Strikes in Steel Belt US Military Industry, 1966

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From 1962 to 1965, the Labor Relations staff attached to US Army Mobility Command (MOCOM), based at the Detroit Tank Arsenal in Warren, Michigan, kept scattered, mostly handwritten records of the few dozen work stoppages that military contractors were required to report. Then, in 1966, strike activity inside military contractors plants exploded, producing enough reports - now standardized through a special form label DD-1507: Work Stoppage Report - to fill an entire US National Archives FRC box.

The picture looking out from the DTA Labor Relations staff records stands in sharp contrast to existing official statistics on labor militancy in the defense industry.Under "Ordnance and accessories" (read: military industry), the Bureau of Labor Statistics (BLS) Work Stoppage Analysis for the year 1966 counts only thirteen strikes involving 8680 workers who idled for a total of 62,500 days. The documents analyzed in this data, which were generated by the Labor Relations staff at the Detroit Tank Arsenal (DTA) in that same year, tell a very different story: almost ten times as many strikes in military industrial plants, involving over five times as many workers, who cost their employers at least 790,000 worker-days.

These DTA records provide only a partial scan of the whole body of military industry in the year 1966. DTA Labor Relations staff reporting on work stoppages focused almost exclusively on contracts overseen by the staff's parent agency, MOCOM. We rarely glimpse occurrences of labor unrest affecting contracts overseen by other Army commands, much less other branches of the US military. That said, MOCOM oversaw contracts for a number of big-ticket conventional hardware, like the M60 tank, the M109 self-propelled howitzer, and M110 armored personnel carrier, as well as many smaller but still important items, like trucks, shop vans, and the small horse-power engines used as generators to run AC in tropical Southeast Asia. This scan may be incomplete, but it captures vital organs of military industry, and its gaps merely point beyond itself to an even wider discrepancy between BLS data and the actual reality of shopfloor conflicts brought to boil by the intensification of US military involvement in the Vietnam War. The total number of strikes, strikers, and production days lost likely to be much higher than what is recorded in this document.

The stakes of this discrepancy between BLS data and DTA records are much deeper than simple accurate account; it matters for our understanding of how the United States' long, brutal, and industrially intense war in Southeast Asia shaped political-economic and social relations on its own soil. We know that the United States turned Southeast Asia into the most bombed region on the planet, dropping more bombs at a faster rate, than it used across all theatres of the Second World War. But we do not yet know enough about how all this materiel was made, who made it, and what effects its production had on social reality during a disavowed war with a disavowed home front.

Nota Bene: The purpose of this document is to serve as a heuristic for guiding research questions and in-depth qualitative investigation. It is neither a formal preview of a finished research project nor even a prospectus for a regimented quantitative analysis.does

BLS Data for 1966

Table 6. Work Stoppages by Industry Group, 1966

Industry group	Stoppages beginning in 1966		Man-days idle, 1966 (all stoppages)	
	Number	Workers involved	Number	Percent of estimated total working time
All industries	[1] 4,405	1,960,000	25,400,000	0.19
Manufacturing	[1] 2,295	922,000	13,700,000	0.28
Ordnance and accessories	13	8,680	62,500	.10
Food and kindred products	187	46,600	528,000	.12
Tobacco manufactures	-	-	-	-
Textile mill products	56	25,700	195,000	.08
Apparel and other finished products made from fabrics and similar materials	100	11,800	263,000	.07
Lumber and wood products, except furniture	48	10,300	253,000	.16
Furniture and fixtures	81	16,800	199,000	.17
Paper and allied products	92	26,200	336,000	.20
Printing, publishing, and allied industries	66	19,500	621,000	.24
Chemicals and allied products	151	44,600	727,000	.30
Petroleum refining and related industries	14	1,240	13,500	.03
Rubber and miscellaneous plastics products	83	27,300	433,000	.33
Leather and leather products	32	8,220	99,200	.11
Stone, clay, and glass products	142	31,600	594,000	.36
Primary metal industries	219	98,600	1,540,000	.46
Fabricated metal products, except ordnance, machinery, and transportation equipment	277	76,100	1,290,000	.37
Machinery, except electrical	301	136,000	2,440,000	.51
Electrical machinery, equipment, and supplies	189	168,000	2,410,000	.50
Transportation equipment	162	150,000	1,330,000	.27
Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	37	5,930	148,000	.14
Miscellaneous manufacturing industries	48	8,480	181,000	.16
Nonmanufacturing	[1] 2,110	1,040,000	11,700,000	[2] .14
Agriculture, forestry, and fisheries	20	5,490	50,900	[3]
Mining	194	96,100	794,000	.50
Contract construction	977	455,000	6,140,000	.73
Transportation, communication, electric, gas, and sanitary services	240	312,000	3,390,000	.32
Wholesale and retail trade	365	42,300	508,000	.02
Finance, insurance, and real estate	14	1,730	27,600	[4]
Services	159	21,100	358,000	.01
Government	142	105,000	455,000	.02
State	9	3,090	6,010	[3]
Local	133	102,000	449,000	[3]

[1] Stoppages extending into 2 industry groups or more have been counted in each industry affected; workers involved and man-days idle were allocated to the respective groups.
[2] Excludes government and agriculture.
[3] Not available.
[4] Less than 0.005 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Figure 1: BLS Work Stoppages Analyis, 1966 (p. 9)

Summary Statistics DTA Labor Relations Records, 1966

Table 1: Strike events by type

Type	count
authorized strike	75
potential strike (averted)	7
wildcat strike	21

Table 2: Summary stats for Actual Strikes (Authorized + Wildcat)

Total Strikes	96
Total Strikers	49,052
Worker-Days Lost	789,992

Table 3: Workers on Strike

Minimum Strikers	3
Maximum Strikers	5200
Mean Strikers	831
Median Strikers	320
Standard Deviation	1108

Table 4: Strike Length

Mean Strike Length	26
Median Length	13
Minimum Strike Length	1
Maximum Strike Length	183

Table 5: Work-Days Lost

Minimum Worker-Days Lost	3
Maximum Worker-Days Lost	78000
Mean Worker-Days Lost	14107
Median Worker-Days Lost	8050
Average Percentage of Worker-Time Lost	7

Table 6: Estimated Percentage of Production Time Lost by Contractors in Data

6.795091

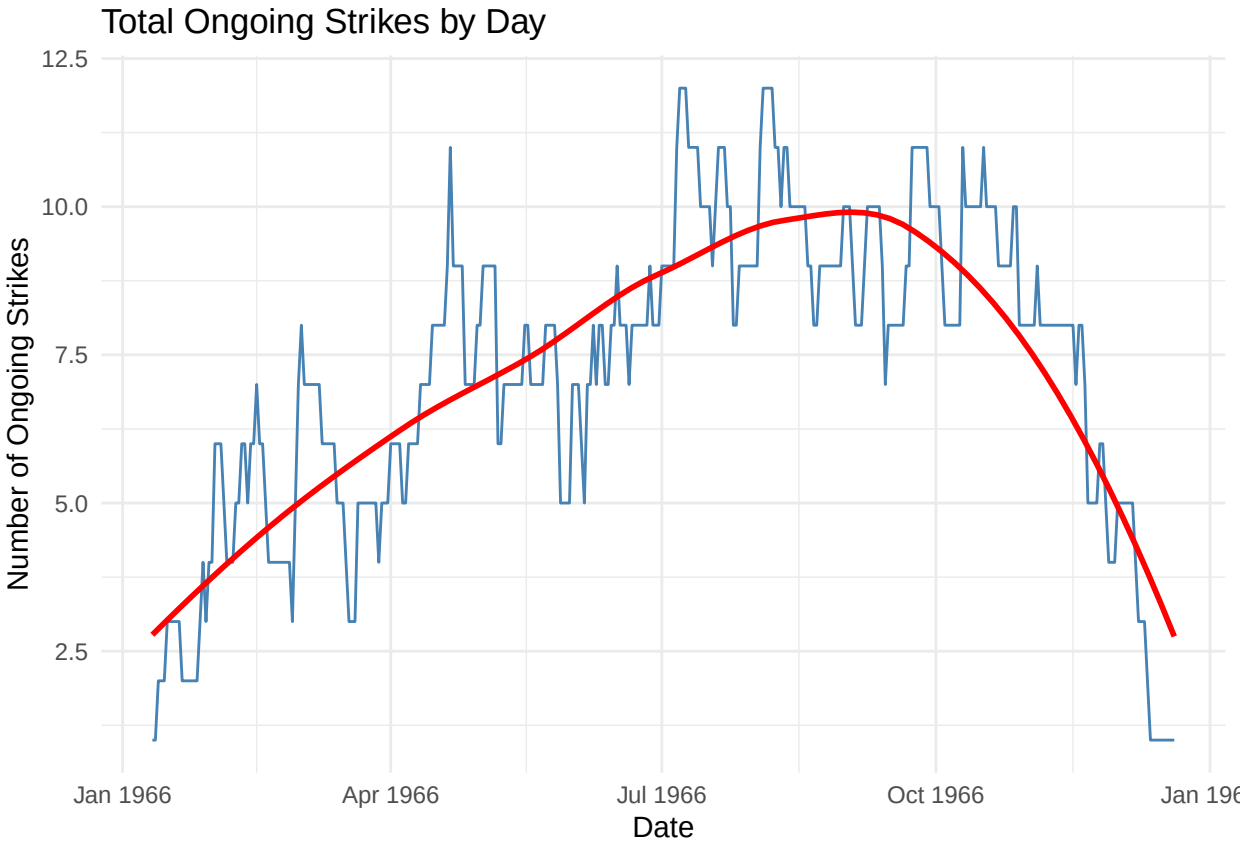
How the above value is calculated: (sum of days lost to strike) / [(sum of strikes) * 365)]*100. This slightly over estimates percentage of productivity days lost because it double counts a small number of factories (N= ~4) that featured multiple strikes and assumes that every factory operated 365 days a year.

Strikes and Strikers Over Time

Table 7: Total Strikes and Total Strikers by Month, 1966

Metric	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Strikes	6	9	10	10	6	12	10	7	8	8	7	3
Total Strikers	7433	8020	6574	5732	3089	1468	1433	623	2360	2452	9808	60

```
## `geom_smooth()` using formula = 'y ~ x'
```

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## `geom_smooth()` using formula = 'y ~ x'
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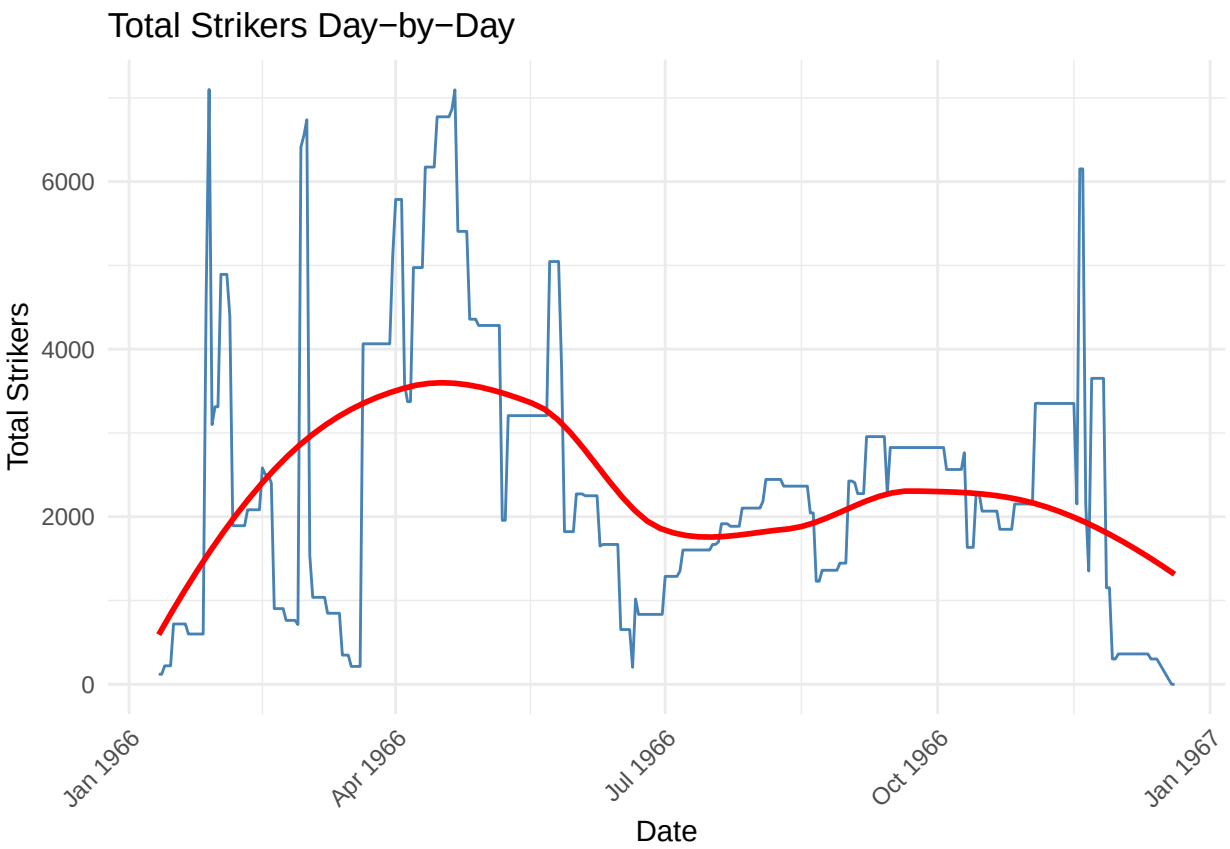
Total Strikers Day−by−Day
Total Strikers
6000
4000
2000
0
Jan 1966
Apr 1966
Jul 1966
Oct 1966
Jan 1967
Date

Geography of Military Industry Strikes

```
## PhantomJS not found. You can install it with webshot::install_phantomjs(). If it is installed, pleas
```

The following two maps are interactive when viewed in HTML. Click on a marker to reveal specific information. These interactive functions are not available in PDF format.

```
## Warning in validateCoords(lng, lat, funcName): Data contains 5 rows with either
## missing or invalid lat/lon values and will be ignored
```

What cities are in the data?

Table 8: Number of 1-Strike Cities

num_cities_once
65

Table 9: Top 10 Cities by Number of Strikes

Location	total_strikes	total_strikers
Detroit, Michigan	5	350
Lima, Ohio	4	2029
Chicago, Illinois	3	2413
Dayton, Ohio	3	600
Milwaukee, Wisconsin	3	450
Akron, Ohio	2	1600
Buffalo, New York	2	150
Elyria, Ohio	2	0
Fort Wayne, Indiana	2	1065
San Jose, California	2	1219

Table 10: Top 10 Cities by Number of Strikers

Location	total_strikes	total_strikers
Columbus, Indiana	1	5200
Stratford, Connecticut	1	4000
Newark, Ohio	1	2500
Chicago, Illinois	3	2413
Northlake, Illinois	1	2105
Lima, Ohio	4	2029
Marion, Indiana	1	1839
Akron, Ohio	2	1600
Columbus, Ohio	1	1350
Milwaukee, WIsconsin	1	1250

Table 11: Summary of Strikes and Employees on Strike by City

Location	total_strikes	total_strikers
Columbus, Indiana	1	5200
Stratford, Connecticut	1	4000
Newark, Ohio	1	2500
Chicago, Illinois	3	2413
Northlake, Illinois	1	2105
Lima, Ohio	4	2029
Marion, Indiana	1	1839
Akron, Ohio	2	1600
Columbus, Ohio	1	1350
Milwaukee, WIsconsin	1	1250
San Jose, California	2	1219
Horseheads, New York	1	1200
Kalamazoo, Michigan	1	1130
Warren, Michigan	1	1100
Fort Wayne, Indiana	2	1065
Wausau, Wisconsin	1	680
Minneapolis, Minnesota	1	675
Dayton, Ohio	3	600
Kent, Ohio	1	550
Maple Heights, Ohio	1	512
Evansville, Indiana	1	500
Lebanon, Pennsylvania	1	500
Princeton, Indiana	1	451
Milwaukee, Wisconsin	3	450
Detroit, Michigan	5	350
Manistee, Michigan	1	320
Mattoon, Illinois	1	302
Rock Falls, Illinois	1	262
Coldwater, Michigan	1	217
Springfield, Ohio	1	217
Delphos, Ohio	1	210
Galion, Ohio	1	200
Jeannette, Pennsylvania	1	190
Renton, Washington	1	184
Buffalo, New York	2	150
Cincinnati, Ohio	1	135
Traverse City, Michigan	1	135
Hayward, California	1	134
Lansing, Michigan	1	120
Claremont, California	1	100
Toledo, Ohio	1	80
Wisconsin Dells, Wisconsin	1	80
Anniston, Alabama	1	65
Oak Park, Michigan	1	50
Long Island, New York	1	30
Livonia, Michigan	1	22
Alameda, California	1	3
Elyria, Ohio	2	0
Tulsa, Oklahoma	2	0
Atlanta, Georgia	1	0

Location	total_strikes	total_strikers
Bucyrus, Ohio	1	0
California	1	0
Carrollton, Texas	1	0
Charleston, West Virginia	1	0
Cleveland, Ohio	1	0
Edison, New Jersey	1	0
Elba, Alabama	1	0
Elmira, New York	1	0
Erie, Pennsylvania	1	0
Fostoria, Ohio	1	0
Fullerton, California	1	0
Highland, Illinois	1	0
LaPorte, Indiana	1	0
Louisville, Kentucky	1	0
Lynn, Massachusetts & Everett, Massachusetts	1	0
Massillon, Ohio	1	0
New Haven, Connecticut	1	0
Oshkosh, Wisconsin	1	0
Pontiac, Michigan	1	0
Port Huron, Michigan	1	0
Roseville, Michigan	1	0
South Bend, Indiana	1	0
St Marys, Ohio	1	0
St Paul, Minnesota	1	0
Troy, New York	1	0
Watertown, New YOrk	1	0

To Do:

- continue cleaning up data manually
- clean up cities
- PDF friendly maps
- clean up state column