THE MAKING OF THE TECH WORKER MOVEMENT

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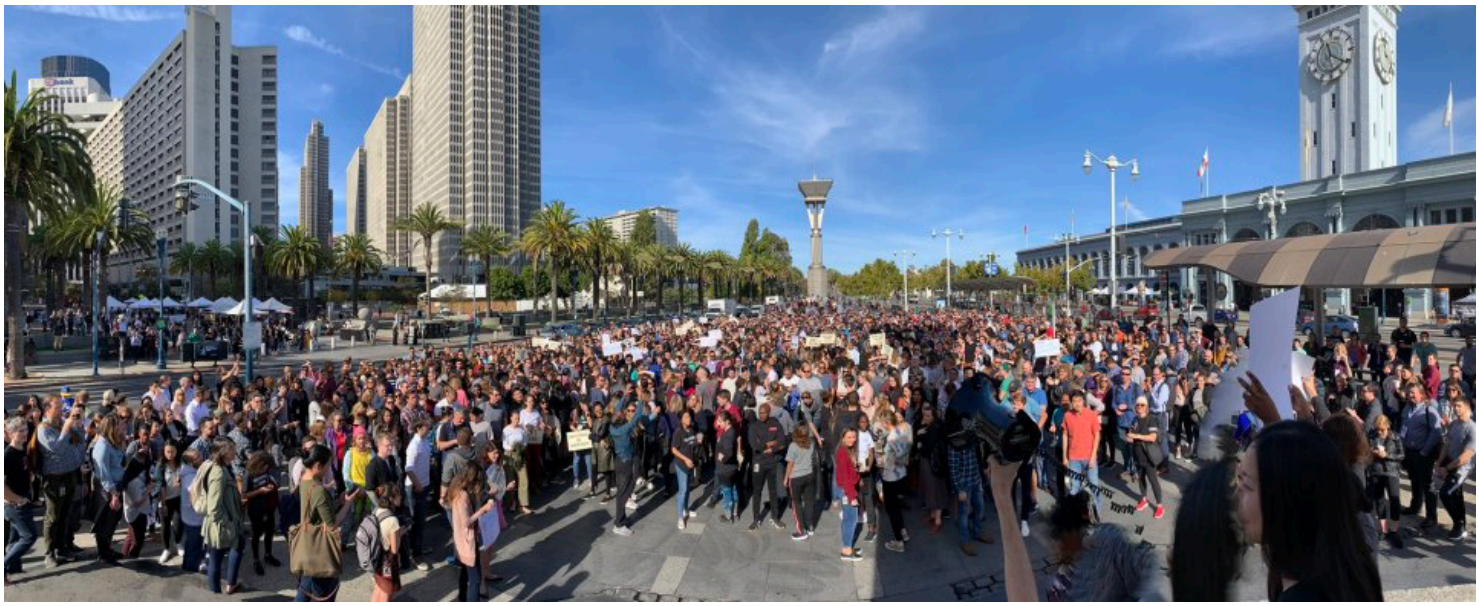

Google Walkout in San Francisco on November 1, 2018. Courtesy of Google Walkout for Change.

The Making of the Tech Worker Movement

Ben Tarnoff

On November 1, 2018, more than twenty thousand employees and contractors of Google walked out of their offices.[1] They walked out in fifty cities around the world: in Silicon Valley and Sydney, Dublin and São Paulo. They were enraged by a story in the *New York Times* reporting that Andy Rubin, creator of the Android mobile operating system, had been protected by Google management—and given a $90 million exit package—despite allegations of sexual harassment that management itself had found credible.

So, only seven days after the *Times* story broke, they pulled off one of the largest international labor actions in modern history. They gathered in parks and plazas, chanted, marched, and shared stories. They were protesting not only the Rubin cover-up, but what organizers called a "toxic work culture" characterized by harassment, discrimination, racism, and the abuse of power.

The scale of the walkout was remarkable. So was its rhetoric. Throughout the day, participants spoke the language of labor. A popular chant was "women's rights are worker's rights." Many people carried signs with the same message. In San Francisco, hundreds gathered at Harry Bridges Plaza, named for the legendary American labor leader. Amr Gaber, one of the walkout's organizers, spoke to the crowd about the significance of the setting:

> *Harry Bridges Plaza is a very symbolic location for this action... He helped launch the eighty-three-day waterfront strike that exploded into the four-day 1934 San Francisco general strike. That brought black workers and white workers standing together in solidarity. It is one of the most effective strikes in American history.*

In a press release, the organizers also invoked contemporary labor struggles. They said that the walkout belonged to a "growing movement" of "teachers, fast food workers, and others

who are using their strength in numbers to make real change." And they emphasized the power of solidarity, especially between different kinds of workers. More than half of Google's workforce is employed on a contract or temporary basis. They earn less and receive fewer benefits than full-time employees, and face greater risk of retaliation for reporting sexual harassment due to their precarious employment status. The walkout organizers highlighted these inequalities in their public statements, and included contractors in their demands. "If we want real change," they wrote, "we have to take action together."

At first glance, such language might seem surprising. The tech industry has long been hostile not only to organized labor, but to the idea of labor itself. Employees of top firms like Google have traditionally seen themselves as professionals, creatives, or entrepreneurs rather than workers—a self-identity sustained by a mix of factors, ranging from relatively high salaries to the neoliberal assumptions of the Californian Ideology. Yet here were those same employees using the oldest tactic of the labor movement, collectively withholding their work to halt production in order to pressure management into accepting their demands while invoking the past and present of that movement.[2]

How did this happen? As seven of the walkout's organizers wrote in a piece for *New York* magazine's *The Cut,* their efforts belonged to "a massive moment that ha[d] been growing for a long time." The walkout didn't come out of nowhere: Google in particular and the tech industry in general were already in the midst of a wave of rank-and-file mobilization. And, while the walkout remains exceptional for its size, this wave has continued to grow. Tech workers are engaging in collective action at a range of companies, around a range of issues. A tech worker movement is taking shape.

This movement is an immensely significant development for the Left. Tech is the crown jewel of American capitalism. While the rankings frequently shift, the top five largest publicly traded companies in the world by market capitalization are usually American tech companies, and they are very profitable: the economist Michael Roberts notes that since

2010, profit growth has stalled everywhere except for the US, thanks to the outsized earnings of the tech giants. Tech is an oasis of profitability in an era of stagnation. For this reason, it also serves a valuable ideological function. Tech is widely seen as a place where the American dream still lives: thus the enthusiasm for teaching coal miners to code, or seeding the Rust Belt with startup incubators, or proposing some other digital cure to the long crisis of working-class life.

In short, tech matters deeply to American capitalism. So the fact that a large number of tech workers are engaging in collective action should be of considerable strategic interest.

But this is not the only reason to pay close and careful attention to the new tech worker movement. It also offers a useful set of materials with which to think through a core difficulty of Marxist thought: class. As Cinzia Arruzza has observed, the concept of class is a paradox for Marxists. On the one hand, class analysis and class struggle are central Marxist categories. Yet, as Arruzza writes, "what exactly a class *is* is perhaps the most controversial and ambiguous question" in the Marxist tradition. And nowhere is this question more controversial and ambiguous than when considering the class position of those who fall outside of the binary of proletariat and bourgeoisie.

Marx predicted that capitalism would simplify its class structure as it developed. "Society as a whole is more and more splitting up into two great hostile camps, into two great classes directly facing each other—Bourgeoisie and Proletariat," in the words of *The Communist Manifesto*. Instead, the opposite happened. Advanced capitalist societies generated more heterogeneous class structures, with growing numbers of people occupying clerical, technical, supervisory, and professional roles that were neither bourgeois not proletarian.

Nicos Poulantzas called them the "new petty bourgeois"; Harry Braverman, the "new middle class"; Barbara and John Ehrenreich, the "professional-managerial class." Theorizing these middle layers became a major concern for Marxists in advanced capitalist countries in the twentieth century. This task remains critically important in the twenty-first, particularly as a

resurgent American socialist movement tries to make sense of a complex class landscape, and to forge a new class politics within it. Socialism is a working-class project, but socialists have never had the luxury of organizing in societies that are cleanly divided into a working class and a capitalist class. There are always other classes. The question is whether and how they can be brought into a socialist bloc, as junior partners in a working-class movement.

Members of the middle layers have the potential to be either friends or enemies of such a movement. By virtue of their position between labor and capital, they inhabit what Erik Olin Wright famously called "contradictory class locations." Their class condition is a combination of bourgeois and proletarian elements, which means they are pulled in two directions. They can focus on the ways in which they are bourgeois, and identify with the capitalist class; or they can focus on the ways in which they are proletarian, and forge alliances with the working class.

The tech worker movement offers a fascinating illustration of the latter phenomenon. It involves many members of the middle layers coming to see themselves as *workers*. This new identity has in turn enabled those individuals to act collectively as workers: to use their leverage over the spaces where profit is made in order to demand more control of their work and their workplaces. They are wielding the weapons of working-class struggle while speaking its language. Most significantly, they are building relationships of solidarity with their working-class colleagues in the tech industry and coordinating their efforts in order to advance their campaigns together.

This process is riven with contradictions, of course, and suffers from inevitable limitations. It is also highly uneven: the tech worker movement is by no means monolithic, and many of its middle-layer participants prefer to position their actions within non-proletarian frameworks like professional ethics and corporate responsibility. Still, the prominence of class rhetoric and a collective action approach is undeniable. Indeed, they have been widely noted by mainstream observers: in the *New York Times*, labor reporter Noam Scheiber

observed that the "most remarkable aspect" of the Google walkout "was the way the organizers identified their action with a broader worker struggle, using language almost unheard-of among affluent tech employees."

The tech worker movement, then, deserves to be closely studied by the Left. On the one hand, the movement is important to understand and engage with because of the power wielded by the industry within which it operates. But it also demonstrates how, under the right circumstances, members of the middle layers can propel themselves into a more proletarian alignment. There are lessons here for working-class organizers in countries like the United States, who will have to find many friends in the middle in order to build a movement deep enough to defeat their enemies at the top.

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Anyone who tries to tell the story of the tech worker movement may have trouble knowing where to start. The movement spans different kinds of struggles and different kinds of workers, and thus can be hard to think about as a whole. For this reason, a bit of taxonomy is helpful.

Broadly, tech worker struggles have fallen into three categories. The first involves what might be considered bread-and-butter issues: wages, benefits, and working conditions. The second centers on the demand for safe and equitable workplaces, free from sexism, racism, and other kinds of oppression—the Google walkout is a good example. The third is motivated by concerns about the social harms inflicted by particular products, contracts, or technologies.

At the risk of becoming too schematic, we could also sort the workers who are taking part in these struggles into three categories. The first is subcontracted service workers: those who

perform service labor for a tech company without being directly employed by that company. This includes security guards, janitors, cooks, and other support staff, largely concentrated on the big Silicon Valley campuses.[3]

The second category is subcontracted office workers. They have the same employment status as the janitors but they sit at a desk and move symbols around on a screen. They do many different kinds of labor, from content moderation and data labeling at the lower end to product design and software development at the upper end. Sometimes they work offsite at the offices of the subcontracted company; sometimes they work at the tech company itself, alongside full-time employees.

This brings us to our final category: full-time office workers who are directly employed by a tech company. They execute a range of functions, from communications to sales to HR. In the tech industry, however, technical roles like software development are often considered to be the most business-critical. Many of the top tech companies were founded by developers, and they remain heavily developer-centric. Technical workers also tend to be the best paid and most numerous kind of full-time employee.[4]

These three categories compose a hierarchy. The subcontracted service workers occupy its lowest, and most unambiguously proletarian, rung. Not coincidentally, this is also where the tech worker movement began.

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From its inception, the tech industry has been profoundly anti-union. Robert Noyce, a co-founder of Intel and a key figure in the making of Silicon Valley, declared in 1963 that "remaining non-union is essential for survival for most of our companies," emphasizing the need to "retain flexibility" and avoid "deep divisions between workers and management."

Over the years, executives have pursued these goals by implementing a number of managerial techniques designed to downplay hierarchy and foster unity. Perhaps the most notable is embracing a more horizontal, networked internal structure organized around semi-autonomous "work teams"; another is the deployment of concepts like corporate "mission" and "culture" to encourage a strong sense of emotional identification between employee and company. (Both have since migrated to the rest of the corporate world, suggesting that the tech industry's managerial innovations are nearly as important as its technical ones.) Stock options and amenities like staff cafeterias were also introduced early on—initially as explicitly anti-union measures at the region's microwave tube firms in the 1930s and 1940s, decades before the area was known as Silicon Valley.

Yet it would be a mistake to overstate the efficacy of these methods. While tech has never been a hotbed of trade unionism, neither has it been entirely free of organized labor. Back when Silicon Valley was in the business of manufacturing electronics, companies regularly contracted with unionized construction and janitorial services. And while production workers within the semiconductor firms never unionized, they repeatedly organized against low wages and toxic working conditions; other corners of tech have also seen occasional flashes of collective action since.[5] A common theme has been creativity under tight constraints: as the former labor organizer David Bacon writes, "Silicon Valley was as much a cauldron of new strategies for labor organizing as it was for corporate management of the workforce."

In the 1990s, however, organized labor began making serious inroads in Silicon Valley. It did so by embracing different, more disruptive methods: the Service Employees International Union (SEIU), as part of its nationwide Justice for Janitors campaign, began targeting the tech companies where subcontracted janitors worked, rather than their direct employers. A major vindication of this strategy came in 1992 when, after a year-and-a-half-long fight that saw SEIU members protesting Apple shareholder meetings, boycotting Apple products, and even conducting a hunger strike outside of Apple offices, more than 130 janitors at an

Apple subcontractor signed their first union contract, joining SEIU Local 1877.[6]

This breakthrough, and the string of successful union struggles that followed, established a beachhead for organized labor in the tech industry—one that would lay the groundwork for the sharp growth of unionism two decades later. The 2010s brought a series of big wins in quick succession. In only three years, from 2014 to 2017, five thousand subcontracted service workers in Silicon Valley unionized, prompting *Bloomberg* to run a story with the headline, "Union Power Is Putting Pressure on Silicon Valley's Tech Giants." Today, SEIU, UNITE HERE, and the Teamsters represent shuttle drivers at Apple and Twitter, security guards at IBM and Cisco, and cafeteria staff at Intel and Google, among many others.

The biggest driver of the union boom has been the increasingly impossible math of making ends meet in the Bay Area.[7] Subcontracted service workers earn very low wages despite working in one of the world's most profitable industries and living in one of the country's most expensive regions. A 2016 study found that they make on average about $20,000 a year, less than the median annual rent in Santa Clara County, which encompasses Silicon Valley; long commutes and second jobs are common.

By unionizing, subcontracted service workers have secured a measure of relief, winning higher wages and benefits like affordable healthcare. But this wasn't all they did. They also made a lasting impression on many full-time office workers.

Despite the standard managerial attempts at slicing up the workforce and keeping the slivers separated, security guards and software engineers occupy the same physical workplaces. This creates opportunities for interaction, exchange, and solidarity—for fusion across the fractures of what the scholar David Weil calls the "fissured workplace." The Tech Workers Coalition (TWC), a key organization within the tech worker movement, has prioritized building relationships between different kinds of tech workers since its founding in 2014.[8]

These relationships played an important role in certain union campaigns. When food service

workers at Facebook were organizing for a union in 2017, for instance, full-time employees affiliated with TWC mobilized in solidarity. They distributed union materials to food service workers and even brought union organizers on to the Facebook campus, signing them in as their guests. They also joined the organizers on house visits, listening to workers' stories and pledging their support.

These kinds of actions contributed appreciably to the success of service worker unionization.[9] They also had a profound effect on the full-time employees who participated in them. One such worker at Facebook told me that the experience caused him to re-evaluate the anti-union ethos he had absorbed from his time in the industry:

> *I read [venture capitalist] Paul Graham and other Silicon Valley thinkers that rail against unions. The cafeteria worker campaign opened my eyes and made me realize that a union is just a group of workers making demands together. Organizing wasn't some abstract thing I read about in the news anymore. Instead, I talked to workers about what better wages and benefits would mean to them and their families, and there was no way I could not want that for them.*

Moreover, the service worker campaigns offered something quite concrete: an education in the tactics and techniques of worker organizing. This would become indispensable when full-time office workers began to wage campaigns of their own. "It gave me a language for collective actions later," explained the Facebook employee. "Very tactical things like finding leverage points and how to measure coverage of a workplace."

But the most radical realization facilitated by these encounters would be the simplest: the idea that tech's full-time office employees were also workers. Not professionals, creatives, or entrepreneurs, but workers. This idea came into focus as full-time office workers discovered points of contact between their experiences and those of subcontracted service workers. Beneath the vast and obvious differences—compensation, employment status—certain

parallels emerged. The best account of this phenomenon belongs to Stephanie Parker, one of the Google walkout organizers, who told Nitasha Tiku at *Wired* in 2018:

> *Seeing the cafeteria workers and security guards at Silicon Valley companies bravely demand access to benefits and respect was a deeply inspiring experience for me and many other tech workers this past year. It helped me to see parallels between the struggles of these service workers and my own experience as a black woman in tech, and also prepared me to identify with the struggles happening in other local industries, like the Marriott hotel strike.*

Parker is describing a dynamic of central importance to the tech worker movement. Observing proletarian tech workers engaging in class struggle caused a number of tech workers in the middle layers to acquire a different understanding of their own class position. In particular, it underscored the proletarian elements of their experience—elements that had always been there by virtue of their contradictory class location, but whose salience had been largely suppressed.

These elements take a range of forms, but among the most consequential are those rooted in race and gender. To borrow a formulation from Stuart Hall, race and gender are modalities through which class is lived. In the case of the tech worker movement, they are modalities through which tech workers of the middle layers *live* the proletarian elements of their contradictory class location.

This may help explain why most leaders of the movement have been women and people of color. Parker's quote suggests that women and people of color are more likely to be available to a class analysis by virtue of being the more proletarianized members of the middle layers.[10] For Parker, coming to class analysis was not a function of a "universal" class perspective displacing her "particular" identity as a Black woman. Rather, she came to class analysis *through* her identity: by being a Black woman in tech, she was better able to identify

with the union struggles of subcontracted service workers, the majority of whom are Black and Latinx. This identification operated through relations of race and gender but ultimately expressed itself in class terms: Parker saw herself as a worker, in solidarity with other workers.

Parker's story is a personal one, but it illustrates a broader theme: the centrality of race and gender in shaping and sustaining the class dynamics of the tech worker movement. This is particularly evident when one looks more closely at how collective action began to migrate from the subcontracted periphery of tech into its salaried core—a development that had everything to do with the election of Donald Trump.

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The tech worker movement is hard to imagine without Trump winning the White House. There were earlier stirrings, of course, like the service worker struggles. And the election did not immediately unleash a wave of worker revolt: the pace of collective actions wouldn't really pick up until 2018. Still, 2016 marked a turning point. It set in motion new dynamics, and accelerated existing ones, that would converge to produce a new mood of mobilization.

Trump's victory shocked Silicon Valley. Historically, tech industry leaders have maintained a close relationship with the Democratic Party. This relationship was especially close under Barack Obama, hailed as the "first internet president" for his innovative use of online campaign strategies.[11] So their support for Hillary Clinton in 2016 was a foregone conclusion. But many went further, denouncing Trump as a dangerous bigot. Trump's rhetoric seemed the very antithesis of their own: here was an avowed enemy of networked liberal cosmopolitanism, a builder of "walls" not "bridges," in Mark Zuckerberg's words.

After the election, however, the tone from the top of the industry abruptly changed. Tech

leaders, it turned out, were happy to build bridges with the builder of walls. First came conciliatory public statements from various industry elites. Then, on December 14, 2016, a number of executives joined the president-elect at Trump Tower for a so-called "Tech Summit." Press photos showed Trump surrounded by Apple CEO Tim Cook, Alphabet CEO Larry Page, Amazon CEO Jeff Bezos, and Facebook COO Sheryl Sandberg.

For many of these companies' employees, seeing their leaders so swiftly accommodate the president-elect after condemning him during the campaign was a disillusioning experience. Most had also opposed Trump, leaning liberal or further to the left.[12] The about-face created a new sense of distance between them and their bosses, suggesting that their interests and values were not so closely aligned.

This sense of distance wasn't new to everyone. Many women and people of color in full-time office roles had long appreciated the fact that their interests and values were not necessarily aligned with those of upper management. So did many of those who occupied less privileged strata within the office—administrative assistants rather than software engineers, for instance—or had endured the more exploitative aspects of the startup world, where employees often work long hours in exchange for equity that turns out to be worthless. As Paige Panter, a TWC volunteer, remarked to the *Guardian*'s Moira Weigel: "You start to realize, 'Maybe our company is only delivering value for these venture capitalists.'"

Still, the dynamics on display at the Tech Summit made this sense of distance more widely and more intensely felt. It also fostered a new appreciation for the potentially harmful consequences of the technologies that the industry was building or could build, and a recognition that executives had little incentive to mitigate those consequences, further amplifying the sense of distance. During the campaign, Trump had promised to build a registry of all Muslims in the US and to accelerate deportations of the undocumented. The sudden coziness between tech leaders and Trump suggested they would be willing to supply the software to help implement this agenda.[13]

In response, an unprecedented surge of activity swept tech's full-time office workers. A new group called Tech Solidarity began meeting regularly, first in San Francisco and then in other cities, creating a space for people in the industry to strategize about how to oppose the incoming Administration. The inaugural gathering helped produce the Never Again pledge, a public declaration by tech company employees that they would refuse to build a database identifying people by race, religion, or national origin. It focused on the two concerns that predominated at the time: Trump's proposed "Muslim registry" and mass deportations. The pledge went live the day before the Tech Summit, and attracted 1,300 signatures in the first forty-eight hours. It would go on to collect nearly 3,000, before the organizers stopped accepting signatures after eight days.

The Never Again pledge anticipated and inspired key elements of the tech worker movement. It took the form of an open letter, a popular genre in later campaigns. Its text also articulated certain sentiments that would guide many future actions, namely the recognition that technology can hurt human beings, and that employees of tech companies have both the capacity and the responsibility to stop such abuses.[14] Above all, it conveyed a strong sense of moral urgency about the need for tech employees to take action.

The title of the pledge reflected this sense of urgency: "never again" refers to IBM's well-documented role in providing the Nazis with the punch-card machines that streamlined the Holocaust.[15] That thousands of tech industry employees, many from top companies like Google and Amazon, felt compelled to add their name to such a strongly worded document suggests the starkness of the shift precipitated by Trump.

But how precisely would the signatories keep their promise to "never again" be complicit in atrocities? What could they do to prevent their companies from building something like a Muslim registry? On this point, the Never Again pledge was less clear. It presented a range of possible approaches for enforcing the terms of the pledge, from destroying data sets to whistleblowing to resigning. For its part, Tech Solidarity generally focused on funneling

donations and volunteer labor to nonprofits working against the Trump agenda; later, the group would raise money for Democratic Party candidates.

This wide range of tactics points to the problem of the immediate post-election period. A large number of white-collar tech workers were becoming newly active, but they didn't have an obvious place to put their energy. They wanted to take action, but exactly *how* to take action remained an open question.

Perhaps the clearest and most distinctive path forward came from TWC. The organization had two major advantages. First, it had been around since 2014, which meant its organizers were more experienced than most. The group's greatest asset, however, was its unique emphasis on labor and class. As Kristen Sheets, a longtime volunteer with TWC, explained to me in early 2017:

> *The Tech Workers Coalition doesn't see tech workers as a special kind of worker. But we understand that we do have a strategic position with regard to our place in production that we can leverage to stand in solidarity with other workers—not only with the service workers who work as security guards and bus drivers in our workplaces, but with all workers.*

While these ideas would later become widespread as the tech worker movement grew, it's hard to overstate how unusual they were at the time. As Sheets acknowledged, "Currently, most tech workers—and most people in general—don't typically engage with politics around the question of labor and class." Once again, Trump played a crucial role. He created the conditions for TWC's perspective to find wider support.

This perspective offered two things to white-collar tech workers feeling angry and disoriented in the aftermath of the election. First, it helped make sense of the estrangement they felt from their leaders after the latter's embrace of the new Administration. Historically, the tech industry had been relatively successful at giving its salaried staff the impression that

they had real control of their work and real input into the direction of their company. The post-election moment demonstrated that this was not the case. Rather, it seemed to confirm the fundamentals of TWC's class analysis: that the tech industry, like any industry, was divided into workers and bosses.

Software engineers, product designers, and others enjoyed better conditions than most workers, but they were still workers. Their privileged position gave them a degree of autonomy in their workplaces and, in some cases, non-negligible equity stakes in their firms—these were the bourgeois elements in their contradictory class position. A select few would even ascend into upper management or acquire enough capital to become truly bourgeois. But most would remain in the middle layers, and among the proletarian aspects of this location was the exclusion from real decision-making—namely, investment and production decisions such as whether to build a piece of software for the Trump Administration.

Yet this didn't mean they were powerless. Far from it: if seeing themselves as workers helped clarify the power dynamics within their workplaces, it also presented a way to alter those dynamics. This was the second thing the TWC perspective provided: a method for making change. To the extent that tech workers were workers, they could exercise leverage over management the same way that workers in other industries did—through collective action. For inspiration, TWC looked to the labor movement.

Originally founded by a union organizer and a software engineer, TWC always had close links to organized labor. But in late 2016, the group began its first major efforts to support union campaigns by subcontracted service workers on Silicon Valley campuses. The timing was fortuitous. After the election, the size of TWC meetings began to grow, thanks to an influx of anti-Trump tech employees looking for an organizational outlet. These newcomers could immediately plug into solidarity work. On November 25, 2016, seventeen days after the election, TWC announced they were partnering with Service Employees International Union-United Service Workers West (SEIU-USWW) to help security guards organize in Silicon

Valley. In early 2017, they began working with UNITE HERE to do the same for cafeteria workers.

To those who participated in them, these initiatives further validated TWC's class analysis. Full-time office workers obtained a better understanding of the proletarian elements of their contradictory class existence through their interactions with unionizing service workers. They also learned about the power, and the mechanics, of collective action.

How might these lessons be brought to bear on the crisis that triggered the Never Again pledge? How could tech's full-time office workers use organizing techniques to acquire greater control over their work, in order to prevent their bosses from collaborating with Trump? The first inklings towards an answer began to appear in early 2017.

On January 18, 2017, TWC organized a protest outside of the Palo Alto headquarters of Palantir. A data analytics company co-founded by Trump advisor Peter Thiel, its software was already helping ICE conduct workplace raids and deportations. Thiel's links to Trump also made the firm an obvious choice for building the much-feared Muslim registry, or whatever else the Administration might need to pursue its policies.

About seventy people joined the action, including employees of Facebook, Google, Intel, Cisco, and Stripe. While such demonstrations would become more common, the spectacle of tech employees protesting a tech company was still a novelty in early 2017—a fact that helped the rally garner significant media coverage. "Silicon Valley is no stranger to protests against tech companies," wrote Sarah Buhr in *TechCrunch*. "But it's unusual when the tech workers themselves protest tech."

Equally unusual was the salience of the worker identity. TWC volunteers emphasized they were taking action as tech workers, in an effort to urge their fellow workers within Palantir to take action. "We want to send a message to employees," Sophie Xie, a former Facebook product designer, told Nitasha Tiku at *BuzzFeed*. "It's pretty clear that employees are one of

the most powerful levers that can fight for change internally."

TWC thus promoted collective action in the workplace as the most promising mechanism for change. An early illustration of what such action might look like came only twelve days later, when, on January 30, 2017, more than two thousand Google employees in eight offices around the world participated in a walkout to demonstrate their opposition to Trump's recently announced "Muslim ban." This was the executive order prohibiting entry from seven Muslim-majority countries, which had sparked large protests at airports across the US.

At the action at the Mountain View headquarters, workers spoke about how the Muslim ban had affected them. Among the speakers was a janitor with SEIU-USWW—a reminder that immigrants were also well-represented among tech's subcontracted service staff. Indeed, this was "one of the biggest points of intersection" between the two types of workers, SEIU-USWW president David Huerta told me in early 2017.

It's tempting to see the Muslim ban walkout at Google as the first major example of tech's full-time office workers engaging in collective action. However, several aspects mitigated its militancy. First, while the idea for the walkout originated with employees, leadership signaled its support and then moved to control the message. Both Google CEO Sundar Pichai and company co-founder Sergey Brin spoke at the demonstration, emphasizing the need for moderation and dialogue across political differences. Moreover, the Google workers weren't making demands of management. If anything, both sides were aligned on the issue at hand: Google, along with many other tech companies, had recently filed an amicus brief challenging the constitutionality of the Muslim ban, and had pledged to match up to $2 million in employee donations to help refugees. The hashtag for the walkout, #GooglersUnite, captured the tone: the company presented a largely united front.

Even so, the events of that day clearly indicated that something significant had changed. The ease and speed with which Google employees could organize a large workplace action

suggested a new appetite for agitation among tech's rank-and-file. Leadership's response suggested a certain nervousness from the top. The contours of the tech worker movement were beginning to come into view. It would take another year to see them clearly.

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2018 is when the tech worker movement achieved escape velocity. Collective Actions in Tech, an online resource cataloging tech worker unrest, shows a sharp uptick in activity starting that year. According to JS Tan, the site's creator, "2018 marks the first year where we're seeing tech workers protesting on a fairly consistent basis."

The epicenter of the upsurge was Google. Within Google, organizers pulled off large, high-profile mobilizations that inspired similar actions elsewhere in the industry, and brought the movement to the attention of the mainstream media. Several factors made Google an especially fertile ground for organizing. The most significant was a company culture that permitted unusually open and vigorous discussions among employees, even when they directly challenged decisions by leadership. These discussions were conducted on a robust internal communications infrastructure that included thousands of mailing lists, a company version of the Google Plus social networking site, and a meme platform called Memegen. Google employees made use of these tools to organize the walkout against the Muslim ban in January 2017; they would be put to similar purposes in many later actions.

Yet if Google's internal forums helped give voice to the new "tech left" energized by opposition to Trump, it did the same for the reactionary elements that comprised a new "tech right" emboldened by Trump.[16] A good example was James Damore, a Google software engineer. In July 2017, Damore used the company's internal mailing lists to circulate a memo that denounced the company's diversity initiatives and claimed that women were biologically unsuited to write code. In the firestorm that followed, right-wing Googlers leaked

screenshots of internal posts by left-wing Googlers to sites like Breitbart. Alt-right outlets like 4chan then initiated a campaign of doxxing and harrassment against these Googlers, particularly those who were queer, transgender, or people of color.

Management failed to protect employees from these attacks, contributing both to the erosion of trust between leadership and the rank-and-file and to the growing interest in labor-oriented collective action.[17] In the aftermath, Liz Fong-Jones, a queer and transgender woman of color who had been targeted by the alt-right, brought a labor group to Google to talk about protected concerted activity rights under US labor law.

But there was another important reason that Google became a hotspot for organizing. Its employees tended to have a more utopian outlook, aptly summarized by its former slogan, "Don't be evil." Employees expected executives to put ethical considerations above profit-making. When this expectation was not fulfilled, it created a sense of betrayal that fed a process of radicalization. Such a process was particularly evident in the organizing against Project Maven—the breakthrough that marked the true arrival of the tech worker movement.

Project Maven, also known as the Algorithmic Warfare Cross-Functional Team, is a Pentagon initiative to use machine learning (ML) to analyze drone footage. It belongs to a broader effort to modernize US military operations through the greater use of ML and cloud computing, which requires partnering with tech firms like Google that specialize in these technologies. In September 2017, Google signed a contract with the Pentagon to work on Project Maven. Management tried to keep the deal quiet, knowing that anything related to the weaponization of ML would cause controversy. But employees began to find out about it, and as the concerns they raised through official channels went nowhere, they turned to the company's internal forums to raise awareness.

Outrage grew. In February 2018, an open letter to CEO Sundhar Pichai asking him to cancel the contract began to circulate. As it racked up signatures, anti-Maven employees mobilized on a number of fronts: compiling Maven-related research, asking pointed questions at

company meetings, even distributing anti-Maven memes. After months of escalating pressure, management caved: in early June 2018, Google announced it would not be renewing the Project Maven contract.

The anti-Maven campaign presented a conclusive answer to the tactical uncertainty of the post-election period. It put the ideas of the Never Again pledge into practice by implementing the collective action model advocated by TWC—and won. As one of the core anti-Maven organizers told me shortly after Google canceled the contract:

> *The Project Maven campaign is the Never Again pledge in action. This is what it looks like when we actually try to say "no." It's messy. It takes a lot of actual organizing effort. You're not going to get a project titled "Muslim database." But if we organize collectively, we can put our resistance into action.*

Collective action became thinkable for these employees in large part due to a changing understanding of their class position generated through struggle. Over the course of the campaign, rising tensions with management cast the structural divisions of the workplace into starker relief, making new perceptions and new courses of action possible. In the words of the anti-Maven organizer:

> *Before the campaign, a lot of Googlers had never considered the fact that their values might not be aligned with the values of leadership. Organizing around Project Maven helped people realize that no matter how good their job is—and generally speaking, Google jobs are good—they're still workers, not owners… [T]he structure of every workplace is the same. Workers have no say. They have no voice. If they disagree with management, then they're out.*

In other words, Google employees came to perceive the proletarian elements of their

contradictory class location more clearly by clashing with management over control of their work. This helped them see themselves as workers and, in turn, to see the power they held collectively as workers—an insight ultimately confirmed by the success of the campaign.

The anti-Maven mobilization also demonstrated what collective action by tech's full-time office workers could look like concretely. Service worker union struggles had been influential for those in the TWC orbit, but they followed the typical roadmap of organizing a union: signing cards, winning an election, negotiating a contract. Among full-time office workers at a place like Google, the prospects of forming an official union were more remote. Yet such workers—especially software engineers and others considered technical—had substantial labor market power. They were expensive to hire and expensive to train, and they could usually find another job without too much trouble.

Simply by making their dissatisfaction known, then, such workers could threaten the profit engine without necessarily engaging in a work stoppage.[18] They could raise the specter of bad morale—a phenomenon much feared by management at top tech firms, since it endangers their ability to retain and attract technical talent, or to keep such talent motivated and on task. Workers could weaponize management's fear of bad morale to advance their demands.

Wielding this weapon effectively required organization, however—and this is where the anti-Maven campaign really distinguished itself. As Nitasha Tiku remarked in *Wired*, "Maven's opponents were organized in a way that Google hadn't really seen before." The level of coordination was unprecedented, which centrally contributed to the organizers' victory in June 2018.

Google's cancellation of the contract landed like a bombshell. It came as a surprise to nearly everyone, not least to the organizers themselves. It also produced a perceptible air of panic among the functionaries and apologists of US imperialism. One op-ed contributor after another lined up to denounce the anti-Maven workers in the country's major newspapers.

The Pentagon launched various tech "ethics" initiatives to try to defuse rank-and-file dissent. Tech worker unrest was now a matter of serious elite concern.

But the biggest consequence of the campaign's success was the inspiration it gave workers elsewhere in the industry. For those who had been looking for ways to say "never again," the achievements of the Google organizers made a profound impression. They now tried to bring the same energy to their own workplaces.

Two and a half weeks after the Project Maven announcement, Microsoft employees posted an open letter to the company's internal message board calling for the termination of a $19.4 million cloud contract with Immigration and Customs Enforcement (ICE). Two days later, *Gizmodo* reported that a similar open letter was circulating within Amazon demanding the company cut ties with ICE and stop selling facial recognition to police departments and government agencies. Four days after that, *Bloomberg* revealed that Salesforce employees had written an open letter requesting the cancellation of a contract with Customs and Border Protection (CBP).

These campaigns were known collectively as #TechWontBuildIt, a label that came to encompass more actions as the post-Maven momentum spread. Meanwhile, agitation within Google grew: in November 2018, hundreds of workers signed an open letter demanding the company halt work on Project Dragonfly, a censored search engine for the Chinese market.

As mobilizations proliferated across the industry, the degree of militancy, organization, and employee engagement varied widely. Yet the distance traveled since 2017 was considerable. Compare the walkout at Google in January 2017 against the Muslim ban with the much larger walkout against harrassment and discrimination in November 2018. The former was co-opted by management, and featured two top executives as speakers. It made no demands, and it submerged the structural divisions between leadership and the rank and file rather than surfacing them.

By contrast, the latter forcefully underscored those divisions. The action was led by the rank and file and suffused with the language of labor. When Google leadership tried to co-opt it, inviting one of the core organizers to a meeting with three top women executives in the days before the walkout—including the CFO, the head of HR, and the CEO of YouTube—the overture was rejected. In the space of twenty-two months, from one walkout to another, a new model of making change had taken root.

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In 2018, the tech worker movement found its footing. In 2019, it broadened its influence. In particular, a new group joined the fray: subcontracted office workers.

Such workers are abundant in tech. According to the staffing agency directory OnContracting, contingent labor accounts for 40 to 50 percent of the workforce at most tech firms. At Google, the proportion is particularly high: in March 2019, the *New York Times* reported that it had obtained an internal document showing that Google employed 121,000 temps, vendors, and contractors (TVCs) and 102,000 full-time employees. (By December 2019, the number of full-time employees had risen to 118,899.)

Blue-collar workers like janitors have been subcontracted from the industry's earliest days. In recent years, however, tech companies have also come to rely on a growing number of white-collar subcontractors. This development is driven by two related factors. The first is a broader, decades-long trend, accelerated by the Great Recession, whereby corporations have turned to contingent workers in order to cut costs. At Google, for instance, many full-time recruiting positions were eliminated after the financial crisis, only to be brought back later on a temporary basis. The second is more specific to the tech industry. New products and technologies have spawned new kinds of office work, such as moderating content on social media platforms or labeling data to train ML models, that is outsourced to other companies,

often those located in countries with lower labor costs. Overall, subcontracted office workers earn lower pay, receive fewer to no benefits, endure precarious employment, and often suffer grueling working conditions.

While pockets of these workers have taken action in the past, they never organized as successfully as their blue-collar counterparts.[19] At the end of 2018, however, the tide began to shift. This came about in part through coalitions forged with full-time employees, who could exercise their greater leverage within the company in solidarity with their subcontracted colleagues.

The organizers of the Google walkout in November 2018 developed their demands with input from subcontracted workers, many of whom participated in the action. The following month, the organizers published a letter written by subcontracted workers demanding better treatment for "Google's shadow workforce." Echoing a common refrain of the tech worker movement, the letter emphasized the role of racism in structuring class divisions within the company: subcontracted workers, both blue-collar and white-collar, are much more likely to be people of color.[20]

But agitation around the issue grew sharply in the spring of 2019, after the company shortened the contracts of thirty-four temps who helped craft the "personality" of Google Assistant. An internal outcry followed, which saw the circulation of a letter signed by more than 900 Googlers. Management responded by promising to raise the minimum standards for US-based subcontracted workers.[21] A campaign within Facebook, which saw similar levels of coordination between subcontracted and full-time office workers, achieved comparable results: meaningful if inadequate concessions from management on pay and conditions.[22]

On the one hand, these kinds of coalitions were nothing new: full-time office workers affiliated with TWC had been doing solidarity work with unionizing subcontracted service workers for years. Yet the work being performed by subcontracted office workers was much

closer—in some cases, identical—to the work being performed by full-time office workers. It was often technical; sometimes it required advanced degrees. Inevitably, this colored the class analysis facilitated by the encounter.

If software engineers had perceived the proletarian elements of their contradictory class location through their solidarity work with security guards, they would perceive something else in their solidarity work with subcontracted white-collar staff: the possibility of their own proletarianization. Here was the potential for their class location to become much less contradictory. Even those who occupy privileged perches within the middle layers always face the risk of falling downward; capital is remarkably creative. Meredith Whittaker, a leading organizer within Google, said as much in her farewell letter after retaliation by management pushed her out of the company in summer 2019: "Google is moving in a direction where soon everyone but upper management will be a [subcontracted worker]," she wrote.[23]

Whittaker proposed a solution: "unionize—in a way that works." In September 2019, this is exactly what one segment of subcontracted office workers did. A group of data analysts at a Google contractor in Pittsburgh voted to unionize with the United Steelworkers. But subcontracted office workers aren't the only ones who have begun to pursue formal unionization. In February 2020, full-time employees at Kickstarter voted to unionize with the Office and Professional Employees International Union, after a hard-fought eighteen-month campaign. These two workplaces will be home to the first white-collar tech unions in the country.[24]

Another promising trend is the growth of intercompany organizing. In September 2019, full-time office workers at Amazon led the first major cross-company mobilization: a walkout for climate action. They issued three demands: for the company to commit to zero emissions by 2030, to have zero custom cloud computing contracts with fossil fuel companies, and to spend zero dollars on funding climate-denying lobbyists and politicians. They were joined by

workers at Google, Facebook, Microsoft, and Twitter. Never before had tech's full-time office workers undertaken an industry-wide action. Known on social media as the #TechClimateStrike, the mobilization saw workers collaborating across firms and coalescing around common demands.

But late 2019 and early 2020 also brought a less encouraging development: a rising tide of retaliation from the top. The crackdown has been especially intense at Google. In November 2019, management fired four employees involved in organizing, the same month the *New York Times* reported that the company had retained the services of a notorious union-busting firm. In December 2019, Google terminated yet another worker-organizer. Executives have also begun dismantling various internal practices that made Google especially fertile ground for organizing: restricting the free flow of information, for example, and scaling back the meetings where employees can pose direct questions to leadership.[25]

These three elements—white-collar unionization, intercompany organizing, and management backlash—may very well define the next stage of the movement, as it evolves past its initial insurgent phase and looks to put down deeper roots.

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It's impossible to draw definitive conclusions about a movement that's still in progress, and the tech worker movement is still very much in progress. Still, it's possible to discern some general patterns to its progress so far.

The most distinctive aspect of the movement is the extent to which its participants see it *as a movement*—that is, as a relatively cohesive formation. This may seem strange, given the diversity of issues it has organized around. Pentagon drone strikes, workplace harassment, and tech's contribution to climate change are not obviously linked. But organizers have

consistently affirmed the connectedness of their campaigns. When I spoke with Rebecca Sheppard, an organizer of the Amazon climate walkout, she described the inspiration she drew from the Google walkout of November 2018 and the #TechWontBuildIt campaigns against ICE and CBP. "All of these fights are connected," she said.[26]

What explains the sense of relatedness that organizers feel across such distinct mobilizations? One theme that figures prominently in statements and interviews is the demand for greater worker control. Across the movement's many mobilizations, workers have demanded greater control over the conditions of their work, how their workplaces are run and organized, and what kind of work they do. This aspiration is often explicitly stated. At Amazon, employees have petitioned CEO Jeff Bezos for "a choice in what [they] build, and a say in how it is used." At Google, they have demanded "a say in decisions that affect their lives and the world around them." To that end, Google organizers want to create a seat for a worker representative on the company board.

This theme has also helped cultivate solidarity across different kinds of workers, since it is so widely felt. When Amazon warehouse workers in Shakopee, Minnesota staged a one-day strike in July 2019 to protest their working conditions, a contingent of full-time office workers from Amazon involved in climate organizing traveled from Seattle to show their support, bringing hundreds of statements of solidarity from their coworkers. "We see these two struggles as very much related," Weston Fribley, an Amazon software engineer, told *The Verge*'s Josh Dzieza. "Amazon employees often don't have a say in the decisions that affect their work and their communities, or how their work is used."

If the demand for greater control is one theme of the movement, another is a critique of the profit motive. When Microsoft workers want to place "children and families above profits," or Amazon workers condemn the fixation on shareholder value as "a race to the bottom," they are articulating a shared understanding, often one acquired over the course of conflicts with management, of how the logic of profit maximization can compel executives to build

products that inflict harm. This harm, however, is not distributed evenly, but in ways that reflect the inequalities generated by race, gender, and other forms of social difference—inequalities that are also inscribed throughout the tech industry itself.

Indeed, the points of contact between members of marginalized communities *targeted* by certain technologies and members of marginalized communities who are *building* those technologies—between the objects and subjects of technology, in other words—have served as a powerful stimulus for collective action among tech's full-time office workers. The reason that the prospect of a Muslim database had such a mobilizing effect on these workers in the aftermath of Trump's victory was due in large part to the fact that many of them were immigrants themselves, and thus could very well be targeted by anti-immigrant technologies. A similar perspective informed the campaign against Project Maven. "Many of the Googlers who supported the campaign come from regions of the world where the American military has been extremely destructive," an anti-Maven organizer told me.

While this helps explain how certain campaigns have gained traction, however, it doesn't explain how the campaigns are connected. For that, we have to return to the profit motive, and in particular how it relates to the forms of domination implicated in initiatives like Project Maven. The best elaboration of this comes from former Google organizer Meredith Whittaker:

> *Ultimately, shareholder value [and the] profit motive are driving these companies' existence. [That is] reflected in the technology they build, [which is] built to benefit a vanishingly small number of usually white men. And they incidentally harm a fairly predictable demographic of people. It's Black and brown people, women, marginalized groups, specifically Black women. You see this in the decision to move forward with Project Maven. If you look at the victims of the drone war, you're looking at a similar demographic makeup to the people who get paid least at Google.*

This analysis is by no means universally held by members of the tech worker movement. But it is widely perceptible in stronger or weaker forms as a kind of connective tissue running through the movement, so it's worth parsing carefully.

Here, Whittaker is describing how the profit motive is entangled with racism, sexism, and other oppressions. It is inseparable from the injustices perpetrated against certain groups *within* tech firms, just as it inseparable from the injustices perpetrated against certain groups by the technologies that these firms create. Racism, for instance, lets the industry's predominantly white male leadership pay certain workers less—particularly subcontracted workers, who are far more likely to be people of color—while generating targeted populations (immigrants, "terrorists") that give the industry lucrative opportunities to partner with state security agencies.

While the different kinds of damage are of vastly different degrees—having a drone drop a bomb on your house versus earning a lower salary—they are rooted in the same set of social processes, whereby certain groups of human beings are racialized, gendered, or otherwise differentiated in order to justify the devaluing of their lives or their labor. As Cedric J. Robinson argued, such differentiation is indispensable to the functioning of capitalism, since it helps naturalize the relationships of domination demanded by the imperative of accumulation.

What this means more concretely is that the executives of a tech firm, just like those of any capitalist firm, are bound by certain incentives and constraints that strongly favor, and sometimes absolutely enforce, certain behaviors. These incentives and constraints are structured by capitalism, as mediated by racism, sexism, and other oppressions. They are structural, in other words, and thus require a structural response.

Within the tech workplace, as in any workplace, different people are dominated differently. But it is only by coming together around what they share in common—their position as workers—that they can compose a force powerful enough to combat the system that

dominates them. Class identity and organization are thus arrived at *through* relations of race and gender, not in spite of them. Only the workers, organized in class terms across their many forms of difference, can push back on the profit motive. By asserting more control over their work, they can help create more democratic workplaces.

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The picture I've provided is far from complete. It excludes important sites of organizing in tech, such as the platform-mediated gig workforce and Amazon warehouses. It also focuses on full-time office workers. This isn't because these workers are more organized or more effective—although they are more prominent due to the disproportionate amount of media coverage they receive. Rather, it's because their contradictory class location makes their path to a more proletarian subjectivity particularly interesting.

This path is never a straight line, even for those who inhabit less contradictory locations. As Adam Przeworski observes, "Classes are not given uniquely by any objective positions because they constitute effects of struggles, and these struggles are not determined uniquely by the relations of production." In other words, classes are not static clusters of individuals who reside at one latitude or another within the productive structure—and thus must inevitably think the thoughts associated with their location (or suffer false consciousness). Rather, classes are made and remade by struggle. And this struggle doesn't take place solely at the economic level, but at the political and ideological levels as well.

In his early work, Erik Olin Wright argued that these latter two levels are especially consequential for those who inhabit contradictory class locations. Since the relations of production lived by such individuals are contradictory, the economic exerts a less conclusive effect on class determination. "In a sense it is the indeterminacy of class determination at the economic level which allows political and ideological relations to become effective

determinants of class position," Wright wrote in his first piece for the *New Left Review* in 1976. The question that always haunts these relations is one of *classification*: how does a particular group of people see themselves? As whites, Catholics, entrepreneurs? Or as workers? This is why struggle at the political and the ideological levels is "*about* class before it is a struggle among classes," in Przeworski's words.

The experience of full-time office workers within the tech worker movement mostly confirms these insights—while furnishing a few of its own. More broadly, it gives us a way to refine our understanding of how class is made in the middle layers, and how the contradictions that belong to those layers can be polarized in a more proletarian direction.

Wright was correct to emphasize the outsized role that political and ideological struggle play in class formation among those who occupy contradictory class locations. But he may have overstated his case when he wrote of "the indeterminacy of class determination at the economic level." On the contrary, the economic is determinant in an important sense: it is the ground upon which the hypotheses that arise from struggles at the other levels must verify themselves. These hypotheses must be *credible*, in other words, and their credibility is derived from the snugness of their "fit" with the realities associated with particular relations of production.

Consider the different kinds of tech workers. There is no guarantee that a subcontracted janitor at Google will see themselves as a worker, or as anything else. But the hypothesis that the janitor *is a worker* is likely to encounter ample evidence at the economic level, given the plainly proletarian character of the janitor's position within the structure of production. What about a subcontracted customer support representative? Here the picture becomes more contradictory, although the proletarian elements—precariousness, negligible autonomy, relatively low pay and meager benefits fostering radical market dependence—will probably predominate. Again, there is no guarantee that such individuals will see themselves as workers. But the hypothesis that they are workers, as advanced through political and

ideological struggle, will find an easy fit at the economic level.

When we arrive at the full-time software engineer, however, we reach the most contradictory of the three categories. The relations of production possess both bourgeois and proletarian aspects, which means there is evidence to sustain competing hypotheses. For this group, then, political and ideological struggle serve a critical interpretive function. They attempt to make coherent a highly contradictory situation, by foregrounding the elements that help validate their respective hypotheses, and backgrounding the ones that don't.

This theoretical framework helps clarify how full-time office workers in the tech industry came to embrace a worker identity. At first, this identity was only promoted by a small circle affiliated with TWC. Other classifications—the professional, the creative, the entrepreneur—held greater sway, maintaining their credibility by highlighting the bourgeois aspects of the location.

In the aftermath of Trump's victory, however, the idea of the "tech worker" became more plausible to more people. This is because the new cycle of political and ideological struggle triggered by Trump brought the proletarian elements of the contradictory class location into sharper focus—in particular, the lack of control over the investment and production decisions of the firm.

This lack of control had always existed. But it began to be perceived more acutely in the post-election period, as fears about a Muslim registry fueled a new mood of moral urgency around technology's capacity to cause harm. As workers began trying to mitigate these harms by claiming more control over what their firms were building, they met resistance from management—and discovered that they were, in significant respects, workers.

They also made this discovery through their interactions with other categories of tech workers. For instance, the relationships forged with subcontracted service workers through supporting their union campaigns accentuated the proletarian elements of the contradictory

class location, helping the hypothesis initially proposed by TWC find a better fit.[27]

In both cases, relations of race and gender functioned as catalysts of class formation. Women and people of color largely led the mobilizations, which largely expressed themselves in class terms. Solidarity around shared oppressions enabled such workers to see themselves as workers: through alliances with their subcontracted colleagues, through tensions with management over the disproportionate amounts of damage inflicted by certain technologies on marginalized groups.

What lessons might socialists draw from all this? Perhaps the most obvious, and one with relevance far beyond tech, is that the middle layers can be good terrain for organizing. Their intensely contradictory class character means that the existing arrangement is always less stable than it looks. New waves of political and ideological struggle can precipitate new processes of class formation, by foregrounding the proletarian aspects of the economic level. Of course, if the economic level starts exhibiting more proletarian aspects—for instance, due to the proletarianization of white-collar work through outsourcing and automation—such struggles will find more ground on which to stand. Yet so long as there are *some* proletarian elements, class formation can find a way, even within relatively privileged strata. The task for organizers, then, is to identify those elements and develop forms of practice that give them prominence.

Even when they succeed, however, their victories can be easily undone, since they rest on such a contradictory foundation. The militancy of a software engineer is a fragile thing. This is why organizing among the middle layers must always orient itself towards proletarian leadership: to build relationships with such workers and to enter into coalitions under their control. The tech worker movement will become a truly transformative social force to the extent that it takes its direction from the Google security guard, the Uber driver, the Amazon warehouse worker. Socialism needs friends in the middle, but it must be led from below.

Endnotes

1. Since a corporate restructuring in 2015, Google's parent company is called Alphabet, and Google is technically a subsidiary.

2. The five demands of the Google walkout were 1) "an end to forced arbitration in cases of harassment and discrimination," 2) "a commitment to end pay and opportunity inequity," 3) "a publicly disclosed sexual harassment transparency report," 4) "a clear, uniform, globally inclusive process for reporting sexual misconduct safely and anonymously," 5) "a commitment to elevate the Chief Diversity Officer to answer directly to the CEO and make recommendations directly to the Board of Directors," and "to appoint an Employee Representative to the Board." In the aftermath of the walkout, Google management agreed to end forced arbitration in cases of sexual harassment or assault. Under further employee pressure, management later ended forced arbitration in all employee disputes.

3. This schema excludes two important categories of tech workers who are taking collective action: Amazon warehouse workers and gig workers. Mobilizations by these workers are central to the tech worker movement. However, I do not discuss them in this piece.

4. While tech companies don't typically release detailed breakdowns, Microsoft has revealed that 41.2% of their global headcount is devoted to "engineering" as of December 2019, which is by far the single biggest category.

5. Three notable examples are Alliance@IBM, WashTech, and the Temporary Workers of America. Alliance@IBM was an advocacy organization composed of dues-paying IBM employees affiliated with the Communication Workers of America (CWA) that existed from 1999 to 2016 and which had 400 members at its peak. WashTech, or the Washington Alliance of Technology Workers, is an organization, also affiliated with CWA, formed in 1998 to advocate on behalf of contingent workers at Microsoft; it was also active in a failed attempt to unionize 400 Amazon customer-service representatives in Seattle in the early 2000s. The

Temporary Workers of America were a group of thirty-eight bug testers who worked full-time in Microsoft offices but were employed by a temp agency called Lionbridge Technologies. In 2014, they voted to unionize; in 2016, Lionbridge fired them. The workers brought a National Labor Relations Board complaint against Microsoft and Lionbridge, which was settled in 2018.

6. The year 1992 also saw a group of production workers within Silicon Valley go on strike. Approximately fifty-five workers, mostly Latina women, struck against Versatronex, a circuit board manufacturer. They never formally unionized, however.

7. Rents in the Bay Area have skyrocketed in recent decades with the growth of the tech industry—the same growth that has greatly increased demand for subcontracted service workers in tech offices. From 1990 to 2014, employment at food service contracting companies in Santa Clara and San Mateo Counties grew 246 percent, compared to just 18 percent in all private industry.

8. Full disclosure: while TWC does not have formal members, I have been involved with the organization since 2016.

9. In July 2017, over 500 food service workers at Facebook voted to unionize with UNITE HERE.

10. In addition to facing harassment, discrimination, and other forms of oppression in the workplace, women and people of color are underrepresented among tech's full-time office workers, and earn lower salaries on average.

11. Google was a favorite of Obama's: over the course of his Administration, nearly 250 people went from working at Google to working for the federal government or vice versa.

12. Tech company employees donated to Bernie Sanders's 2016 presidential primary campaign in significant numbers. According to the Center for Responsive Politics, five of the

top ten employers of Sanders donors who gave $200 or more to his campaign committee were tech companies; Google's parent company, Alphabet, was number one.

13. In certain cases, they already were. While the "Muslim registry" never materialized, tech companies were already facilitating mass deportations under Obama, who deported around 3 million people, a record. The Tech Summit was brokered by Peter Thiel, co-founder of the data analytics company Palantir. Back in 2014, Palantir began building a digital records system called ICM for Immigration and Customs Enforcement (ICE), a tool that helps the agency target undocumented people for deportation. ICM runs on Amazon's cloud service, Amazon Web Services (AWS). By the time of the Tech Summit, AWS also hosted other immigration-related software for the Department of Homeland Security, which oversees ICE.

14. Actions driven by concerns about harmful technologies were not entirely unprecedented. In 2011, a number of Google employees pushed management to abandon a policy requiring users of the social networking site Google Plus to use their real names, arguing that this would endanger certain users.

15. This history makes it all the more chilling that, mere days after the election, IBM CEO Ginni Rometty wrote a congratulatory letter to the president-elect personally offering her company's services to his Administration.

16. Right-wing workers existed at Google before Trump's election. Especially vocal was a software engineer named Kevin Cernekee. As Nitasha Tiku describes in a long *Wired* article about Google, Cernekee began railing against the company's "Social Justice political agenda" in posts on internal forums as early as 2015, taking particular aim at pro-diversity initiatives. This provoked heated discussion among Google employees and led to Cernekee receiving a written warning from HR. In response, Cernekee filed a charge with the National Labor Relations Board, claiming illegal retaliation against "protected concerted activity." Cernekee would eventually be fired in June 2018 for breaking multiple company rules, including downloading company information onto his personal device.

17. According to Nitasha Tiku's reporting in *Wired*, the attacks intensified after Google fired Damore in August 2017, shortly after his memo leaked to *Gizmodo,* as the termination enraged Damore's supporters in right-wing media and online forums.

18. Even when workers did engage in a work stoppage, such as with the Google walkout later that same year, it was more about registering discontent than halting production, since the stoppages didn't last long enough to cause appreciable pain to the bottom line.

19. In 1992, thousands of Microsoft "permatemps" filed a lawsuit accusing the company of misclassifying them, winning a large settlement eight years later. Contingent workers at Microsoft also formed two organizations, WashTech and the Temporary Workers of America, which are discussed at greater length in an earlier note.

20. In a 2016 report, Working Partnerships USA estimated that Black or Latinx workers made up 10 percent of Silicon Valley's direct workforce, but 26 percent of the white-collar contract industry workforce and 58 percent of the blue-collar contract industry workforce.

21. Google announced it would require companies that supply subcontracted workers to offer a minimum wage of $15 an hour, comprehensive health insurance, a minimum of eight paid sick days, twelve weeks of paid parental leave, and $5,000 per year in tuition reimbursement for skills training and higher education to those who work at least 33 hours per week.

22. In December 2018, a group of Facebook subcontractors at a company called Filter Digital faced retaliation for demanding better working conditions; in part due to the support lent by full-time Facebook employees, Filter Digital backed down. In spring 2019, full-time and subcontracted workers at Facebook came together to form a coalition called Workers For Workers; according its website, the group is "organizing to build worker power and end the two-tiered employment system in our workplace and throughout the tech industry." One segment of subcontracted workers that has been particularly active is Facebook's content moderators: in May 2019, the *Washington Post* reported that roughly a dozen US-based

subcontracted Facebook content moderators were "spearheading a quiet campaign inside the social media giant to air their grievances about unsatisfactory working conditions and their status as second-class citizens." The same month, Facebook announced it would be raising its minimum wage for subcontracted workers and requiring vendors to offer all-hours on-site counseling to content moderators.

23. In April 2019, Meredith Whittaker and Claire Stapleton, two of the main organizers of the November 2018 walkout at Google, posted a letter to an internal mailing list describing instances of retaliation by management. Stapleton left the company in June 2019, with Whittaker to follow shortly after in July.

24. In March 2020, the month after the Kickstarter vote, employees at the tech company Glitch unionized with CWA after management voluntarily recognized the union. There have also been a number of recent unsuccessful attempts at forming white-collar tech unions in the US. In January 2018, fifteen software engineers at a logistics software company called Lanetix were fired after announcing their plans to unionize. In August 2018, the National Labor Relations Board issued a complaint against Lanetix alleging numerous violations of federal labor law; in November 2018, the workers received a settlement of $775,000. A similar story unfolded at software company NPM, which in July 2019 settled with three employees that had been terminated for union organizing.

25. The backlash has not been confined to Google. In January 2020, Amazon management warned employees they could be fired for speaking publicly about their ongoing campaign to push the company to reduce its carbon emissions. In response, the internal group coordinating the campaign, Amazon Employees for Climate Justice, published quotes from 400 workers in a Medium post, in a mass defiance of company policy.

26. Often, the connections are embodied in the continuity of personnel across different struggles. For example, Sheppard also participates in the #TechWontBuildIt campaign at Amazon. Within Google, many of those who organized against Project Maven and Dragonfly

also helped lead the walkout of November 2018.

27. These kinds of relationships are not without their own contradictions. Barbara and John Ehrenreich, in their original articles on the professional-managerial class (PMC) for *Radical America* in 1977, argue that the PMC occupies "an objectively antagonistic relationship to the working class," since "its function is the direct or indirect management and manipulation of working-class life." This is often clearly true of tech: think of the Uber engineer implementing the algorithmic management systems designed to discipline Uber drivers.

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