The Struggle over the Place of Generative Artificial Intelligence in Business

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The implications of generative artificial intelligence (GenAI) are controversial. GenAI has supported some workplace abuses. For example, workers in Samsung's semiconductor division used ChatGPT to leak trade secrets (Mearian, 2023). Yet other workplace uses are benign. Insight Enterprises, for example, used ChatGPT in its distribution center, saving money on mundane tasks such as updating product statuses and supply systems (Mearian, 2023). Ernst & Young (EY) found that 53 percent of US CEOs expect to use GenAI to assist in research and development (Mearian, 2023). Companies, employees, and other social groups are competing to draw the line between legitimate and illegitimate applications of GenAI in the workplace. OpenAI, the Center for Human-Compatible Artificial Intelligence (CHAI), and the Computer and Communication Industry Association (CCIA) favor relatively rapid AI development and deployment. The Algorithmic Justice League and the Writers Guild of America contend that AI is already amplifying algorithmic biases and compromising intellectual property and must therefore be much more strictly regulated.

Review of Research

In a historical study of 130 years of technological innovations, Christ and Anderson (2011) found that even successful innovations were initially controversial, delaying adoption. For example, the automobile initially competed poorly with rail, but due to its advantages in rural areas it soon proliferated. The resolving factor was competition, sales groups were forced to adopt the automobile to gain customers that lived outside of metropolitan areas. Except for Greece, EU countries adopted webtools at breakneck speed by the EU (Angelou & Veglis, 2024). Using a mixed method approach, this study employed a literature review, content analysis, and survey of social media. Angelou and Veglis (2024) found Greek citizens trusted

news from the internet over local media groups. After being well below EU averages of internet access for years, media outlets made the switch to stay relevant (Angelou & Veglis, 2024). Here, media groups were forced to adopt technology because their customer base shifted.

Globalization was another starter for adoption, used by social groups during the Industrial Revolution. Tang (2016) studied historical industry data to compare the industrialization of Japan and USA. Late-developing Japan resolved industrial concerns by adopting technological practices laid out by the US propelling Japanese industries to significance faster (Tang, 2016). Industries did not want to be forgotten and adopted out of necessity. Labor saving inventions conflicted heavily with the revolution (Silvestre & Murray, 2022). Employing case studies, Silvestre and Murray (2022) examined the mechanical ventilator which divided coal miners in West Virginia. Mine owners drew from advanced coal mines around the world and safety concerns to convince workers of the invention (Silvestre & Murray, 2022). In both studies, social groups determined outcomes over adoption by using globalization. They sold the idea that their group could not be left out of the global stage, adoption was required.

Adoption of technology boils down to how competing choices impact each other. Kuilman and Van Driel (2013) details a cautionary tale of how a warehouse association in the Netherlands diluted its accreditation process and went under. The accreditation company wanted to expand outside of warehousing, giving recognition to external companies. The company saw short term gain but lost all value after dilution just as some internal members had warned. Leading members used short term gain to win over dissenting members who valued being genuine.

The literature presented cites market trends and globalization as factors for adoption, and how competing agendas can energize nations or destroy businesses. Artificial intelligence is the

latest technology which has divided businesses like never before. Necessity drove a lot of adoption, and in most cases, companies saw overall benefits. However, in the current climate GenAI is not deemed a necessity. It's closer to the cautionary tale above, where a decision to adopt is not as simple as following a successful economic model and could draw undesirable outcomes too.

Voice of the Employees

The rallying voice of the public is a powerful tool that hopes to put adoption into the people's hands. Writers Guild of America whose recent strikes focuses on the regulation of GenAI before its widespread use "This issue is not on the radar of anyone else…in 10 years I'm confident you'll be glad I brought it up now" (Maddaus, 2023). WGA is seeking job security in the face of chatbots which can write movie scripts in a matter of minutes. After 148 days of writers refusing to work, the WGA successfully "established regulations for the use of artificial intelligence" (WGA, 2023). Similarly, the Algorithmic Justice League composed of engineers, authors, and scientists seeks to call out a crucial flaw in most algorithms being used today. In an open letter, AJL called out "the use of facial recognition technology for surveillance, thus gives the police a powerful tool that amplifies the targeting of Black lives" (Buolamwini, 2020). The letter successfully put public pressure on industry leaders like IBM to "provide at least one million dollars to support racial justice in the tech sector" (Buolamwini, 2020). The public has not made up its mind on AI, but on the topic of safety the Center for Human-Compatible Artificial Intelligence (CHAI) takes a different side. To improve AI's handling of safety issues, "it must be possible to prove that it will work across a wide range of both expected and unexpected situations" (Russell, 2023). CHAI, a group composed of Berkeley academics, argues the only way to secure safety is to ramp up AI integration to build strong context for AI tools.

History emphasizes the power of the public in seeking desirable outcomes. In an almost identical situation, WGA went on strike from 2007-2008 protesting fair compensation from a new technology, the DVD. The DVD created new media sales, which writers were not entitled to. The protests that followed publicly painted the Alliance of Motion Picture and Television Producers (AMPTP) as villains. After public scrutiny and a cost of $1.5 billion for Los Angeles, both guilds came to an agreement on better compensation for writers. A recent win for US auto workers strikes saw against the top automakers in the US secured an increase in wages and retirement benefits. An interesting example, as the automobile industry has been one of the most recent examples of evolution due to adoption. Even after most companies have switched to automated assembly lines, workers still have a voice to achieve their demands. Perhaps the most famous example is the Luddite Movement from 1811-1817 where workers smashed machinery protesting the use of technology in the textile industry. Although, the movement was unsuccessful in stopping adoption, even today the term “Luddite” is synonymous with people opposed to technology. In both examples there was not a new technology, executive power, or business decision that finalized the outcome but rather the collective voice of the most impacted group. So far GenAI has seen business executives investing billions, revealing groundbreaking tools, and promising a new way of life. But following history, the weight of the public is a powerful tool that can still decide the outcome.

The Power of Executives

Executives ultimately make the decision to adopt, giving them large responsibility and influence on the matter. Adoption has split the group into two, those who already made deep investments and those who are dissatisfied with infrastructure. A main outcome to watch is how will employment be affected? Proponents of AI argue that while AI will replace jobs, the benefit

of new jobs in a booming industry outweighs these concerns. Opponents argue this shift will displace too much of the working population and the cost of learning new skills is too high. The World Conference of Information Systems and Technologies (WorldCIST), seeking to "better understand the impact of AI on organizations" (Shuhaiber, 2022), surveyed industry leaders in the United Arab Emirates, finding employment effects of primary interest. GenAI exploded onto the radar in 2023, but one year later many business executives are not buying the hype. BCG surveyed leaders and found, "66% of leaders are ambivalent or dissatisfied with the progress" (BCG, 2024). BCG (2024) sees lack of talent, clear roadmaps, and responsible practices as reasons why profits haven't come. Executives at OpenAI hope to convince industries by addressing these concerns. On safe use, OpenAI wants to "work hard to aggressively reduce harms posed by the misuse or abuse of our AI tools." (OpenAI, 2024). Almost paradoxical, groups like OpenAI and CHAI argue that a safe-use AI model can only be reached by increased usage not decreased. As a commitment to safety, OpenAI (2024) "disrupted five state-affiliated malicious actors" with help from bigtime investor Microsoft to display to the tech sector that OpenAI is worthy of future investment. On the issue of lack of talent and roadmaps, OpenAI has not waited for talent to catch up with the latest release of text to video tool Sora. OpenAI is a tool provider, it's up to business executives to apply these tools and advance the industry. Brad Smith, Vice Chair & President of Microsoft, is ready to move forward with a "$5.6 billion [investment] into new AI datacenters" (Smith, 2024). Executives have a lot of powerful choices at their disposal and have been tasked with guiding the AI industry to hopefully new highs.

Historical executive decisions are infamous for creating business superpowers or erasing companies from history entirely. Amazon Web Services (AWS) was a revolutionary pivot by the e-commerce giant as before they were strictly e-commerce. The move came after internal

frustrations with Amazon's software infrastructure. AWS was a solution which allowed Amazon to have a shared IT space, saving resources to be spent on customer facing tools. This executive decision was easy on paper, create a unified IT base to save resources. But after AWS launched for external use, it's now bringing in $2.57 billion USD in revenue. Early developer Andy Jassy, the current CEO of AWS, had a lot of choices of where to take AWS and had the vision to take it beyond an internal services platform. The double-edged nature of decisions falling on a select few was also seen in the case of BlackBerry. Mike Lazaridis was Founder and co-CEO revolutionized computing by bringing a two-way pager into users' hands. The BlackBerry was one of the first smartphones ever, and throned BlackBerry as the leader. Lazaridis would fatally lose his crown to competitors like Apple and Android, and in 2013 sold the company due to poor financial position. Due to decisions made by a board, including Lazaridis, BlackBerry could not keep up with Apple and Android costing their entire business. The AI industry has just begun, and it's very likely the faces of GenAI will look different even in 10 years' time. It will be up to executive leaders to guide their groups through the new frontier.

The Role of Research in Technological Adoption

Executives, trade associations, and worker unions all use published research as evidence to push their agendas. Studying the implications of AI for higher education, researchers in China "matched the knowledge points with the curriculum of each university to form a personalized educational AI knowledge map based on the different students in different disciplines" (Wang, 2023). This tool would keep teachers but aim to cut costs that higher education schools spend on educational material, which is estimated to be 3 million USD yearly (Wang, 2023). This study offers a possible compromise, where human jobs are secured, and AI is used purely as a secondary tool. A lot of the research done is conducted purely in a controlled setting, where

executives do not actually have anything at risk. Highlighting racial bias in tech, MIT Media Lab researched that “machine learning algorithms can discriminate based on classes like race and gender” (Buolamwini & Gebru, 2018). This study went on to start the AJL, who qualified their claims in rooted research. CHAI released a report which proposed “auditing large language models for unexpected behaviors” (Jones et al., 2023). Framed as a technical solution, CHAI recognized the drawback of AI tools and proposed an improvement. Topics such as AI become polarizing because both sides have genuine arguments, reflected by research.

Research’s role in history often served as an undeniable truth, so convincing thanks to the scientific method. Vaccines are an excellent product of research that lay to rest many concerns of social groups. The poliovirus was deemed the most feared disease of the mid-20th century, causing panic in every worker, executive, and politician none of which had any solution. Thanks to research done by Jonas Salk and Albert Sabin, two vaccines were developed, and the epidemic was resolved. Backed by irrefutable research, healthcare workers were able to convince other groups to adopt this technology to live. The Manhattan Project was as an endeavor to end all wars and change the course of technology forever. Research did put an end to discourse whether an atomic bomb was feasible. However, it had a direct effect of opening pandora’s box and sparked political and ethical turmoil, for decades after. GenAI research follows the former example, businesses have opened pandora’s box and are waiting to see what will come out. Research will not be as black and white as the effectiveness of a vaccine can be but will be used by all sides to spark continuous debates in a struggle for desirable outcomes.

Trade Associations Speak Louder than Companies

Industries leading companies use trade associations to be their biggest representative, wanting their agenda to appear unbiased. The Computer and Communication Industry

Association is a global trade association that is currently lobbying against a lot of proposed AI regulation policies, "it is still very early days for AI technology, and rapid developments are yet to come…any asymmetric regulation is likely to become outdated within a few years, if not months" (CCIA, 2023). Amazon, Google, IBM, and Adobe are all members of the CCIA, and argue that the fast-paced nature of the AI industry cannot be regulated. CCIA also argues that a growing AI industry should be supported, not regulated, and that regulation will hurt future job opportunities and players trying to enter the industry. The Information Technology Industry Council (ITIC) is another trade association with members like Apple, EY, Dell, and Cognizant. ITIC stresses the "Development and adoption of AI…across every sector of the economy" (ITIC, 2024). Like CCIA, ITIC wants AI adoption to continue at the current rate. Interestingly, the ITIC (2024) makes no mention of slowing down in favor of regulation instead favoring a "risk-based approach to regulation, encouraging adoption". The agenda is clear, while big companies individually present that they care about safe use, on a larger scale they are using trade associations to push the government against regulation and towards adoption.

Trade associations have historically been very active in policy and how it relates to their agenda. CCIA (2011) lobbied against the Stop Online Piracy Act (SOPA), which aimed to extend police jurisdiction to combat online copyright infringement. CCIA was concerned among other issues the bill would, "drive internet traffic and domain routing that we now control outside of the US" (CCIA, 2011). Companies felt threatened that their individual control over their product was going to be forfeited to the US government. After heavy lobbying, SOPA was postponed and ultimately killed by the House Judiciary Committee. Since 2016, ITIC has lobbied for the DIGIT Act, a bill promoting Internet of Things (IoT) stating it "has the potential to increase efficiencies and productivity" which could generate "$2 trillion by 2025" for the US

economy (ITIC, 2016). By 2020, ITIC was successful in its campaign as DIGIT passed. IoT has been questioned for its functionality, some saying it's no more than a pointless feature. Companies saw that regardless of the engineering design of IoT, increased usage means increased profits and saw an opportunity to voice this agenda. Its no question that overwhelmingly, big tech will use trade associations to push for AI adoption. Trade associations have been a clever way for big companies to influence policy decisions from the shadows to stay in good faith with the public.

Conclusion

The buzz around GenAI transforming business is not new but parallels the historical trend of technological adoption. A lot of hype around AI poses a new way of life, and the unknown playing field leaves a lot of groups confused on how to move. However, just like in the past, social groups of varying ability have tools to draw outcomes desirable to them. Will the working class and allied organizations prevail using the power of assembly? Or will companies use trade associations to influence policy that benefits their needs? How will both sides use published research to qualify their agenda? All these questions can apply to any situation where change is introduced. Change is disruptive, it redefines participants' gains and pains. What stays consistent is how participants struggle to decide their outcomes. Those with resources, but scarce numbers, can influence decisions on a big scale. Communities that maybe don't have the same power, can use their collective voice to be heard. Both groups fight for ways to qualify their agenda by making the other sound villainous or using published research to sound irrefutable. Generative AI might just be the latest stage these groups are playing on.

Even though a pattern has been found, new to this debate are the permanent impacts this tug of war will have on participants. Groups like AJL, OpenAI, WGA, and big tech are going to

see outcomes that make or break them. The working-class securing AI regulation will secure safety but also hurt the huge investments made by big tech which are already seeing decreased ROI. Conversely, big tech ramping AI integration might see threats never seen before, but also a higher standard for technology. The roles groups play rarely change as much as their faces.

Further research should focus on how much the product itself impacts adoption. Examples presented show how some products barely make a splash and are immediately adopted where others turn the world upside down overnight. Historical examples are again the best evidence for this, some of which were touched upon above including the atomic bomb versus AWS. Another area to investigate would be how outcomes determined by the people versus executives have impacted all parties involved. Many examples saw worker strikes creating long term benefits such as: fair compensation, worker rights, and equitable representation. Executive decisions have mostly resulted in short-term benefits that ultimately cost the whole company. Is there a correlation between representation and favorable outcomes? It’s already obvious to note the exceptions for both cases ex: the failure of the Luddite Movement and AWS benefitting small businesses.

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