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Class Agency under Conditions of Self-Enforcement: Marx on Capitalists' *Common's* Problem

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Abstract

Marx discussed institutional innovations in the context of a complex dynamic between *inter* versus *intra*-group opportunism, which contains clues for understanding how capacity for class agency develops. His lengthy discussion of the English Factory Acts in his Vol. I of *Capital* is an important case in point, which the paper revisits for its broader lessons not only for how *institutions* solve collective action problems but also how they become self-enforcing when third party enforcement is ineffective. The paper gives an account of how the Acts could have become self-enforcing at a time when the state enforcement capacity was rudimentary at best. The argument focuses on the dynamic between *inter* versus *intra*-class opportunism, shedding analytical light on how organized labor could help capitalists bolster their capacity for class agency.

Keywords: institutions, collective action problem, opportunistism, common's problem
JEL Classification: B14, B55, C720

In the early 19th century England, continued externalization of internal costs of production threatened to harm capitalists collectively as the inflow of workers from rural labor reserves began to dry out. The dismal health and living conditions of working poor became the hallmark of a mismanaged *common pool resource*. A similar *common's* problem emerged in connection with educating the labor force at a higher level of economic development when workers with basic literacy and numeracy promised palpable productivity gains. What *universal public education* addressed in this instance was essentially the same challenge capitalists faced with the limiting of the workday and curtailing child labor earlier. It was in capitalists' collective interest to better husband their work force, but their competitive antagonism made that inherently difficult.

In traditional Marxian narratives such collective costs are discussed in connection with the theory of the *state*. Often approached *politically*, the focus is generally on capitalists' need to *capture* the state to discharge collective costs and further their collective class interest. But, usually ineffective states are not the center of attention. The state is more of a *black box* in conventional economic analysis - at least, until recently - which assumes it enforces the property rights and contracts that are essential for a market economy at zero cost whoever might be its political master. The paper takes a different approach from both and focuses on how class agency can emerge under conditions of *quasi*-self-enforcement when third-party enforcement by the state is spotty or unreliable. Its approach is informed by the new microeconomics that has focused on strategic interactions among agents, which in recent decades contributed to an extensive body of literature on interactive bargaining, opportunistic behavior, enforcement costs and institutions. Drawing on this work, it looks at *exchange* not in *idiosyncratic* market transactions, but in those that represent a *class* on account of the self-organizing groups they engender out of similarly transacting *others*.[1] Such are the transactions of *consumers* and *workers* that produce spillover effects when they act strategically, making the terms of exchange and balance of bargaining power in one a function of what happens in the next.

Much theorizing in Classical Political Economy arguably involved *representative transactions* and in Marx we find an implicit account of how they arise in concert with the network effects *class agency* augments. When looked from this angle, the capital - labor transaction, the key *representative* transaction in capitalism he focused on, is seen as an *abstraction* rooted in a reality transformed by class agency. I argue that Marx discussed institutional innovations in the context of a complex dynamic between *inter* versus *intra*-group opportunism, which contains

[11] Other contributions that draw on this literature to revisit Marx or the capital-labor relationship include, among others, Bowles and Gintis (1993), Bowles (2004), Feguson (2013), Levine & Parker (1995) and Streeck (1992), while Aghion & Hermalin (1992) consider more broadly suboptimal outcomes in private bargaining under asymmetric information.

clues for understanding how class agency develops. His lengthy discussion of the English Factory Laws in his Vol. I of Capital is an important case in point, which the paper revisits for its broader lessons not only for how *institutions* solve collective action problems but also how they become self-enforcing when third party enforcement is ineffective or rudimentary.

The basic logic of Marx's argument I hope to highlight can be summarized as follows: (i) classes or groups *coordinate* to solve collective action problems, and (ii) they coordinate better the better they curb opportunistic self-seeking in their midst, which is in turn (iii) easier done when their counterparty is better coordinated with their respective group. A company that cheats in the stock exchange benefits itself while risking the collective reputation of the exchange and thus harming other businesses. Likewise, a worker who crosses the picket line intends to make himself better off at the expense of his co-workers. Opportunistic self-seeking in either case undermines group cohesion and thus capacity to act in collective interest. But, a group whose members increasingly transact with better coordinated counterparties has a higher cost of coordination failure, raising its stake in checking opportunism *within* its ranks. Because the coordination problem is symmetric, the tendency is for self-organizing groups to emerge on both sides, turning the individual *representative* transaction into a microcosm of their power interaction, the *class struggle*. Abba Lerner (1972) once remarked that a market transaction is a "solved political problem," which in our view uniquely applies to *representative* transactions where agents' strategic interest in coordinating with their respective group overshadows their *utility* considerations. The less reliable is third-party enforcement the more important becomes group coordination in reducing enforcement costs.

The organization of the paper is as follows. Section II gives an overview of the literature on English Factory Acts. Section III discusses the nature of the capitalists' common's problem and why it cannot be fixed by market competition. Section IV gives an account of how the Acts could have become self-enforcing, highlighting the role of organized labor in this process. The paper ends with a few concluding remarks.

II. English Factory Acts

The 'Factory Acts' refer to a series of laws enacted from 1819 and on through the nineteenth century that aimed at regulating industrial employment in England. An earlier labor Act from 1802 was concerned with the health and welfare of orphan "pauper" children employed as apprentices in cotton mills under the Poor Law. The literature on the Acts looks at their social, legal, and economic effects (Hutchins and Harrison 1903, Cooke-Taylor 1894, Blaug 1958), and place in the industrial revolution (Ward 1970a, 1970b). Wide agreement exists on the limited scope, effectiveness and enforcement of the early Acts, especially prior to 1933 (Bartrip and Fenn 1983; Peacock 1984; Nardinelli 1985). Capitalists opposed the Acts as an infringement on the 'freedom of contract' and could often ignore them due to lax enforcement (Marvel 1977, Blaug 1958, 1985). Even when factory inspectors (whom Marx praises in the Preface to his

Volume I of *Capital*) did their jobs well, magistrates – often, factory owners themselves - were seldom impartial (Marx 1867, p. 288-9; Nardinelli 1985, p 429). However, it is also generally remarked that the Acts gradually became accepted rather than contested by mid-century. Marx's account, though less sanguine, agrees on the timing of their increased effectiveness. As he put it, the overall objective of the Acts was to "… curb the passion of capital for a limitless draining of labor power, by forcibly limiting the working day by state regulations, made by a state that is ruled by capitalist and landlord (p. 239)." That they were initially highly ineffective was in his view not surprising since "… [Parliament] was shrewd enough not to vote a penny for their carrying out" (p. 278). Yet, the Act of 1833, a turning point in retrospect, established a 'factory inspectorate' that oversaw compliance and gave inspectors magistrate power. This was also the period in which workers especially in the cotton mills were becoming better organized (Driver 1946, Ward 1962). Finally, with improving political fortunes and widening support, the ten-hour working day was first introduced in 1947 and with auxiliary legislation that followed in the 1850s became increasingly a part of the industrial landscape.

In an approach similar to the starting point in this paper, Douglass Booth argued that the Acts solved a collective action problem the capitalists faced. Though all capitalists were threatened by the deleterious effects of rapid capital accumulation on the health of labor neither of them could individually gain from a shorter working day. The Acts in his view bolstered economic growth and stability by providing a much-needed balance between short term requirements of capital accumulation and the health and welfare of the working class at a time of dwindling supply of labor from the countryside (Booth 1978). Another interpretation argued that Factory Acts were basically a cartel device that served the sectional interests of large cotton-mill owners for whom a shorter working day provided an opportunity to cut output and raise prices (Lawrence 1980, Marvell 1977). Many capitalists supported the shorter working day, it is argued, not out enlightened self-interest or humanitarian concerns but the desire to maximize profits.[2] While this raises a valid issue, the theoretical orientation in these arguments have tended to brush away the capitalists' commons problem altogether.

In this paper, I agree with Booth's assessment that the Factory Acts enabled capitalists to deal with a collective action problem, making both classes better off. The paper extends this line of argument in a couple of directions. First, it spells out more explicitly the argument why market competition and economic growth could not be relied on to improve working conditions and pay. Second, it explains how the Acts could have become self-enforcing without capitalists needing to act in their enlightened self-interest or humanitarian concerns. The argument focuses on the dynamic between *inter* versus *intra*-group opportunism and different sectional

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[2] Anderson et al. (1989) revisit a similar argument that goes back to Nassau Sennior (1966 [1837]), which emphasizes the role of factory operators and particularly the spinners who pressured legislators into restricting child labor with a motivation to raise the price of their own labor.

interests among capitalists, shedding analytical light on how organized labor could help capitalists bolster their capacity for class agency.

III: Capitalists' Common's Problem

In any pre-capitalist setting, a landlord has it in his self-interest to preserve and safeguard the basic welfare of workers over whom he has property claims. For any outside threat that can harm them is liable to cause him harm as well. But, of course, whatever protection the worker enjoys comes at a price. He often faces not only onerous obligations, but also a restricted mobility that prevents him from seeking advantage *elsewhere* or striking a better bargain when his *outside option* improved. By contrast, when he is no longer tied to the land, the worker becomes *doubly* free: free to move about seeking a better deal, but also free to starve (Marx 1967[1867], ch 6).

As his and family's welfare became a concern of his alone, the worker had to rely not on his "natural superior's" self-interest but on the market worth of his labor power which depended on capitalists' demand for it (Marx 1973 [1939]). The central question then became whether economic growth and competition among capitalists could produce a wage that secured subsistence, if not a satisfactory standard of living with decent working conditions. When oversupply of labor robbed workers of their bargaining power would the problem not self-correct? Skepticism towards labor legislation has a long history (Ely 1908), and in its modern reincarnation in *Law and Economics* (Posner 1984) it is based on the idea that if private markets were left alone there would be no unemployment, substandard wages and inferior working conditions. Marx clearly had no such confidence in markets, but he nonetheless made an inverse dynamic between lower wages and pace of accumulation a central theme in his *General Law of Capitalist Accumulation.* If distributional shifts in favor of profits stimulate higher growth, why would higher labor demand not eventually raise wages and improve working conditions?

Going all the way back to Adam Smith, employment relationship has been recognized as uniquely asymmetrical. Two arguments are often made in discussing the asymmetry.[3] One's focus is on those special qualities of labor power as a commodity that lowers workers' bargaining power. The worker risks causing damage to his person in a way the capitalist does not because his labor power is inseparable from. His ability to hold out until he is fully compensated for his risk is inherently limited because labor power is perishable and cannot be stored.[4] Another argument holds that a *low wage trap* can thwart any tendency of wages to

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[3] For a broader discussion, see: Kahn-Freund (1983, ch 1), Deakin & Wilkinson (1991, 1994), Deakin & Morris (1995).

[4] Adam Smith (1986, p. 169) wrote, "Many workmen could not subsist a week, few could subsist a month, and scarce any a year without employment. In the long run, the workman may be as

self-correct. Because workers need to work more to secure their livelihood when wages dip below subsistence, the labor supply can become downward slopping. The higher quantity of labor supplied then counterbalances the increased demand for labor power caused by lower wages, and thus with cutthroat competition among workers for work wages can remain stagnant or even continue to fall rather than rising.[5]

Substandard wages, poor working conditions and child labor degrade the general quality of labor supply and hurt capitalists in the long run as well. Yet, the problem is that though every capitalist would benefit if no one paid starvation wages, those who alone did could benefit even more. Thus, market competition, if anything, makes the problem worse, necessitating a collective fix. The collective nature of the problem was not unrecognized before Marx. As early as in 1832, John Stuart Mill wrote about the need for collective measures to curtail child labor. "The case in which it would be to the advantage of everybody, if everybody were to act in a certain manner, but in which it is not in the interest of any individual to adopt the rule for the guidance of his own conduct, unless he has some assurance that others will do so too" (quoted in Blaug 1958, p.214).[6]

The capitalists' common's problem was for long masked by oversupply of labor, though that did not mean it could be ignored forever. For "the same blind eagerness for plunder that in the one case exhausted the soil, had, in the other, torn up by the roots the living force of the nation. Periodical epidemics speak on this point as clearly as the diminishing military standard in Germany and France" (Marx p. 239). Thus, the interest of capital Marx remarked pointed in the direction of a normal working-day. "Just as in a machine the part of its value to be reproduced every day is greater the more rapidly the machine is worn out," the unnatural extension of the working-day he argued raised "the sum of the expenses for the reproduction of labor-power" (p.266). Yet, as he was also keenly aware, capitalists were in – what we would today call - a Prisoner's Dilemma, which prevented them from acting in their collective interest.

> "Capital that has such good reasons for denying the sufferings of the legions of workers that surround it, is in practice moved as much and as little by the sight of the coming degradation and final depopulation of the human race, as by the probable fall of the earth into the sun. In every stock-jobbing swindle everyone

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necessary to his master as his master is to him; but the necessity is not so immediate. Asymmetric bargaining power between workers and capitalists also figures prominently in the works of early institutionalist economists such John R. Commons, see Kaufman (2003).

[5] The idea of a low wage threat was common among early institutionalist economists at the turn of previous century. Seager (1913) wrote, "…. the free play of economic forces results in starvation wages for thousands and hundreds of thousands of workers, and these starvation wages persist year after year, with little sign of improvement." See also Dessing (2003) on downward slopping labor supply in developing countries., see, also, Moss (2017) who looks at the English Factory Acts from its gender dimension in this connection.

[6] I am indebted to Alex Kangas for bringing this to my attention.

> knows that some time or other the crash must come, but everyone hopes that it may fall on the head of his neighbor, after he himself has caught the shower of gold and placed it in safety. … [A]ll this does not, indeed, depend on the good or ill will of the individual capitalist. Free competition brings out the inherent laws of capitalist production, in the shape of external coercive laws having over every individual capitalist. (p. 270).

IV. Organized Labor and Capitalist Class Agency

Even when all capitalists recognized that they could all benefit from mutual constraints on each other's behavior, they could still fail to reach a cooperative solution to their dilemma. To commit to acting in cooperative self-restraint they would first need a *commitment device* that would enable them to credibly expect that others also will. Thus, a legal uniform limit imposed on all capitalists could solve the problem of a shorter working-day, but only if the state could be relied on to *punish* those who did not comply. But, a state with a poor or rudimentary enforcement capacity would not be an effective commitment device. For instance, it could not be relied onto impose discipline on the "ruling classes" when it lacked the prerequisite relative autonomy from them (Poulantzas 1970, 1975). Some other commitment device would then be needed for capitalists to overcome their dilemma. Given its independent source of power organized labor can potentially function as one if capitalists expected that workers could make defectors pay a price, enabling them again to commit to acting in cooperative self-restraint. The prerequisite enforcement capacity for capitalists to escape their dilemma would then potentially be provided by the combined power of workers and the state. This was arguably why Marx thought that it was in the ruling classes' own interest not to hinder the development of working class.[7] Yet, he also recognized that workers had to put up a struggle to organize before capitalists would concede to any check on their power even when that was in their collective class interest. "The creation of a normal working day is … the product of protracted civil war, more or less dissembled, between the capitalist class and the working class" (p. 299). The following discussion tries to make explicit Marx's intuition.

Consider the familiar dyadic Prisoner's Dilemma payoff matrix below as a depiction of the competitive environment capitalists are in, where it is assumed that $a > b > c > d$. Cooperation here takes the form of capitalists *complying* with the Acts, while defection refers to their *defiance* in some form of opportunistic self-seeking as in Marx's various examples in his Chapter 10. The capitalists' *dilemma* is that they cannot commit to complying with the terms of the Acts

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[7] In the preface to the first German edition of his *Capital*, he wrote, "Apart from higher motives, therefore, their own most important interests dictate to the classes that are for the nonce the ruling ones, the removal of all legally removable hindrances to the free development of the working class" (p.9).

before they can expect that others also will. For simplicity, it is assumed that all payoffs are common knowledge.

		Capitalist 2	
		Comply	*Defy*
Capitalist 1	*Comply*	b_1,b_2	d_1,a_2
	Defy	a_1,d_2	c_1,c_2

Based on the simplifying assumption that all capitalists are alike, an N-person extension in Figure 1a shows, respectively, the expected payoffs from compliance (cooperation) and defiance (defection), both as functions of the number (or ratio) of cooperators among them. With n capitalists who are already *compliant* before her, the n+1st potential cooperator decides whether to cooperate or defect given the respective payoff of each strategy. Figure 1a shows that for all values of n, the compliance payoff, $\pi_C(n+1)$, lies below the defiance payoff, $\pi_D(n)$, which means that defection always pays off more no matter how many cooperators there are. The sole Nash equilibrium then occurs when no one cooperates (n = 0). By contrast, in Figure 1b a threat of sanction t, carried out with probability δ, reduces the expected defection payoff of capitalists to $a_2 - \delta t$. This causes the two expected payoffs become equal at some critical threshold (n*), and compliance payoff exceed (fall short of) that of defiance to its right (left). Self-enforcing, mutual cooperation is now a possibility if the number of capitalists who comply exceed n*. The lower is this threshold, the more likely self-enforcement becomes since then it takes fewer initial capitalists who comply before compliance is the preferred strategy.

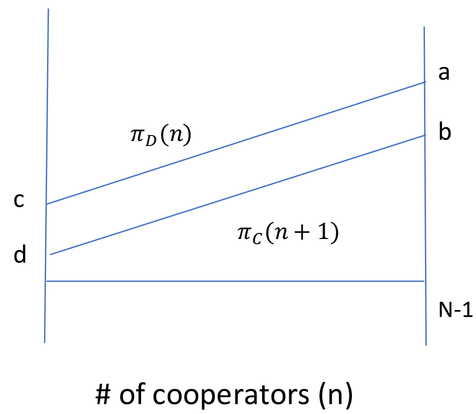

Figure 1a

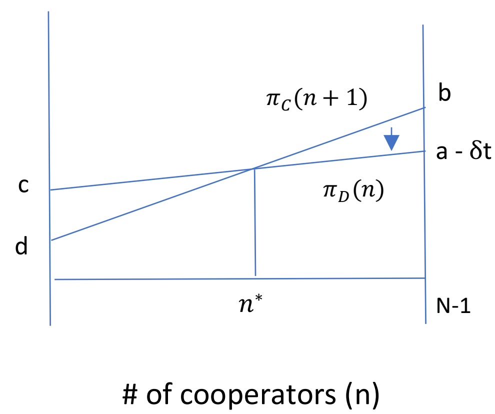

Figure 1b

Shifts in compliance and defiance payoffs bring about changes in the value of n*. For instance, the greater is the threatened sanction (t) and the probability with which it is carried out (δ) the lower is the value of n*. That is, the more the expected defiance payoff is lowered it takes fewer initial cooperators before the law can become potentially self-enforcing. Similarly, any improvement in *cooperation reward* has the same effect as its effect would be to shift up the expected cooperation payoff schedule. The conceptual framework can give us a clue how the Acts could have become self-enforcing.

The threats of sanction the Acts imposed on potential defectors were initially lacking in credibility because capitalists would have reasonably expected a low enforcement probability. This meant a high value of n*, making defiance the more attractive strategy than compliance provided most capitalists did not comply anyway. But, over time, as workers became better organized, defecting capitalists had to worry about not only diligent inspectors and whether magistrates could be impartial but also retaliation from organized labor. They thus faced both stronger threats and a higher probability of them being carried out. Stylistically, the stronger credible threats from workers had the effect of lowering the slope of π_D and thus the threshold value n*.

As Marx remarks the struggle for a shortened work-day first triumphed “in those great branches of industry which form the most characteristic creation of the modern mode of production.” This was not surprising since in these sectors the capitalists were more likely to have faced better organized workers. It is also plausible that their payoff from a more cooperative relationship with workers were higher, the effect of which would again be to increase workers’ deterrence capacity. By causing an upward shift in the expected compliance payoff schedule it would lower threshold value n*making self-enforcement more likely. Unsurprisingly, the strongest resistance to a shorter working day came from technologically backward, smaller and rural producers, who had the least ability to adjust to it (Marvel 1977, pp. 387-388). By contrast, more advanced capitalists were soon "discovering" its merits. "The masters from whom the legal limitation and regulation had been wrung step by step after a civil war of half a century, themselves referred ostentatiously to the contrast with the branches of exploitation still 'free.' The Pharisees[8] of 'Political Economy' now proclaimed the discernment of the necessity of a legally fixed working day as a characteristic new discovery of their 'science'" (Marx 1967, p. 295-6).

But, for workers to act on their common interest and get organized against their employers, they had to first overcome their own intra-class competition. "Large-scale industry concentrates in one place a crowd of people unknown to one another. Competition divides their interests. But the maintenance of wages, this common interest which they have against their boss, unites them in a common thought of resistance—combination. Thus combination always has a double aim, that of stopping competition among the workers, so they can carry on general competition with the capitalist" (Marx, 1955[1847], p. 79). This however involved a coordination problem since the initial cost of organizing falls unevenly on the first group of workers who try to organize (Booth 1978b, Lichbach 1998). A worker's payoff of joining in a coalition rises only after other workers join, and, thus, in the dyadic payoff matrix below, either worker is better off joining in the coalition after the other has already joined: ($\beta > \delta$).

		Worker 1	
		In	*Out*
Worker 2	*In*	β_1,β_2	δ_1,α_2
	Out	α_1,δ_2	θ_1,θ_2

Assuming again common knowledge payoffs and that the payoff of staying *out* is independent of the number of workers who opted *in* ($\alpha = \theta$) for simplicity, Figure 1a depicts an N-person extension with homogenous workers. With w of W total workers already in the coalition, whether the w+1st worker's expected payoff from joining is below or above that of staying *out* depends on the critical threshold value w*. When w > w* the expected payoff of joining the coalition is higher than that of staying *out* and *vice versa*. Thus, the lower (higher) is w* the higher (lower) are workers chances of success in organizing, since it takes fewer (more) initial workers before the coalition promises a higher payoff.

Shifts in workers' respective expected payoff schedule, i.e., their expected relative benefit or cost of organizing, move the threshold value w* left or right. For instance, Figure 2b shows a downward shift in $E_o(w)$, indicating a fall in the expected payoff of staying *out*, which is what

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[8] A member of a Jewish sect that flourished during the 1st century B.C. and 1st century A.D. distinguished by its very strict observance of religious ceremonies and practices.

Marx contends awaited the isolated worker whose "serpent of agonies" would only get worse as capitalism developed. All else being the same, the falling expected payoff of staying *out* lowers the value of w*, making organizing the worker's only hope. Even when they were poorly enforced, the Acts could still have mattered by helping workers organize better, i.e., by being a focal point for their coordination.

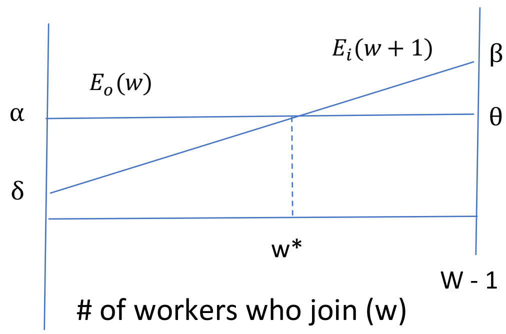

Figure 2a

Figure 2b

The various political developments that Marx thinks alternatively helped or set back the workers' movement at the time can be thought to have caused shifts in the threshold value w*. For instance, he remarks that workers initially benefited from the political cleavages that emerged between landlords and capitalists in the aftermath of the repeal of the *Corn Laws*, as "the Tories were panting for revenge" against capitalists and would lend them a helping hand in Parliament (p.283). He also adds that, soon after, the bloody suppression of the June 1848 insurrection in Paris "… united, in England as on the Continent, all fractions of the ruling classes, landlords and capitalists, stock-exchange wolves and shop-keepers, Protectionists and Free traders, government and opposition, priests and freethinkers, young whores and old nuns, under the common cry for the salvation of Property, Religion, the Family and Society," resulting in a strong political backlash against workers (p. 285-6). Just as the former would have shifted up E_i, boosting workers' expectations, the latter would have caused a downward shift "shaking their confidence in their own strength." Yet, as Marx argued, in the long run workers enjoyed widening support from civil society (Ward 1962), and the cumulative trend was towards better-organized workers powerful enough to deter defecting capitalists. This can incidentally explain why he would assume an inverse dynamic between wages and pace of accumulation in the later chapters of his *Capital*, vol. I.

V. Conclusion

Marx gave a large space for English Factory Acts in his Vol I of *Capital*. He thought that while legislation alone could not overcome the central contradictions of capitalism it had the potential to lessen their deleterious effect on society to the benefit of all classes. Yet neither such legislation nor its effectiveness could be assumed but for organized labor. Focusing on the dynamic between *inter* versus *intra*-group opportunism, his discussion underscores the importance of the development of the working class for capitalists' ability to exercise class agency in attending to their collective costs at time when third-party enforcement by the state was rudimentary. The paper retraces the logic of his argument and shows that the organized labor's capacity to deter opportunistic self-seeking by capitalists was a game changer. At a time when capitalist could not fully rely on the state to impose discipline, it could function as yet another independent commitment device. In standard theory, private collective action is associated with the efforts of interest groups to circumvent market competition as in collusion or lobbying. A fundamentally different logic of collective action emerges in Marx's analysis, which basically drops two salient assumptions that define standard theory. One assumption is the exclusive focus on *idiosyncratic* market transaction, ignoring those with systemic spillover effects, while the other is to posit costless and perfect third-party enforcement. In a world defined by their absence, collective action by similarly transacting *others* is social welfare improving when it reduces enforcement costs. Thus, when less powerful transactional groups such as workers and consumers lose their power to deter opportunistic defection by the powerful everyone pays a price.

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