an interview guide	setting objectives
choosing the appropriate pictures for a presentation	conducting belief audits	producing project plans
choosing the color palette of a deck	requesting data	setting success criteria
writing weekly touchpoint emails	cleaning data	setting quantifiable metrics for business and data success criteria
agreeing on an overall value proposition	analyzing data	assessing personnel, resources, and data
deciding on how to visualize ideas	choosing relevant data cuts to present	creating calendar and timeline for deployment
running a mock interview	looking for themes across relevant data cuts	shaping data according to regulatory compliance
conducting qualitative interviews	compiling quote banks	deciding key visualizations for client presentation
running a workshop	looking for themes across relevant quotes	generating hypotheses on different modeling techniques, business propositions, and data characterization
deciding on the format of a workshop	shelling out a deck with an overall story	responding to task orders and proposals

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writing appropriate headlines for each slide	selecting key themes that encapsulate story	identifying potential risks
deciding when to start analysis	selecting icons to accompany key themes	defining business and technical requirements, assumption, and constraints
clustering observations	looking through research database for similar / relevant material to the case	creating data, business, and technical dictionaries for internal and client documentation
writing out an insights story	conducting expert interviews	creating a narrative in client presentation and decks
developing a 100-slide deck	scheduling time with multiple partners to review content	creating initial data characterization and quality reports
booking flight tickets	scheduling time with case team managers to review content	extracting salient information, features, and properties for analysis
booking hotel reservations	reviewing project budget	including/excluding information based on subject matter expertise
calling research participants to check-in prior to an engagement	parsing out partner feedback to relevant analysts / associates to turn comments	data wrangling to make data presentable
deriving a method to test findings	compiling slides from different analysts / associates into one deck	combining and aggregating various datasets together
choosing a partner to implement suggestions	making formatting consistent across different slides	deciding, constructing, and tuning model analysis and assumptions
wearing appropriate clothing for the presentation	scheduling touchpoints with client counterpart pre-steerco	creating modeling explanations and critiques based on quantitative and qualitative results

choosing which client to communicate x with	scheduling steercos	synthesizing results and forming a set of recommendations for clients on implementation and solutioning
proofreading written documents	qualitatively communicating client / partner feedback across the team	creating pros/cons list based on each model/decision made
filming an instance during research	refining data cuts / answering additional questions from clients / partners	documenting and training personnel to execute on formed decision
photographing an instance during research	removing extraneous slides from the deck for the final presentation	overseeing service and maintenance of decision/deployment
writing down a quote during research	sending out pre-read to clients	debriefing meeting internally and with clients on the risks, challenges, and continuation of projects
asking the right follow-up question during research	preparing talking points for each slide for the presentation	providing feedback to team members
choosing the appropriate people to join the team	presenting to steerco	measuring impact
evaluating team members	giving feedback to team members / case leadership / firm leadership about the case	managing project budget
giving mid-term feedback	conducting sustainability pulse check survey and discussion	requesting relevant data

When observed across consultancies – the tasks and workflows can be clustered into four categories – 1) gathering information, 2) analyzing information, 3) communicating conclusions, and 4) project logistics. The phases of an average project in the world of consulting would look like the following:

Set-up and gathering information – is the totality of the project set-up, getting the right data and workflows in place. This phase sets up the team for success or failure from the very beginning and includes a variety of logistical tasks that generally require executional agency as well as some thinking agency in key moments like *"team meetings."*

Analyzing information and deriving conclusions – is when the data gathered is being analyzed qualitatively or quantitatively to come up with a set of conclusions to be communicated with the client. There are ongoing meetings throughout the process to communicate initial findings and conclusions – this is a phase with many workflows where thinking agency and executional agency are intertwined.

Communicating and action on conclusions – this is the final deliverable package, handoff generation process – where consultants communicate initial and final findings – the tasks tend to include creating presentations, pitches, agreeing on collaboration methods for going forward etc. – executional agency in creating the conclusions, based on the thinking agency involved in ideating them.

Project logistics – these are the set of internal facing tasks that necessitate a healthy flow of a project and are almost entirely logistical, like booking hotels, filing expenses, printing decks, and giving feedback to each other during and after the end of a project.

Establishing a Set of Criteria

Upon conducting three ethnographic immersions across different types of consultancies, consulting anthropological and data scientific literature – we propose three criteria to evaluate each proposed automation and AI in the world of consulting to prioritize between different automation and AI technologies at different points of an average project.

A. **Thinking or Executional** – does automating workflow X decrease thinking or executional agency?

B. **Productivity-Enhancing** – does automating workflow X enhance productivity?

C. **Accuracy-Enhancing** – does automating workflow X enhance accuracy?

We argue that a workflow should be automated, if the following three conditions hold true:

1. **Automating workflow X may lead to decreasing executional agency, but not thinking agency** – ethnographic immersions, unstructured interviews, and industry research point towards the automation of executional agency contributing very little to the sense of losing agency, while automating thinking agency to be a major contributor to the sense of losing agency. Automations that retain thinking agency and only automate executional agency should be prioritized.

2. **Automating workflow X enhances productivity** – technical literature already establishes the role of automation as a productivity-enhancing mechanism, yet ethnographic immersions showcase that when automation enhances productivity – the individuals mentally convince themselves that they are able to better focus on tasks that actually matter, and it frees up more time to focus on things that cannot be/will not be automated.

3. **Automating workflow X enhances accuracy** – technical literature in machine learning and AI, as well as ethnographic immersions also suggest automation's role in ensuring consistency and a sense of accuracy – ethnographic immersions showcase that one of the biggest perceived shortcomings of manual processes are a

lack of consistency, quality, and accuracy. Whether it being minor mistakes in Excel or typos on a PowerPoint or more major decisions.

Therefore, workflows in consulting that needs to be prioritized for automation are the ones that 1) involves mostly executional agency, 2) automating it enhances productivity, and 3) automating it enhances accuracy.

For example, as we walk through the 33 steps at Management Co., slightly less than half of these steps can be automated: these include more straightforward steps that could be more accurately and productively done by a machine e.g. scheduling time with partners / clients / team, selecting icons to accompany key themes, formatting consistently across the deck. However, the set of criteria defined above also helps define some less straightforward steps that can and should be automated: looking for themes across relevant quotes or looking for themes across the various data cuts. For example, a python script applied to all the words in all the interviews to identify themes on the basis of word count can highlight new and interesting insights that may not be available to the consultant, whose perceptions of the interviews are deeply formed by their own experiences with the interviewees, and the interviewee's tone of voice or emphasis. Taking a more creative approach that abstracts from that may not only enhance accuracy, but also give the consultant more leverage or 'thinking agency' to draw out something interesting about the story instead of just regurgitating key data points.

Here lies the specific point about executional agency – on first brush, executional agency may seem more limited than it actually is. For example, a task requiring 'synthesis' – that is, identifying themes across data – is often taken to be one requiring thinking agency, a strong capacity to critically analyze and conclude a specific story from a set of given data points. However, the rise of automation and new technologies is changing what can be 'executed', and that should condition how organizations think about using technology. By looking at concrete data points within the 33 processes we outline, we find that there are always higher levels at which to apply thinking agency – in the example above, moving from applying thinking agency to 'synthesis' to applying thinking agency to identifying nuances within the data.

A set of additional more nuanced criteria can be introduced to further nuance the prioritization of which automations to pursue and which automations to de-prioritize, however the main three clusters that seem to matter for the individuals' own descriptions of their own workflows and agencies – these three stand out – they ensure that the productivity and accuracy enhancing aims of automation and AI are fulfilled while the agency and the connected lack of purpose and meaning aren't lost from one's labor.

Discussion and Implications

In this analysis, we have taken on three different instances of how AI and automation have increased the throughput and quality of workstreams in designing presentations (Insights Co.), uncovering and inspiring transparency in work that has otherwise been mired in bureaucracy (Management Co.), and in the assessment and creation of the tools that use AI and automation (Technology Co.).

In order to understand the implication of agency and AI, we refer back to the original definition of agency defined in this paper:

"the perception of a certain capacity for individuals to make free choices and to
tact independently within the existing societal structures and constraints of power."

Popular culture depicts AI and automation as technologies that will overpower human agency. While AI enthusiasts are excited at the pace of growth in technology such as self-driving cars, cryptocurrency, and tumor detection in cancer, they are quick to note how AI is "narrow" in nature, and how this will most likely not change in the future. We quickly delve into Narrow AI below.

Narrow AI is the ability for AI and automation to do a task repeatedly with either a defined logic that is manually written by humans, or by an algorithm that is designed by a human. Very rarely are there instances of an AI algorithm that can accomplish multiple tasks without serious revamping or a serious rehaul. Steve Wozniak sums up the current challenge in AI and automation as:

"Could a computer make a cup of coffee? You could come into my house and
you'd be able to make a cup of coffee…you'd have to ask a couple questions, but
you could get there. But the steps to get there is built up over a lifetime of
knowledge and information… when is a computer going to get to that level?... what
a human being is so far above anything we've ever done." (Wozniak 2010)

The work that has been accomplished at all three of the consulting firms investigated in automation is not to create decisions and strategies behind business processes - rather, it is to aid in contextualizing relationships between entities and predict outcomes as a result of data collected by humans with the aid of other automated tasks. New technologies change the 'executional' potential of AI and automation, increasing the depth of AI within its narrowness, but human knowledge is required to broaden that scope and elevate insights taken from the data. Agency is best exemplified in the scoping and ideation of work that is done and having a form of automation/AI that can replace this, or at least create the perception of replacement, is unlikely in the near future. In short, automation is an incredibly nuanced definition that often is much narrower in scope, capabilities, and scale and that remains highly dependent on humanistic elements such as context, assumptions, and subject expertise, where agency truly shines.

We are now at a crossroads – we have heavily emphasized how thinking agency is increased, but rarely inspired a conversation around executional agency, which revolves around building out different forms of presentations, visualizations, and analyses that are now created as a result of an increase in thinking agency. The most susceptible form of agency, as present by Technology Co. and Insights Co., is executional agency. But the beauty of executional agency is that this definition – that is, the creation and execution of events the way an agent would like it to be executed – fits the very scope that automation and AI can currently be created for. By repositioning the resource allocation of our work from the creation of a PowerPoint deck, stubbornly attempting to fit a re-org framework into a company that had problems elsewhere, or form the laborious tasks of recreating models from the ground up with little room for experimentation and hypothesis testing, the balance of executional agency getting limited by automation and AI and thinking agency can best be thought of in terms of value proposition created for the clients consultants serve.

If the mission of a consultant's work is to create the largest value proposition for the clients, consulting firms are brought in not to create and design slides with a focus on stylistic content – it is to provide value in a way of providing external perspectives, connecting and managing resources available to the client, and achieving a mission. How that mission can be achieved has often been in the way of creating one-framework-fits-all, with the time spent in that framework on creating the underlying tedious details that create tenuous connections to the framework. With the trade off in executional agency in return for thinking agency, however, consultants are now able to provide a newfound value for their clients in way of hypothesis space expansion and experimentation. We, as the researchers, all current or ex-consultants have sought different forms of direction and patterns in our work using similar automated software in the pursuit of this value creation that all stem from the increase of thinking agency.

In these three firms, we have demonstrated that human agency and the perceived loss of free will and decision making can be counteracted by understanding the realities of automation. Without a proper scope defined by humans, automation will not lead to productive or efficient results. Without the proper data mining and infrastructure, automation will be susceptible to high variance and outliers. These results will, counterintuitively, decrease trust in automation, which may then further reduce human agency by lumbering decision making in the highly tedious and transactional tasks at hand.

In many ways, big data and automation have created human agencies in pockets of emotional and cognitive functions that were otherwise unidentified both in the workplace and in personal life. As Wozniak has described, simple and mundane decisions that are subconscious to us accumulate over a lifetime, creating a wholly unique decision process and autonomy. However, as defined in the discussion, automation possesses an incredibly nuanced definition that often is much narrower in scope, capabilities, and scalability which is highly dependent on context, assumptions, and subject expertise. As a result, human agency – both thinking and executional – can be argued to increase simply by the virtue of setting up, intuiting, and working on the foundation of various autonomous tasks, and understanding/strategizing collaborative and cognitive tasks that are otherwise unavailable within AI and automation processes.

Cengiz Cemaloglu is a consultant at ReD Associates. He holds a BA in Anthropology and Government from Harvard University.

Jasmine Chia is pursuing her MPhil in International Relations at Oxford University. She was previously an associate at Boston Consulting Group. She holds a BA in Government and Religion from Harvard University.

Joshua Tam is a cognitive consultant at IBM. He holds a BSE in Operations Research and Financial Engineering from Princeton University.

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