



Rosa Luxemburg's Internet? For a Political Economy of State Mobilization and the Movement of Accumulation in Cyberspace¹

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Both the state and capital have been crucial for the evolving political economy of the Internet. This article briefly sketches the history of U.S. state action to shape and manage the extraterritorial Internet and explicates the escalating challenge to U.S. dominance that stems today from other governments. The article then examines the role of capital, viewed not as money or investment but as the contradictory social relation that is built around wage labor. Drawing on insights offered by Rosa Luxemburg, communication processes and practices—including but not limited to the Internet—are situated in relation to the historical reconstitution of the global working class.

Academics have unduly elevated individual Internet users and social network sites while neglecting the Internet's evolving structure and placement in society. Twenty years after the rollout of the World Wide Web, 30 years after the formalization of the Internet's domain name system, 40 years after the formulation of the Internet Protocol, and half a century after packet-switching technology was conceived, the political economy of the Internet remains chronically undernourished. Remedyng this deficit is one of our greatest intellectual challenges.

How, and by whom, is power to shape the Internet exercised? How does the Internet interact with power relations in the political economy overall? What forms of labor are drawn into the provision of Internet systems and services? How did the Internet come to surpass rival technical approaches to data communications? Which of the industries of Internet supply generate outsized profits and strategic points of leverage—from telecommunications infrastructures, routing equipment, data centers, and mobile hardware to backbone networks and access providers; and from operating systems and browsers to search engines, social networks, and content applications? What are the leading sources of Internet demand among corporations, governments, and consumers, and how do demand-side pressures impinge on Internet system development?

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A political economy of the Internet also must raise other questions. What environmental effects and other externalities are created in producing Internet systems and services? What does the Internet add to processes of market deepening or commodification? What does the Internet contribute to the reproduction of capital? What arrangements have been made to manage and coordinate the Internet internationally? Is there resistance to Internet-enabled commodification projects, and, if so, what are the sociopolitical bases of this resistance? How are the varying experiences of indignity, oppression, and inequality that characterize capitalist societies projected onto Internet systems, services, and applications? How, in sum, is the Internet bound up in divided and domineering societies?

These are, at best, incompletely answered questions. They supply us with a far-ranging research agenda. Within this wider framework, in this article I attempt to underline some of the ways in which the state and private capital are interlocked with Internet system development.

State Mobilization

Power-inflected social theories, notably including Marxist theory, are likely to identify capital and the state as crucial, interconnected shaping forces. Often with recourse to the state, capital organizes wider fields of production and consumption; often with recourse to capital, the state sets social priorities and allocates resources, legitimates the arrangements that result, and—should legitimization fail—deploys means of organized violence against those it deems adversaries. Debates over the theoretical status of each of these two structuring forces, and their mutual relations, are of long standing. I will touch on some of these controversies below, highlighting the insights of the Polish Marxist Rosa Luxemburg. That capital and the state together are conceptually indispensable for political economy, however, I will take as given.

It is well established that the U.S. state was the early Internet's shaping force (Abbate, 1999, p. 114; Goldsmith & Wu, 2006, pp. 43–46; Kahn, 1995; Mueller, 2002, pp. 77–78, 81–82, 85–87). Then, as the Web burst onto the scene during the 1990s, a top-level U.S. executive branch task force on global electronic commerce made Internet connectivity a worldwide priority and also systematically privileged big business interests and commercial functions (Crain, 2013; D. Schiller, 1999). The U.S. state has continued to exercise an outsized and, as we will see at the conclusion of this article, multifaceted role with respect to the Internet.

This role, though, is both formal and informal. Critical Internet resources, including IP addresses and autonomous system numbers, are coordinated by a U.S. agency, the Internet Assigned Numbers Authority (IANA), under contract to the U.S. Commerce Department. A shadowy U.S. corporation, VeriSign, manages essential addressing data for the extraterritorial top-level generic domain, dot-com. Technical standards for the Internet admittedly are developed at a remove from the state, by participants in meetings held by the Internet Engineering Task Force and the Internet Architecture Board. However, in practice, the composition and funding of these organizations—in conjunction with the overrepresentation within them of U.S. companies—mean that the Internet's supposedly bottom-up decision-making processes are disproportionately responsive to U.S. preferences (Kwalwasser, 2009). Milton Mueller (2010) aptly asserts that today's Internet is structured by a U.S. policy of "unilateral globalism" (p. 62).

From its inception, this unilateral globalism has drawn opposition from other nations (Padovani, 2005; Pickard, 2007; D. Schiller, 2007), but, not surprisingly, the United States has been keen to preserve it. Under President Barack Obama, indeed, the U.S. executive branch launched an impressive mobilization to defend this status quo and to continue to exclude other states from a formal role in global Internet governance. U.S. leaders have publicly endorsed the thesis that cyber-issues constitute "a new foreign policy imperative" (Hillary Clinton, in Pellerin, 2012, para. 23).

Today's global depression renders this imperative both urgent and problematic. Entering its sixth year at the end of 2012, the slump accentuated intercapitalist competition and intensified contention over existing and prospective poles of economic growth. Who will harvest the abundant profits generated by Internet equipment and services as pressures increase to identify new sources of dynamism? U.S. authorities think they know the answer: It should be Apple, Google, Amazon, Microsoft, IBM, Oracle, Facebook, and, on the demand side, big U.S. corporate users of Internet systems and services. Who will set the terms for Internet development going forward, when the answer will profoundly influence the power structure of transnational capitalism? Again, U.S. authorities have a preferred answer.

Continued U.S. primacy over management and system development is a critical strategic objective—and the object of a concerted campaign. This campaign has drawn on a carefully articulated ideological position elaborated by Secretary Clinton's State Department. At the center of this policy framework is a long-standing U.S. rhetoric of human rights: a discourse of "Internet freedom" or, sometimes, a "freedom to connect." The claim is that the United States is best suited to manage the global Internet because of its unique historical commitment to free speech rights—all the way from the American Revolution forward. But this rhetoric obfuscates more than it illuminates.

The principle of freedom of expression constitutes both a profound historical legacy and a vital basis for movements to democratize political and social life. However, the claim that the United States constitutes the abiding homeland of free expression ignores incontrovertible historical and contemporary realities. The record of U.S. support for freedom of expression may be better than that of many governments; however, U.S. backing for speech rights itself has been incomplete and contingent.²

The formal ratification of the Bill of Rights during the founding years of the American republic constituted a major victory, and since then free speech rights have been recurrently tested and concretely expanded. There also have been flagrant departures from this norm, however, including lengthy spasms of repression. From the early years of its existence, and continuing today, the U.S. government has episodically restricted, attacked, and suppressed its citizens' speech rights. One leading historical episode was the prohibition of abolitionist literature from circulating in the slave states between 1835 and the outbreak of the Civil War (John, 1995). Works deemed obscene, expressly including information about birth control methods, were barred from public discourse for more than half a century after passage of the Comstock Act in 1873 (Dennis, 2009; Fowler, 1982). While mid-to-late-20th-century social and political

² We may assume that Hillary Clinton knows this from her long-ago experience as a student at Yale Law School, where she was taught by an eminent critical authority on freedom of expression, Thomas Emerson (Chafe, 2012, p. 73).

activists succeeded in entrenching and enlarging some free speech rights, the state also continued to trample on civil liberties, prominently including freedom of expression, throughout the Cold War (Wiegand & Wiegand, 2007). As Laura Stein (2006) has pointed out, meanwhile, U.S. courts often interpreted the First Amendment to elevate the rights of corporate media owners above those of ordinary citizens.

The arrival of the Internet does not transcend this history, but layers into it. The noncommercial WikiLeaks, unmatched for documenting the international exercise of U.S. state power, has been attacked by the U.S. government in deadly earnest (Assange, 2012; Benkler, 2011; Democracy Now!, 2012; McChesney, 2013, pp. 164–165). No matter what the technological means used to express and circulate ideas, in divided and domineering societies, including the United States, free speech is forever both constrained and threatened: a matter not of absolute normative commitment but of conflict-laden contingency.

Notwithstanding its checkered support, the U.S. state long has deployed human rights as a lever of its foreign policy. A recent study (Billias, 2009) explains that, as the United States joined the other imperialist powers—beginning around the end of the 19th century—the spread of American constitutional forms and practices often came about as a military imposition rather than through some sort of popular embrace: “The United States resorted to force to compel peoples in its colonies, protectorates, and conquered lands to follow its constitutional lead” (Billias, 2009, p. 223). Within this context, the free flow of information doctrine became an especially effective weapon. As Herbert I. Schiller (1976) showed nearly 40 years ago, “free flow” emerged as a central feature of U.S. foreign policy during the period of decolonization and Cold War following World War II. The doctrine was presented as a shining beacon, lighting the world’s way to emancipation from imperialism and state repression.

It was not. Free flow rhetoric portrays deep-seated economic and strategic interests in an appealing language of universal rights. Calculatingly manipulative, it tells us to entrust a fundamental human right to powerfully self-interested social actors.

On the one hand, U.S. foreign policy is publicly allied with U.S.-based units of Internet capital; although capital’s interest in the Internet in fact is much wider, Google and Facebook and Apple are the ubiquitous reference points. Like Hollywood film companies before them, profit-seeking Internet companies are cast as freedom fighters, pursuing a principled mission of antiauthoritarianism and democratic uplift. On the other hand, today’s campaign for Internet freedom is simultaneously an attempt to justify the self-appointed role of the U.S. state as the primary manager of the extraterritorial Internet while preventing other states from infringing on it. By positioning itself as the chosen advocate of universal speech rights, the U.S. state also attempts to undermine the legitimacy of those who challenge its dominance.

The State Department’s ideological construction has been one element of a multifaceted executive branch mobilization (D. Schiller, in press). The Commerce Department’s contribution is to work closely with a large array of U.S. companies to ensure that “Internet freedom” continues to be contoured expressly to business requirements. Unrestricted cross-border corporate data flows have been a business necessity—and a strategic priority of U.S. international economic policy—for decades (H. Schiller, 1981, p.

101); the arrival of a global Internet does nothing to alter this. Cross-border information flows are intrinsic to the real-time operation of corporate commodity chains of every description—from auto manufacturing to banking to agribusiness. Safeguarding these flows against onerous state restrictions and outside interference in turn constitutes a general political demand by transnational capital. The Commerce Department thus is not serving merely a brave little band of tech companies; and its insistence on Internet freedom indeed constitutes a defense of an interest common to capital headquartered not only in the United States but anywhere and everywhere. This lends to U.S. Internet policy a general, though not universal, appeal.

During our period of see-sawing political-economic crisis and structural change, however, the U.S. Internet management faces opaque but ferocious challenges as opposition to the entrenchment of a U.S.-centric system intensifies. News coverage in the United States renders these proposals suspect, even irrational, making it difficult to comprehend the debates that rage over global Internet governance.

Several sovereign states lodged comments in the U.S. Commerce Department proceeding on Internet governance. The government of Kenya proposed a “transition” away from management of the IANA functions by the U.S. Department of Commerce and toward a multilateral government-centered regime (Government of Kenya, 2011, pp. 1–3). U.S. control should be modified by globalizing the arrangements for not only root server operators and protocol developers including the Internet Engineering Task Force but also the five regional Internet registries, the address functions performed by ICANN, and the country code top-level domain operators.

The government of India presented similar arguments. Management of the Internet’s root control functions over unique identifiers and other critical resources should “be made broad based where the entire ecosystem and the community could take part in its reviewing regarding the transparency, accountability and enhancing its performance” (Government of India, 2011). (India, interestingly, backtracked on this stance in the fall of 2012 [Singh, 2012].) Egypt likewise submitted arguments against the status quo, declaring that the system of Internet governance “could be enhanced through more transparency and through accountability to the whole community which could be significantly improved by removing (or at least narrowing the scope of) a unilateral contractual oversight” (Government of Egypt, 2011, pp. 1–4). The secretary of communications for Mexico commented that Internet governance needed to be made more transparent and more responsive, “to create better mechanisms and procedures to interact with all the stakeholders” (Government of Mexico 2011, Annex p. 2-1)

The China Internet Network Information Center (2011) specifically insisted that Internet management should function “completely without involving DOC and VeriSign” and recommended the establishment of “a real independent organization . . . which is supervised by the global Internet communities themselves” (pp. 2–3). The minister of China’s State Council Information Office tartly underlined elsewhere that “international exchanges and cooperation over the Internet should respect the principles of full equality, mutual respect, mutual help and mutual benefit, and should refrain from using ‘network freedom’ to seek ‘network hegemony’” (Wang, 2011). “Open and participative methods” were, the minister held, the preferred option for Internet policy making—and, he concluded, China “would like to play an active role in this process...of jointly formulat[ing] international rules” (Wang, 2011, para. 11).

The structural interests and motivations that underlie other states' opposition to U.S. Internet management merit careful scrutiny (Bhuiyan, *in press*). But it is indisputable that, as Milton Mueller (2011) recognizes, the approach "which is desired by many governments around the world" is to compel the United States to share its authority with other governments, "either on a one-country, one-vote basis or through some subset or club of privileged governments."

After duly noting the comments of these other states, however, the United States ultimately reauthorized the IANA contract. Opposition to this unbalanced arrangement likewise persisted. In mid-September 2012, China's State Internet Information Office hosted an Internet Roundtable Meeting for Emerging Countries, attended by officials and scholars from Russia, Brazil, and South Africa (India sent an observer), at which "hegemony" by "developed countries" (Shen, 2012) was assailed. Critics of the U.S.-centric Internet then proceeded to bring their case to a multilateral treaty organization, the International Telecommunication Union (ITU).

The ITU is a United Nations affiliate with a membership including 192 governments, whose historical center of gravity lies in Western Europe. The ITU must not be mistaken for a democratic organization. It has long been responsive not only to states but also to corporate capital—which acquired an accredited presence in the ITU through some 700 "private-sector entities." However, until the construction of the extraterritorial Internet, the ITU had been the centerpiece of the institutional regime for international telecommunications for over a century. Extending the ITU's jurisdiction to the Internet was, in part, a bid by contending states to create an institutional basis for replacing the U.S. policy of unilateral globalism with a different structure.

The United States—both state agencies and Internet companies—sought to neutralize that possibility. In the U.S. Commerce Department proceeding discussed above, the ITU (2011, pp. 1–4) had pleaded for a role in Internet governance. Perhaps there is no better illustration of the underlying power dynamics behind unilateral globalism: A UN-based international organization in which states confront one another as formal equals was reduced to a supplicant before a single member state.

Meanwhile, the U.S. executive branch ratcheted up its attempt to preserve U.S. Internet control. In May 2011, Assistant Secretary of Commerce for Communications and Information Lawrence E. Strickling (2011) conceded that "one of the greatest challenges facing the Internet in the next five years is its political sustainability, which of course forces us to confront the question of what is the collective role of nation-states" (p. 3). Strickling (2011) reaffirmed that "the United States is most assuredly opposed to establishing a governance structure for the Internet that would be managed and controlled by nation-states" (p. 4). U.S. policy makers began to charge that advocates of multilateral Internet control were autocrats whose plan was to stage a palace coup at the ITU's December 2012 World Conference on International Telecommunications (WCIT) ("Who Controls The Internet?" 2012). Direct salvos against the "U.N. threat to Internet freedom" were fired by Assistant Commerce Secretary Strickling (2012) and by FCC Commissioner Robert M. McDowell (2012a) in language redolent of the U.S. attacks on UNESCO and the movement for a New International Information Order during the late 1970s and early 1980s.

Historical processes typically possess multiple dimensions. In addition to Internet governance arrangements, the WCIT was also the site of crosscutting economic disputes pertaining to the terms of trade that structure Internet data flows. Under consideration at WCIT was a proposal that would have required high-volume services like YouTube (Google), Facebook, and Skype (Microsoft) "to pay new tolls in order to reach people across borders" (Dwayne Winseck, in Barton, 2012, para. 7; Mueller, 2012). The owners of these extraterritorial services of course preferred to dress up their economic self-interest in the guise of freedom of expression. Within the United States, the notion that the United States must resist (other) government's incursions on "Internet freedom" duly drowned out other considerations and other viewpoints.

Congressional hearings were arranged to allow representatives, as well as policy makers at the State Department and the Federal Communications Commission and executives from the Internet Society and Google, to vent congruent views (Cerf, 2012; McDowell, 2012b; U.S. House of Representatives Energy and Commerce Committee, 2012; Verveer, 2012). In the run-up to the WCIT, bipartisan U.S. mutterings against "state control" became a full-throated roar. As the WCIT convened, the House of Representatives unanimously approved a resolution opposing UN "intent" to govern and regulate the Internet, while the European Union and several other U.S. allies, including previously opposed Mexico, also lined up behind the U.S. position (Blue, 2012). At the WCIT itself, the United States pushed for an immediate determination that the ITU would not redefine its regulations so as to encompass the Internet within its jurisdiction (Gewirtz, 2012). U.S. news coverage of the WCIT was predictably antagonistic; more striking was the extent to which nongovernmental organizations, activists, and reformers adopted the U.S. position for their own. Rebecca MacKinnon (2012), for example, stated flatly some months before the meeting that "putting the UN in charge of coordinating the Internet's practical functions would be a setback for freedom of expression" (p. 203). Lurid assertions of a "UN plot to steal the Internet" circulated, courtesy of Fox News, in the run-up to the conference (Brown, 2012). Was continued alignment with the U.S. executive branch, however, better suited to promoting democratic practice and accountability?

We may agree that extending ITU jurisdiction might well engender negative outcomes—for example, as the Electronic Frontier Foundation (Peterson, 2012) warns, in regard to Internet users' privacy. But the underlying issue is the continuation of unilateral U.S. power over Internet management.

For all of its bellicosity, the U.S. position on this crucial issue remained essentially defensive, in keeping with its general posture for managing the economic crisis. As Robert Wade (2012, pp. 10–11) observes, the U.S. pushed hard against extending jurisdiction over global economic policy to the 192-nation UN General Assembly. To avoid any prospect of a "G192," the United States acquiesced to working within the G20; and, where feasible, it steered policy toward narrowly U.S.-centric institutions such as the G7, the IMF, the World Bank, and the OECD, and—in the case of Internet governance—the U.S. state acting on its own. How long may this U.S. defense prove capable of warding off a nascent reorganized multilateralism? U.S. dominance over Internet management is a primary aspect of this wider question. As the open break at the ITU meeting demonstrated, the U.S. view is certain to face continued pressure (D. Schiller, 2013).

To clarify a second primary set of conflicts driving the political economy of the Internet, I turn now to capital. Owing to some deeply rooted but highly problematic assumptions, capital's role with respect to the Internet also needs to be reformulated.

The Social Relation of Capital and the Movement of Accumulation

Fifteen years ago it was already possible to see that the Internet constitutes a "central production base and control structure" (D. Schiller, 1999, p. 37) for a U.S.-centric transnational digital capitalism. Internet connectivity had become a necessity in capital's everyday functioning: in coordinating cross-border commodity chains; propelling high-tech finance; launching lucrative networked weapons; generating cataracts of consumer data to support intensified marketing; and rolling out new commodities, new vectors of profit making. Evidence about all of this is now abundant. The Internet's part in capital's contemporary phase of self-modernization constitutes a crucial, and increasingly well-chronicled, dimension of analysis (Aspray & Ceruzzi, 2010; Cortada, 2004–2008, 2011).

But it is not the *sole* dimension. To not examine matters beyond this point is, in fact, to limit—even to compromise—understanding. First, it idealizes a top-down capital logic, and, second, it ignores what Rosa Luxemburg (2003) called the "movement of accumulation" (p. 447). In consequence, it misses essential features of actually existing capitalism.

Should we think of capital as a thing—money or productive plant—or, instead, as a social relation? If the former, then we may be content with a familiar, abstracted capital logic, whereby investment, market strategy, and profitability appear as reflexes of decisions taken by more or less keen-witted executives. This is, overwhelmingly, the ordinary perspective of market news and mainstream economics. Beginning with Marx himself, however, some theorists and historians have worked with a markedly distinct conception, apprehending capital as a two-sided social relation.

In one of its aspects, for this approach, capital signifies ownership claims over means of production and thus also membership in a social class of capitalists. In its other aspect, however, capital signifies an *absence* of ownership claims to means of production (and subsistence), and thereby also membership in a class of real (and future or prospective) wage laborers who produce surplus value above the costs of production, including the wage workers' own subsistence. It is this intractably dualistic wage relation that *is* capital.

In this conception, forever-mutating social oppositions—changing in light of capitalism's "movement of accumulation"—shape and reshape development. A century ago, Luxemburg foregrounded the problem of capitalism's growth process: its continual expansion through the process of accumulation, meaning the reinvestment of profits (surplus) to generate a new cycle of expanded commodity production.³ "In its living history," Luxemburg explained (2003), capitalism "is a contradiction in itself, and

³ Her own conception insisted that the capitalist political economy was forever dependent on an exterior, noncapitalist social field. Luxemburg asserted that this impulse had propelled colonization and imperialism, as capital's need for expanded reproduction drove it incessantly to find and exploit new

its movement of accumulation provides a solution to the conflict and aggravates it at the same time" (p. 447). How could accumulation be continually expanded?

Divergent explanations have been offered for how this growth process has been manifested and managed. I follow David Harvey (2006, pp. 95, 96, 436) in emphasizing that accumulation revolves around an imperative that lies beyond boosting demand or expanding credit and debt mechanisms: enlarging the scope of the social relation that underpins capitalist production by increasing the size of the wage-earning class. Expanded reproduction, Harvey argues, hinges first and foremost on the growth of waged labor—because waged labor alone produces the surplus value on which capital's continued expansion may be based. Attention thus needs to be directed toward not just one but to both sides of the social relation that *is* capital.

Even a cursory glance at contemporary history—whether we choose to call it “globalization,” “neoliberalism,” or “digital capitalism”—confirms that this social relation lately has undergone a huge quantitative enlargement. In a heartbeat, the collapse of Soviet socialism, the embrace of capitalism by China, and the failure of the Third World political project cumulatively engendered not merely a widely heralded embrace of the market but, correspondingly, a great surge in the size of the world’s wage-earning class. Workers thronged into direct or prospective relation with capital; the International Labour Office (in Foster, McChesney, & Jonna, 2011, p. 21) estimates that, between 1980 and 2007 alone, the global labor force grew from 1.9 billion to 3.1 billion—a rise of 63%. Throughout the same years, the development of specialized software and services (such as expert systems, bots, training software, and a great range of automated algorithmic procedures) opened innumerable labor processes more extensively to the wage relation.

This sudden complex enlargement of the world’s working class opened new vistas for capital’s expanded reproduction, not only through the production of additional surplus value but also by creating the conditions needed to realize it, in the form of wage earners dependent on the consumption of marketed commodities. In 2007–2008, however, this process led to a typical result: a depression, engendered by a feedback loop between an uncontained financial crisis and the prodigious overcapacity that had resulted from previous cycles of expanded reproduction.

In the interim, the capitalist class had been enabled to adjust business operations extensively and rapidly, mobilizing gigantic flows of foreign direct investment to take advantage of the huge but globally dispersed pool of newly available wage earners. Networks were indispensable in engendering this result, and capitalists experimented with and deployed them on a planetary scale. Networked production processes set new and existing forms of labor to work in hierarchical cooperation within extended transnational commodity chains; networked marketing and e-commerce underpinned new forms of commodity distribution; and emerging network-enabled commodities advanced the frontiers of accumulation even as they altered the contours of consumption. Networks were not the only prerequisite

sources of markets, resources, and labor power. A crucial corollary was that state power—sometimes violently expressed—remained an abiding necessity in expropriating those who had stood momentarily outside of the forever-expanding circuits of capital.

for expanded reproduction, of course, but they did constitute an irreplaceable element in capitalists' endeavors to tap into—to mobilize the labor of—an enlarged global working class.

The leading result was to set in motion a gigantic, multiform process of class recomposition. It is not sufficient, however, to speak of this process only in terms of an enlargement or reshaping of the global wage-earning class. The recomposing working class also has been the *bearer* of this transformation, actively experiencing, pondering, communicating, and, at points, contesting it.

Communication practices—the circulation of understanding through communication—therefore need to be set both beside and within the growth and continual reshaping of the waged labor force. In this way, we may explore the manifold ways in which communication figures in working-class consciousness and experience and in the class relations that organize so many aspects of society. In this way, too, we may contribute to creating a valid perspective for understanding the social agency of what has recently come to be the vast majority of humankind.

There are fundamental analytical choices and conceptual uncertainties here. Should we think in terms of multiple national working classes or of a multifarious global working class? What are the patterns of this class's ever-altering heterogeneity; how do race, gender, ethnicity, and other makers and markers of social difference figure? Does it exhibit common purpose? Is there evidence that today's working class may be recognizing—creating—itself as an active and self-conscious agency, as a social, cultural, and political force? If so, in which places, and for what reasons? Where, why, and to what extent, on the other hand, are segments of the working class beset by recalcitrant divisions and internecine animosities, chauvinistic prejudices, manipulated understandings, and political failures? How are communication media and practices present in these complex and variegated historical processes? In what ways does communication contribute? To look at things in this way is to situate communication in light of the much-neglected, often-despised, and yet demonstrably resurgent side of the social relation that is capital.

Communication in fact has been an actively developing aspect of class experience from the very beginnings of working-class formation in early modern England. To learn from others, to circulate news, to cultivate shared sensibilities and form independent habits of thought and, sometimes, by activating and sustaining political opposition and resistance—in all of these ways, pamphlets, flyers, and the day-to-day circuits of oral exchange were interlaid in working-class development. There is a substantial but mostly unsynthesized historical scholarship on this, both for England and other places where the wage relation took root.

A few desultory gestures must suffice to indicate a research trajectory that might propel us toward engaging this knowledge deficit. When state censorship broke down during the English Revolution (1641–1660), the plebeian radicalism of “masterless men”—small farmers forced off the land by aristocratic capitalists and landlords—circulated in print and became a potent political force (Hill, 1975). In England during the 1830s, an unauthorized “unstamped” press became a vitalizing force in working-class reconstitution, again momentarily rocking the English state to its foundations (Hollis, 1970; D. Schiller, 1976; Thompson, 1968). (Much of its creative impulse was absorbed and transmuted by an emergent mass commercial press built around advertising [Curran, 1978].) During the first third of the 20th

century, U.S. workers assimilated movies, musical recordings, and other forms of commercial culture as they reconstituted class relations around a multiethnic industrial—rather than mostly white craft-based—trade unionism (Cohen, 1990; Denning, 1996; Ross, 1998).

The people of the working class have figured in modern communications throughout every epoch of its innovation as both objects and subjects. A century ago, photographers allied with the Zapatista wing of the Mexican Revolution made visual representations of the *campesinos*—peasants, already under pressure to become proletarians—to vindicate their humanity from the slurs cast by metropolitan photographers based in Mexico City (Mraz, 2012, p. 93). Mostly black Brazilian sailors relied on fellow crew members, shipboard operators, to intercept radiotelegraph transmissions sent out by white naval officers and to broadcast their own messages to the people of Brazil during their “revolt of the whip”—a rebellion that nearly overturned the Brazilian state in 1910 (Love, 2012).

At least some communications scholars have long insisted that the relationship between communication and class is a central feature (Dyer-Witheford, 1999; Mosco & Wasko, 1983). Carefully historicized accounts, however, are still conspicuous by their absence in studies of contemporary “alternative and activist new media,” in Leah Lievrouw’s (2011) term.

This may be because the study of class and communication cuts against an ingrained tendency of much communication research: the reification of a supposedly empowered individual user. Researchers have adapted this framework to a parade of new media, beginning with magazines and radio and extending to today’s social media (Rainie & Wellman, 2012). Such accounts typically impose a disabling distance from substantial existing historical knowledge about how communication and media figure in the ongoing reconstruction of social class relations. To integrate this knowledge, on the other hand, will require us to study how the entire range of traditional and new media in use may be situated within or in light of specific experiences of social class relations.

Recent research on the role of the media in the Arab Spring may help clarify this point. U.S. official rhetoric waxed early in 2011, when, contrary to U.S. intelligence agency predictions (Sanger, 2012, pp. 279–280), the Egyptian dictator Mubarak was toppled by an opposition that used Facebook, YouTube, and Twitter to help mobilize and coordinate its protests. Some accounts tried to make out that commercial digital services had been the fundamental enabling condition, but such concepts of “Revolution 2.0” were mistaken and merely amplified the state-sanctioned rhetoric of Internet freedom discussed above. Valuable recent scholarship, including some collected in a 2011 *International Journal of Communication* special section, makes clear that democratic agency inhered not in Internet services but in a long-standing and socially complex political mobilization (Castells, 2012; Hofheinz, 2011; Prashad, 2012, pp. 15, 22; MacKinnon, 2012, p. 192; Rainie & Wellman, 2012, pp. 207–210). Islamic groups such as the Muslim Brotherhood (established late in the 1920s), middle-class students, and women have each been credited with important roles.

Workers, however, also were vital in creating a fulcrum of opposition against the Mubarak regime (Read, 2011). Manuel Castells (2012) underscores the importance for Egypt’s revolution of both the urban poor, “desperate as a result of rising food prices,” and “industrial workers”—fear of whom “was a factor in

influencing the business-wary Army generals to sacrifice the dictator on the altar of their own profits" (p. 67).⁴ Rainie and Wellman (2012, pp. 207–208), similarly, recognize the April 6 Movement as a labor-originated mobilization that fed into the 2011 revolution. However, communication scholars have shied away from scrutinizing how self-organization by Egyptian workers interacted with communications in the run-up to the 2011 revolution and throughout the revolution itself. Not unrelatedly, perhaps, they have elevated the new media to the point of eclipsing other forms.

It is incontestable that, during 2010 and 2011, Egyptians enlisted Internet services and mobile phones in their attempts to become a sustained and coordinated political force. But clarifying the actual contributions of these media compels us to attend to the class patterning and political content of this struggle, and communications scholars must educate themselves about these before imputing transcendent importance to the contributions of Facebook and other new media.

Facebook summarily shut down politically crucial pages on grounds of copyright violation and other infringements of its policies (Ghonim, 2012, pp. 117–118), and the Mubarak regime briefly curtailed Internet and mobile phone access. Aware of these shutdowns, analysts have asserted with Castells (2012) that "the blackout was circumvented in many ways with the help of the world's Internet community" (p. 66). Fair enough; but did prosaic, sometimes long-established, forms of communication also play a part—both at these fraught moments and, indeed, throughout the entire mobilization? Rainie and Wellman (2012) note that Egyptian protest organizers "relied on traditional media, such as flyers, to mobilize people who might not have access to the Internet" (p. 209). How interesting! What about circuits of conversation in families and markets and coffeehouses, actions in shared public spaces and work sites, and messages on posters? Surely these are relevant to pinpointing how Facebook messages should be situated within the more comprehensive matrices of Egypt's communicative practice.

The wider class patterning of communication is not just a matter of differentiated or stratified patterns of media usage but also of concrete political and cultural content. How did class-based understandings intertwine with and, perhaps, contend with one another within Egypt's revolution? Did all participants share the goal of actualizing a liberal political democracy—a Google democracy, we might call it? Or was the idea of democracy itself in contention, as some participants strived to make it encompass not only individual voting rights but also dignity and social justice for working-class Egypt (Prashad, 2012)? Who, to recall Lasswell's (1948) now-ancient formulation, said what about democracy, over which channel, to whom—to what effect? What, in particular, were workers' contributions to the politics and ideology of the revolution?

Linkages between class and communication are being actively researched within a world-historical site of contemporary working-class formation: China. Yuezhi Zhao (2011) calls for us to study media in relation to China's "contentious" society, where class relations are alive with oppositional tension and meaning. How is the Chinese working class fashioning itself, and how are media and communication

⁴ The Egyptian state, according to Kandil (2012), is split into three contending segments—the military, the domestic security services, and the political leadership—whose internecine struggles have shaped and reshaped Egypt's post-World War II history.

practices contributing to this process of class formation? Properly in the foreground, again, will be not media but historically conditioned class experience and consciousness—in relation to media of every description, old and new, from big character posters, petitions, oral traditions, gossip, and rumor to the microblog service Sina weibo.

Some of the scholarship that is looking into these issues is setting a new global standard for analyses of class and communication. Jack Linchuan Qiu (2009) has clarified how new media have interpenetrated what he calls—strikingly—a “working-class network society.” Yu Hong (2011) has detailed how the labor of building the networking equipment that is used all over the world is organized for and performed by China’s migratory working class. Yuezhi Zhao (2008, 2010, 2012) and others (Wu, 2012; Xing, 2012) are tracing a class-oriented dialectic of resistance leading to political reaction leading to resistance throughout a stunning array of mediated social dramas ranging from news discourses into China’s (micro)blogosphere. Grist for these dramas, they find, may come from almost anywhere: factory privatization schemes, land seizures, environmental disasters, school construction projects, corrupt state officials, and bullet-train wrecks. In China, class conflict demonstrably pervades and patterns the force field of media representation. How do communication practices across their range interact with class understandings?

Is China’s working class, inclusive of the communication practices that contribute to it, contained within national boundaries, or, like its forerunner in the Atlantic capitalism of the 17th and 18th centuries (Linebaugh & Rediker, 2001), do its members recognize themselves as part of a global, polyglot, “transcultural” (Chakravarty & Zhao, 2008) class collectivity? Beyond national settings, how—and what—is today’s multiply divided and rapidly recomposing global working class communicating? How, on the other hand, are state and capital using communications systems and resources in their attempts to intervene in, and to canalize and reshape, class-suffused political discourses?

Conclusion

A final consideration is also crucially relevant. Class and communication interweave amid what I call a continuing digital depression (Schiller, *in press*). Yet capital’s need for expanded reproduction persists, and the political economy is compelled to generate new vectors of accumulation. A limit on the form of expanded reproduction identified by Luxemburg is nearing. As the wage relation has been more thoroughly generalized than ever before, territorially speaking, there no longer exist appreciable noncapitalist worlds to conquer. Where, then, is the capitalist system to turn to accommodate the expansionary imperative that drives it?

To understand what is happening we must bring together directly both capital and the state. “It is an illusion to hope that capitalism will ever be content with the means of production which it can acquire by way of commodity exchange,” wrote Rosa Luxemburg (200). “The accumulation of capital, seen as a historical process, employs force as a permanent weapon, not only at its genesis, but further on down to the present day” (pp. 350, 351). Expanded reproduction continually requires—and recurrently engenders—action outside and beyond existing markets. Michael Perelman (2000) and David Harvey

(2010, pp. 48–49) are among those who call this type of action “accumulation by dispossession” and characterize it as a function whose exercise is concentrated in the capitalist state.

Presently, accumulation by dispossession is sweeping the planet—from land seizures to expropriations of public health services to draconian intellectual property laws and treaty instruments. In many countries, the crisis is being used to accelerate these changes as, under the banner of austerity, states slash away at previous arrangements. Waves of commodification are washing through areas of social life previously separated from capital’s self-expansion, and capital is extruding across great ranges of household and community practice once organized along different lines. These new domains of commodification are often predicated on the plunder of public goods. To enable commodification in these cases, state violence is being directed not only outward but often also at functions of the state itself—as the public goods that were the result of an earlier phase of capitalist reproduction become in their turn irresistible sites of capitalism’s cannibalistic self-expansion. Throughout the provision of telecommunications, education, medicine, agricultural biotechnology, government services, and cultural heritage we may see these parallel and concurrent processes of political-economic metamorphosis unfolding: privatization, commercialization, and, more precisely, the direct annexation into the social relation that is capital of areas of practice that, previously, were mostly exterior to it (D. Schiller, 1999, 2007, *in press*). Information and communication are at the center of these encompassing expropriations.

The capitalist class looks to the state to preserve the stability it needs for its global accumulation projects, after the state helps it to capture new streams of social life; and the mobilization of the U.S. state around Internet governance should be set in this context. Whether the United States will succeed in retaining its management role over the Internet is, however, an open question. Expanded reproduction in the era of our digital depression, meanwhile, is bringing forward a much-enlarged and recomposed global working class. Because capital is not finished and complete but ongoing and open-ended—not a simple social force but, rather, an antagonistic social relation—the self-organization and political direction of this transnational class of wage earners assume growing importance going forward. Communication media and practices, finally—including those drawing upon the Internet—will be intercut with these fraught historical transformations and with the inevitable surprises that will accompany them.

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