2014 Ristow Prize for Academic Achievement in The History of Cartography
Mapping Armageddon: The Cartography of Ruin in Occupied Japan
by David Fedman

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FROM THE EDITOR

Many WMS members enjoyed warm Miami in early February while attending the 22nd Annual Miami International Map Fair. It was a good chance to renew friendships, see thousands of maps, and hear interesting talks—WMS member Bill Ginsberg gave a talk about collecting 19th century maps and cited Ira Lourie’s Winter 2014 Portolan article about A.J. Johnson maps.

There is a truly varied selection of articles and book reviews in this issue of your journal. The 2014 Ristow Prize article examines the mapping of post-WW2 Japan. Joel Kovarsky, our WMS December 2014 meeting speaker, describes the Lewis Evans map of the Middle British Colonies. Pat O’Neill shares his vast research into the War of 1812—his article is based on his November talk at the WMS. John Hessler examines mapping of the brain. The many book reviews take us from sea monsters to Marco Polo to landmark maps at the UK National Archives—and much more. A report tells us of map events in Seoul last October, and there is a final call for focus on the Antwerp ICHC meeting next July—time to sign up and make arrangements NOW. There is indeed something for everyone in the current issue—ENJOY.

Tom
If the language of ruination was tinged with a vocabulary of nothingness, it also regularly invoked mapping metaphors. In turns of phrase that were by war’s end routine, Japanese cities had been “wiped,” “blown,” and “bombed” off the map.5 Of course, cartographic representations of this destruction were also widespread. For when words failed to describe the destruction, maps were employed to visually communicate the scope and distribution of the ruins. The early occupation period accordingly witnessed the production of a wide range of cartography of Japan’s bombed-out cities. Assembled by a host of agencies, both Japanese and American, maps of Japan’s war damage became a vital tool in the effort not only to rebuild urban Japan from the ashes of defeat but also to understand how such extensive destruction was accomplished. Indeed, whatever the gulf between the American victors and Japanese vanquished in postwar Japan, the same question weighed heavily on the minds of both peoples: what was the nature, extent, and legacy of urban Japan’s demolition?

For Japanese returnees, the answer to such a question was not simply a matter of reckoning with the past or accounting for loved ones—it was a matter of survival. Cast adrift and in many respects stigmatized, Japanese repatriates naturally turned to the support networks of their hometowns as a means through which to re-integrate into postwar society. As the official Japanese government account of repatriation put it, “the first matter to weigh on the minds of repatriates upon their return was the condition of their home and hometown.”6 Maps, of course, were an obvious means through which to communicate just this sort of information. Officials charged with overseeing...
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repatriation thus worked to establish “Damage Map Inspection Stations” (senkai chizu etsuransho) at post-offices and other official sites (as well as aboard some of the vessels detailed to repatriation), where basic maps of air-raid damage were made available to the public.7 They likewise began preparations for a comprehensive assessment, the so-called Survey of the War Damage Condition of Japan’s Major Cities (Zenkokoku shuyō toshi sensai gaiyōzu). Seeking to alleviate the poverty of information regarding local conditions and wartime experiences, surveyors backed by the First Ministry of Demobilization—Japan’s postwar bureau of veterans affairs—made visits to approximately 130 cities in order to produce the first sweeping cartographic portrait of what the war had wrought.8

American Occupation officials also proved enthusiastic surveyors of the ruins. Like their Japanese counterparts, American officials were deeply concerned with the reconstruction and revitalization of Japan’s cities—a measure many saw as essential to the success of other postwar reforms. In the eyes of some, however, the ruinscapes of urban Japan also bore the imprint of American air power. They stood as an achievement to be systematically examined in order to, as one military historian has put it, “shape the past battlefield, for the future.”9 Such was the objective placed before the United States Strategic Bombing Survey in the Pacific. Tasked with evaluating the efficacy of the air raids conducted against the Japanese homeland, American experts and military officials struck out to every corner of the peninsula beginning in September 1945 to appraise the damage done to Japan’s cities and their residents.

So it was that the fall of 1945 witnessed two simultaneous assessment efforts: the Japanese “Survey of the War Damage Condition of Japan’s Major Cities” (hereafter Survey of War Damage) and the United States Strategic Bombing Survey (hereafter USSBS). Carried out during the same period from October to December 1945, these surveys brought Japanese and American officials face-to-face with the scope of urban Japan’s destruction for the first time. They also yielded an impressive array of maps of Japan’s destroyed cities: cartographic records that, as this paper will show, reveal the distinctive ways in which both groups viewed, documented, and memorialized urban Japan’s destruction.10

Through a comparative analysis of the cartography produced by each survey, this paper offers a lens into the history, memory, and visual representation of the Japan air raids. Such an analysis offers insight into more than the spatial distribution of the damage. For inscribed upon these maps are the visions of their creators: what scholars have variously described as the “militarized imaginaries” or “scopic regimes” of the wartime state.11 Rather than objectively mirroring nature, maps are rhetorical: each sheet is constructed upon a foundation of codes, scientific conventions, and spatial categories valued by its creators.12 The cartography of ruin in occupied Japan is no exception.13 While at first blush it may seem that these maps depict little more than “a kind of negative inventory of the civil ecology of a city,” the larger context of their production, circulation, and consumption sheds light on the visual culture of war, defeat, and occupation.14

That maps facilitated the bombing of civilians during World War II by reducing complex urban spaces into “calculative rather than corporeal” targets is a well-established theme of recent scholarship.15 But what role did maps play when the last bombs had been dropped? If, as Kenneth Hewitt has argued, “aerial bombardment revealed and exploited strong social and geographical differences in the vulnerability of cities” resulting in “distinctive patterns of loss for civilians and urban places,” how do these patterns register cartographically?16 How, in short, did Japanese and American cartographers render Japan’s bombed-out cities and what do these depictions tell us about the divergent experiences—and militarized visions—of both groups? To answer these questions we must not only read between the lines of these maps but also broaden our gaze to account for the larger context from which they were born, the subject to which we now turn.

CARTOGRAPHY OF THE VANQUISHED

The droves of returnees to the Japanese mainland placed tremendous pressure on the already scarce resources of a broken economy. The earliest phase of the postwar period thus entailed a frenzied effort on the part of aid groups, especially Regional Repatriation Centers, to meet the basic needs of repatriates for housing, healthcare, and employment.17 While the Ministry of Health and Welfare assumed principal responsibility for administering repatriation, the First Ministry of Demobilization (Daiichi fukuinshō) also took on a prominent role. In addition to surveying the condition and demands of demobilized soldiers, it undertook extensive research into the local level experience of war. It was as part of the latter effort that initial steps were taken within this Ministry to commence a comprehensive cartographic survey of war damage—the importance of which “was felt keenly” by Ministry officials as requests continued to pour in from veterans for such information.18
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Figure 1. Index Map, Zenkoku shuyō toshi sensai gaikyōzu, 1945. Source: National Archives of Japan.
Figure 2. Map of Iwakuni, Zenkoku shuyō toshi sensai gaikyōzu, 1945.
Source: National Archives of Japan.
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Figure 3. Map of Toyama (Detail), Zenkoku shuyō toshi sensai gaikyōzu, 1945.
Source: National Archives of Japan.
Figure 4. Map of Sendai (Detail), Zenkoku shuyō toshi sensai gaikyōzu, 1945. Source: National Archives of Japan.
The actual task of surveying and compiling the maps fell to the Data Section (shiryōka) of the Ministry, which began to gear up for its survey in October 1945. In preparation for the survey, officials, working in concert with other agencies, assembled an assortment of base maps produced prior to or during the war. Small teams of surveyors thereafter fanned out across the archipelago to conduct on-site surveys of some 130 cities, large and small. In addition to charting the boundaries of destruction, each team conducted basic research into the timing, toll, and strategic objectives of the raids, often drawing upon official police and Home Ministry records.

The survey, however, proved short-lived. Strapped for resources and manpower (and hampered by Japan’s fractured infrastructure), the survey teams were only able to compile the most cursory of maps: a “regrettable” result in the eyes of the Ministry. All told, the mapping effort lasted just three months, with most of the fieldwork conducted and completed in December 1945. Their efforts nonetheless yielded a total of 135 map sheets of damaged cities. Taken together, these maps capture the variety of air raids carried out by the United States Army Air Force against Japan. Read in conjunction with the brief narrative commentary accompanying the map sheets, moreover, they powerfully convey the evolution of American air power during the war: the shift from targeted bombing of select military and industrial sites to the area incendiary air raids that laid waste to vast swathes of urban fabric.

No map conveys the geographical scope of this incendiary campaign better than the first in the set: the index map (gaienzu) of all 130 cities surveyed (Figure 1). By plotting the geographical distribution of the cities attacked over the course of the entire bombing campaign, the map offers a key to the larger topography of urban destruction that stretched along the eastern seaboard of the archipelago—"the pattern of Japan’s industrial economy resembling an elongated S from Niigata to Nagasaki" targeted by American war planners and, in turn, bombardiers. Scattered across the map are red dots of four different sizes, with the smallest representing cities where fewer than 1,000 homes were destroyed by the raids and the largest representing cities that lost 1,000,000 or more homes.

The map sheet also includes in its right-hand corner a table of the deaths, injuries, and homes burnt or destroyed in each city: 813 killed and 329 injured in Iwakuni; 7,051 killed and 4,061 injured in Kobe; 13,973 killed and 19,781 injured in Osaka. The inclusion of information on the human toll of these bombings marked a significant departure from American wartime map sheets whose sanitized representations cast Japanese cities as mere military or industrial targets. Instead, maps such as this one remind us that Japanese cities were also social spaces, comprised as much of families and homes as of railroad yards and factories.

And yet, while the Japanese index map allows us to envision the grand sweep of the air war, its synoptic view of the destruction obscures the considerable variety of air raid experienced at the local level. Indeed perhaps the most striking feature of the entire corpus of maps is its inconsistency—a product as much of the haste with which the surveys were conducted as the varied nature of destruction. Of particular importance is the fact that the boundaries of destruction were drawn on a wide array of base maps. While many surveyors took as their foundation the standard 25,000:1 scale survey charts produced by the Imperial Japanese Army General Staff Office, others used basic road maps or city planning charts. One need only compare the damage maps of Iwakuni (drawn upon a basic road outline, Figure 2) and Toyama (overlaid on a detailed city plan, Figure 3) to gain a sense of their diversity.

The irregularity of these maps also registers in their coding. Some include detailed information about the composition of the city (including factories, post offices, parks, and schools), while others simply plot the outline of destruction upon a non-descript built environment. Still other maps take pains to highlight individual structures of strategic significance (such as airplane factories) as a means to explain the targeting of particular zones within the city. Especially revealing is the variegated ways in which damage zones were labeled on these maps. “War damaged areas,” (senhai chiiki), “razed zones” (shōhitsu kuiki), “comparatively small damaged areas” (higai hikuteki shō naru chiiki): these and other categories of destruction could be found in the highly inconsistent map legends constructed by surveyors. Subtle though these linguistic distinctions may seem, the difference between “razed zones” and “damaged areas” often meant the difference between complete destruction and relatively minor wreckage. “Razed zones”—such as that depicted in the above map of Toyama, where an estimated 98 percent of the city was destroyed—usually delineated the scorched earth achieved by napalm, which was increasingly common after jellied petroleum bombs became the principal payload of B-29s in the closing months of the war.

That these zones could be found in small prefectoral capitals like Toyama testifies to the fierceness of the incendiary campaign. Once the destructive capacity of blanket firebombing was realized in Japan’s large
cities—beginning with the March 9, 1945 raid on Tokyo that claimed an estimated 100,000 lives and left a million more homeless—it was quickly applied to Japan’s smaller cities as well, despite the fact that they were of negligible importance to the war machine. So effective was the incendiary campaign that it would necessitate in some War Damage Survey maps (such as that of Sendai, Figure 4) a separate category to delineate areas spared destruction (higai nashi): small boxes of dark red that would interrupt the otherwise extensive swatches of scorched earth.

In those cities that were subject to multiple waves of raids surveyed tried to clarify when each zone was destroyed. Although limited in number, the resulting map sheets offered something of a narrative depiction of the local experience of the raids. In Hikone (Figure 5), for instance, what started as a limited attack on select sites of a rayon processing facility became a more extensive campaign to cripple local industry and infrastructure. Whereas other maps focus principally on delineating the boundaries of destruction, the Hikone surveyors provide detailed information on the damage incurred by each raid in turn, including information on the factories targeted, the type and number of bombs dropped and rockets fired, and the geography of bodily harm. When set against the map of Maizuru (Figure 6), a small port city in Kyoto Prefecture subject only to limited precision bombing in July 1945, the variety of air raid experiences—and cartographic representations thereof—is thrown into sharp relief.

If maps of smaller cities such as Hikone are remarkable for their attention to detail, cartographic representations of the incineration of Japan’s larger cities are striking in their simplicity. Incendiary bombing, after all, was indiscriminate in its destruction: fine-grained details and narrative accounts of the bombings were not necessary when everything was destroyed in one fell swoop. The maps of Japan’s largest industrial cities—namely, Tokyo, Osaka, Yokohama, Kawasaki, Nagoya, and Kobe—testify to this point. Bare of intimate details about targeting tactics and individual structures, these maps convey little but the contours of loss: the large swatches of red that consume their surface.

Consider the cartography of the capital (Figure 7). Among the many noteworthy features of Tokyo’s war damage maps (of which there are two) is the way they suggest the role that natural topography played in shaping the course and contours of destruction. In many cases, the geography of razed areas corresponds neatly to the landscape itself, with rivers, canals, and other natural firebreaks marking the limits of destruction. Also noteworthy is the fidelity with which the boundaries of the most pronounced destruction (the large block of red in the eastern section of the city) follow the borders of Tokyo’s Shitamachi district: the working class neighborhood in the eastern part of the city targeted by American planners specifically because of its vulnerability to fire. Although the viewer’s first impression is of a blanket of red stretching across the entire metropolitan area, closer inspection reveals a “particular social geography of vulnerability” to air raids akin to that identified by Kenneth Hewitt.

While surveying destruction as extensive as that in Tokyo was surely a daunting assignment, it was in some ways more straightforward than the task faced by those unlucky surveyors dispatched to the sites of the atomic bombings. Although superficially the maps of Hiroshima and Nagasaki appear similar in style to the rest of the set, they differ in one fundamental way: each portrays a gradient of destruction emanating from the blast point. The map of Nagasaki (Figure 8) emphasizes the destruction around the hypocenter, where a large red circle delineates a “completely burnt and completely destroyed zone” (zenkai zenshô kuiki), a category of damage reserved for the nuclear blast sites. But the map also suggests that other types of damage radiated out from this zone of complete destruction: “partially destroyed zones” and “burnt” (but not destroyed) zones. While the map itself offers no information on the toll of the bombing, the scope of the waves of wreckage that extend across its surface offers a portrait of awesome destruction—a blast that paid no regard to the topography of the land.

It is hard to imagine what Japanese citizens made of such maps. Although details about local conditions were surely welcome, the depictions of destruction were often highly abstract, leaving the viewer with little sense of the impact of these bombings on everyday life amidst the ruins. And yet, when examined critically with an eye for both their production and consumption, these map sheets reveal a great deal about the history and memory of Japan’s wartime destruction. They remind us that the raids evolved over time; that destruction was uneven both within and across cities; and that the spaces destroyed were human habitations. Obvious though these points may seem, they are scarcely suggested by American war damage maps. Indeed, the damage assessment maps produced by the USSBS reveal a markedly different conception of Japanese space—and a decidedly different process through which the contours of the ruins would be drawn.
CARTOGRAPHY OF THE VICTORS
If the Japanese War Damage Survey was notable for the scarcity of its resources, the USSBS was remarkable for its sheer magnitude. Commissioned by a presidential order on November 3, 1944, the USSBS was placed under the supervision of a board of civilian experts (including, in the Pacific, the likes of Paul Nitze and John Kenneth Galbraith) and carried out by a massive team of 300 civilians, 350 officers, and 500 enlisted men. With offices in Tokyo, Osaka, Nagoya, Hiroshima and Nagasaki, it enjoyed the support of both the Army and Navy, as well as government officials in Washington, where its final reports were drafted. Given that the USSBS sought nothing less than to “establish a basis for evaluating air power as an instrument of military strategy, for planning the future development of the United States armed forces, and for determining future economic policies with respect to the national defense,” it is unsurprising that it was such a massive undertaking.28

In a basic sense, the USSBS rechanneled the resources mobilized during wartime to implement the destruction of Japan to thoroughly investigate the results and future implications of that effort. In the words of geographer Stephen Graham, it formed “the apogee of the systematic evaluation of the ‘success’ of urban planning for mass death.”29

In contrast to the Japanese War Damage Survey, the USSBS was charged with far more than the simple mapping of urban war damage. As with its German counterpart, it set out to ascertain a comprehensive portrait of the effects of the precision, incendiary, and atomic bombings on Japanese urban infrastructures and their residents, including impacts on morale, civilian health, urban infrastructure, and political decision-making.30 Through interviews with Japanese officials of all ranks, on-site observations, and extensive documentary research, USSBS surveyors sought to reconstruct, step-by-step, the dismantling of Japan’s war machine.31

Maps figured prominently in the thousands of pages that composed the 108 reports produced by the survey. Although the production of USSBS maps cannot be attributed to any single agency, one force behind this enterprise was the 64th Engineer Base Topographic Battalion, which set up shop in the Isetan Department Store in Tokyo, one of the few large buildings in the city that had escaped the flames. Soon thereafter, American cartographers—including those who had drafted the maps that guided the bombers in the first place—began to draw up a wide range of maps to serve the occupation: everything from urban plans to land registers to charts of the shifting geopolitical boundaries of the Asia-Pacific region.

The collection of war damage maps that subsequently made their way into USSBS reports defies easy description. Insofar as it contains a variety of spatial metrics and cartographic styles, it reveals the manifold interests and aims of the USSBS enterprise. Many of the maps, in fact, deal less with the spatial representation of destruction than the process through which it was achieved. Figure 9, for example, maps the flight patterns used by the Okinawa-based Seventh Air Force to conduct raids against Japanese military installations as the XXI Bomber Command prosecuted the firebombing campaign from the island redoubts of the Marianas, the staging ground for its B-29 Superfortresses. A variety of other maps visualize the geography of the Japanese wartime economy, its transportation infrastructure, and the military posture of the Japanese empire—spatial configurations that had shaped the tactical evolution of the air war.

Still, the bulk of the USSBS maps documented the extent and qualities of the destruction, often in ways that mirror their Japanese counterparts. Particularly noteworthy in this regard is the fact that many of the USSBS map sheets bear a striking resemblance to those produced by the concurrent Japanese survey. Differences in style notwithstanding, the contours of destruction drawn up by both surveys often overlap. The USSBS map of Nagoya (Figure 10), for instance, outlines the scope of damage over four successive raids, distinguishing targeted attacks from incendiary bombing runs and identifying key targets. Although the USSBS map strips the urban landscape of anything but the destroyed zones (whereas its Japanese counterpart, Figure 11, includes information on the composition of the city and its environs), their findings line up closely. When set side by side, these maps provide a check on each other’s overall accuracy.

These sorts of resonances, however, were limited. Apart from basic information on the timeline of the raids, the USSBS mapmakers made little effort to convey a narrative experience of the raids on each city. Nor do they exhibit interest in the smaller scale raids waged against Japan’s less significant cities. Highly detailed maps such as that of Hikone discussed above are nowhere to be found in the USSBS reports. For while the Japanese survey maps stood alone, these maps were designed to illustrate larger studies of the bombing campaign (in what often amounted to hundred page narratives). In effect, the USSBS maps...
served less as a comprehensive portrait of urban damage than as supporting evidence for the USSBS reports.

The American maps, in other words, place a premium on the product—not the progress—of the raids. Whereas the Japanese surveyors strove to communicate the human and citywide experience, the USSBS maps maintain a tight focus on the physical destruction. And whereas the Japanese maps highlighted lives lost and homes destroyed, USSBS sheets featured data on tonnage of bombs dropped, number of sorties, and measurements of land area destroyed. The space on which the destruction unfolded remained a passive backdrop. In the map of Osaka (Figure 12), for example, the only background information shown is the location of the streams, rivers, and railways that formed the arteries of the city and its surrounding “urban complex.”

Particularly important—and difficult to ascertain—is the nature of the spatial intelligence used to construct these maps. While many USSBS maps were the products of on-site surveys and original research, the provenance of others can be traced back to the wartime military, which churned out a wide range of maps used to plan and prosecute the air raids.32 As a result, the cartography of the USSBS assimilated the cartographic conventions, codes, and values of wartime planners. Reductive in their conceptions of urban space, the USSBS maps once again rendered Japanese cities as industrial and military systems deserving of wholesale destruction. Figure 13, for example, a population density map of Tokyo, can be traced back to the Office of Strategic Services (the predecessor of the CIA), whose planners in Washington were among the first to research the destructive potential of incendiary tactics. Revealingly, the map plots the boundaries of the vast “incendiary zone” into which B-29s dropped their payloads—an area of the city described in accompanying planning reports as comprised principally of “workers quarters” and “home production facilities.” That the more densely populated regions of the city correspond to the incendiary zone is no accident: war planners sought to exploit the vulnerability of this section of the city, composed as it was of flammable “paper and ply-board” structures.33

The reappearance of such a map within the USSBS reports seems insignificant enough. Maps such as this one, after all, informed the planning of the raids at all stages; it is only logical that it would reappear as part of a larger reflection on the course of the air war. But the recirculation of maps such as this one had larger, if less obvious, implications: it served to naturalize the spatial categories and militarized vision of the war-room. Through reports such as the USSBS, spatial categories fashioned in the context of total war (such as “built up urban area” and “target zone”)—geographical classifications that blurred the boundaries between civilians and combatants—gained currency as the vocabulary and defining metrics of American air power. By re-casting incendiary air raids as a natural component of warfare, these reports (and the maps therein) obscured the fact that the bombing of civilians marked a radical and controversial departure from previous practice.

A related point can be made about the atomic bombings. As awe-inspiring as they were ill-understood, the ruins of Hiroshima and Nagasaki “occupied the attention of a major portion of the Survey’s staff in Japan in order to arrive at a more precise definition of the present capabilities and limitations of this radically new weapon of destruction.”34 Statements such as this one point up the concern with the present that tempered the American view of the atomic ruins.35 In placing an emphasis on the “present capabilities and limitations” of the atomic bombs, USSBS surveyors shifted their analysis away from why and where they were dropped to how and when they might be deployed in the future. In a basic sense, this outlook anticipates the general American historical consciousness regarding the war in the Pacific that would take shape over the years to come: the mushroom clouds of the atomic bombs quickly obscured the destruction of the rest of Japan by other means.36

Although photographs of the destruction figure prominently in the USSBS reports on the atomic bombings, maps of the aftermath were also drafted. As in the Japanese case, American maps of the destruction of Hiroshima and Nagasaki stand apart from the rest of the collection: in style, scale, coding, and composition alike. Not only does the USSBS map of Hiroshima (Figure 14) delimit the “extent of fire” emanating out from the hypocenter, it also attempts to chart “the mean line of structural damage” cutting through the destruction: a measurement meant to determine the velocity and vector of the atomic blast. Needless to say, this map bears a striking resemblance to the Hiroshima map of the Japanese survey: both maps highlight in red the near total destruction of the epicenter and attempt to chart the destruction radiating out from the blast point. But the similarities are largely confined to the hypocenter of both maps. In contrast to the Japanese map of Hiroshima (which traces the fallout of destruction over the larger landscape), the USSBS chart is principally focused on the blast point and the dispersion of fire across the center part of the city. The scale of the USSBS
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Figure 5. Map of Hikone (Detail), Zenkoku shuyō toshi sensai gaikyōzu, 1945. Source: National Archives of Japan.
Figure 6. Map of Maizuru (Detail), Zenkoku shuyō toshi sensai gaikyōzu, 1945.
Source: National Archives of Japan.
Figure 7. Map of Tokyo, Zenkoku shuyō toshi sensai gaikyōzu, 1945.
Source: National Archives of Japan.
Figure 8. Map of Nagasaki (Detail), Zenkoku shuyō toshi sensai gaikyōzu, 1945.
Source: National Archives of Japan.
Figure 9. Targets Hit by Seventh Air Force from Okinawa, 1947.
Figure 10. Air Attacks on Nagoya, Japan, 1947.
Source: USSBS Report 57, Effects of Air Attacks on City of Nagoya, 11.
Figure 11. Map of Nagoya (Detail), Zenkoku shuyō toshi sensai gaikyōzu, 1945.
Source: National Archives of Japan.
Figure 12. Areas Destroyed in Osaka City, 1947.
Figure 13. Tokyo, Density of Population, 1947.
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Figure 14. Hiroshima, Extent of Fire and Limits of Blast Damage, 1946.
map corresponds to the initial blast radius of the atomic bomb.

I have here aimed to draw attention to both typical and extraordinary examples of war damage cartography, but a variety of other cartographic forms have escaped scrutiny: maps of firefighting preparations, air defense distribution maps, weather pattern charts. While this diversity makes generalizations about the cartography of the USSBS difficult, two features of these maps stand out. The first is the simplicity with which they define and code urban space. Like the maps employed to implement the bombings, these maps cast Japanese urban spaces as “incendiary zones,” “industrial regions” and “urban systems”: wartime euphemisms used to justify the indiscriminate destruction of urban space. The second feature is the plainness of their style and content. Simple in design, they portrayed Japanese cities as inactive backdrops against which the war unfolded. The USSBS maps capture this campaign in its broadest strokes, depicting in the process the vast horizons of destruction that were the defining feature of postwar urban life. These maps, in essence, turned the nothingness on the ground into concrete documentations of American air power. Whatever the underlying strategic imperatives of the USSBS, it was in many respects an affirmation—if not celebration—of American military might.

CONCLUSION
This paper has ventured to advance two principal arguments related to the history of cartography. The first is the notion that maps played a critical role in the occupation and reconstruction of postwar Japan. If, as Lori Watt has argued, the immediate postwar period required the production of new maps of Asia, it also called for new maps of Japan and its cities. This was perhaps what American war planners had hoped for in wiping much of urban Japan “off the map.” Be that as it may, the result was that city maps needed to be re-drawn, often from scratch. War damage surveys thus formed the canvas upon which postwar Japan would be re-drawn and wartime Japan memorialized. So, too, did they form an indispensable tool for many Japanese repatriates and air raid survivors, who regularly turned to maps of war damage as they tried to plot a new course for their lives in postwar society.

A second argument proceeds from the first: that a comparative examination of both sets of maps sheds light on the divergent experiences of war and occupation. As discussed above, the objectives of the two surveys were markedly different. While the Japanese survey was constrained by scarce resources, the USSBS was a comparatively massive and well-funded enterprise. And while the Japanese survey sought to simply and efficiently map the ruins for ready legibility, the USSBS embedded its cartography within larger studies of American air power. The USSBS thus expressed a triumphalist outlook: fully supported by the Occupation and military government, it was a product of unbridled American authority in the immediate postwar period. The Japanese survey, by contrast, was a utilitarian undertaking: pragmatic in its conception and humble in its implementation, it was meant to meet the basic needs of the Japanese people.

It may come as little surprise, then, that these parallel survey efforts have garnered significantly different levels of scholarly and public attention. While the USSBS has been the subject of considerable scholarly inquiry, including multiple book length studies, the Japanese War Damage Survey effort has long been forgotten. It was only, in fact, after the National Archives of Japan digitized the collection and held a special exhibition featuring the maps in the fall of 2013 that public interest was rekindled.

The subsequent circulation and re-production of USSBS maps rendered the mapping conventions and spatial categories of total war touchstones for the Cold War era. In this and other ways, incendiary area bombing emerged as a conventional tactic of American air power. As cartographers and war planners set their sights on other conflicts across the globe—especially that in the Korean peninsula—they drew upon similar conceptions of enemy space. These conceptions are not relics of the past. They are, if anything, part and parcel of modern warfare. Although the tools and technologies of both bombardment and mapmaking have changed drastically in the age of drones and Global Information Systems, the armed vision and militarized imaginaries that render cities into targets remain. Bombs continue to sink into the abstract contours and “colored pins of the general’s map,” as the distance between bombardier and target grows only greater.

ABOUT THE AUTHOR
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ENDNOTES
1 This estimate comes from Lori Watt’s path-breaking study of Japanese repatriation, *When Empire Comes Home: Repatriation and Reintegration in Postwar Japan* (Cambridge: Harvard University Asia Center, 2010), 2. Fourteen ports, stretching from Hakodate in the north to Kagoshima in the south, were designated as official processing points for Japanese repatriates.


5 See, for example, “U.S. Pledges Revenge on Japs, Speed Up of Pacific Offensive Demanded,” *Los Angeles Times*, January 29, 1944; and “Senator Clark in Demand that Japan be Bombed Off Map,” *Corsicana Daily Sun*, January 29, 1944.


13 This paper may be read in part as an extension into the postwar period of a similar argument advanced about the maps used to plan and prosecute the destruction of urban Japan in David Fedman and Cary Karacas, “A cartographic face to black: mapping the destruction of urban Japan during World War II,” *Journal of Historical Geography*, Vol. 38, No. 2 (2012), 306–328.


16 Kenneth Hewitt, “Civil and Inner City Disasters,” 259.

17 The definitive account of the social and political conditions of the immediate postwar period is John Dower, *Embracing Defeat: Japan in the Wake of World War II* (New York: W.W. Norton & Co., 1999).

18 Daiichi Fukui shō, “Zengen,” no page number.

19 According to Yamazaki, these surveyors received technical support on map construction and war damage conditions from both the Police Bureau (Keihokyoku) and Geographical Survey Office (Chiri chōsajo) of the Home Ministry (Naimushō), with other agencies supporting. See Yamazaki, “Senso kara heiwa e no dohyō,” 320. Daiichi Fukui shō, “Zengen,” no page number.

20 The first printing of approximately 300 sets of these maps was in fact followed up with an additional round of surveys meant to correct and standardize the set, as well as include additional maps on the destruction of 25 smaller coastal areas and city zones that escaped scrutiny in the first round of survey. Although the


24 A statistical overview of the damage inflicted by the air raids, from which these figures are derived, can be found in Japan Economic Stabilization Agency, Taiheiyō sensō ni yoru waagunin higai sōgō hōkokusho (Tokyo: Japan Economic Stabilization Agency, 1949).

25 For a detailed analysis of the planning and prosecution of the firebombing of Tokyo, especially as related to the targeting of civilians and workers, see Thomas Searle, “It made a lot of sense to kill skilled workers: the firebombing of Tokyo in March 1945,” The Journal of Military History, Vol. 66 (2002), 103–133.


27 The index map, however, does include such estimates for Nagasaki: 13,295 killed, 19,739 injured, 13,881 homes destroyed, and a total of 120,820 afflicted (risaisha). When compared to later tabulations, these figures are conservative.


30 For a broader comparative assessment of both USSBS surveys see Gian P. Gentile, Advocacy or Assessment? The United States Strategic Bombing Survey of Germany and Japan (Stanford: Stanford University Press, 1998).

31 United States Strategic Bombing Survey, Summary Report, iii.

32 For more on wartime intelligence as related to air raids see John Kries, ed., Piercing the Fog: Intelligence and Army Air Forces Operations in World War II (Honolulu: University Press of the Pacific, 2004).


34 United States Strategic Bombing Survey, Summary Report, 22.


37 Lori Watt, When Empire Comes Home, 19.

38 For more on the reconstruction of Japan and Occupation see Carola Hein, Jeffrey Diefendorf, and Yorifusa Ishida, Rebuilding Urban Japan After 1945 (New York: Palgrave Macmillan, 2003).


40 After their initial postwar consumption by repatriates, the Japanese damage maps largely fell into obscurity. It was not until 1981 that the set again garnered considerable public attention after journalists with the Kyodo News agency stumbled across a set of the collection. Following the initial wave of reporting, however, interest once again waned, at least until the 2013 special exhibition at the National Archives. See Yamazaki, “Sensō kara heiwa e no dohyō,” 320; and “Wartime maps of cities damaged by Allied bombers on exhibit for first time,” Asahi Shimbun, August 14, 2013.