
GLOBAL ELECTRONICS

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HIGH-TECH EMPLOYMENT PATTERNS IN SILICON VALLEY, 1990

Employment in electronics manufacturing in Silicon Valley (Santa Clara County, California) follows the same general patterns found in other high-tech centers. **The workforce is sharply stratified**, with white men in positions of power and high income, and women and non-whites holding down the low-level positions, such as operatives—that is, semi-skilled production workers.

White men make up 62.8% of the officials and managers and 50.9% of the professionals, but they only account for 9.7% of the operatives. Women of all races make up 79.1% of the clerical workers and 60.7% of the operatives, yet they comprise only 38.1% of the high-tech manufacturing workforce. Non-white women account for 45.0% of the operatives, although they only represent 16.3% of the workforce at the same companies. Non-whites (men and women) account for 74.6% of the operatives.

Asians (including immigrants and Asian-Americans) are overrepresented in most Silicon Valley job categories. Though they make up 16.8% of the area's population, they comprise 23.6% of the high-tech manufacturing workforce. Their share of technicians (30.8%), craft workers (30.3%), semi-skilled operatives (47.0%), and unskilled laborers (41.2%) is even greater than their rate of participation in the high-tech workforce, and they also make up a substantial fraction of the professional workforce (21.5%). EEOC data does not break down the different Asian/Pacific national origins, but the higher level Asians appear to be preponderantly of Japanese, Chinese, and South Asian descent, while the lower level Asians tend to be Filipino, Indochinese, and Korean.

Many factors contribute to the segregation of the high-tech workforce by race and gender. Education plays an important role, since most of the high-level employees have one or more college degrees. However, even among wage workers companies often practice race and gender discrimination. While employers do not openly admit such discrimination in the U.S., where it is illegal, they overtly discriminate when hiring at their overseas plants. Furthermore, discrimination and other cultural factors appear to reduce the management opportunities for qualified Asian professionals.

The above analysis is based upon data provided by the U.S. Equal Employment Opportunity Commission. Major employers are required to submit data each year, but the EEOC does not generally verify the accuracy of the data. Thus, the information gives a good general picture of the industries covered, but the precision is limited.

PSC has prepared this information, as well as similar reports on the high-tech workforce in Albuquerque, Austin, Boston, Colorado Springs, Dallas, Phoenix, and Portland metropolitan areas, for the Electronics Industry Good Neighbor Campaign, a collaboration of the Southwest Network for Environmental and Economic Justice and the Campaign for Responsible Technology. The industrial sectors covered in this report are listed below. For Silicon Valley, PSC also has analyzed data for the entire high-tech workforce, including services as well as manufacturing.

SIC Code	Industry	# of Reporting Units
357	Office and Computing Machines	46
366	Communications Equipment	35
367	Electronic Components & Accessories	150
381	Engineering and Scientific Instruments	14
382	Measuring and Controlling Devices	21

CLINTON WOOS HIGH-TECH

A political earthquake hit California in mid-September when about twenty top Silicon Valley executives bolted the Republican Party to endorse Democrat Bill Clinton for the Presidency. Hewlett-Packard CEO John Young, John Sculley of Apple, National Semiconductor's Gil Amelio, and Silicon Graphics presidents Ed McCracken led the list. This endorsement appeared to nail the coffin on President Bush's already faltering California re-election campaign. It also prompted a shocking rebuttal from H-P founder David Packard, who labeled the Democratic Party the "party of socialism since President Roosevelt's term..." and called the Gulf War the "greatest military victory in the history of the world."

Clinton won over many of the leaders of
(continued on page 4)

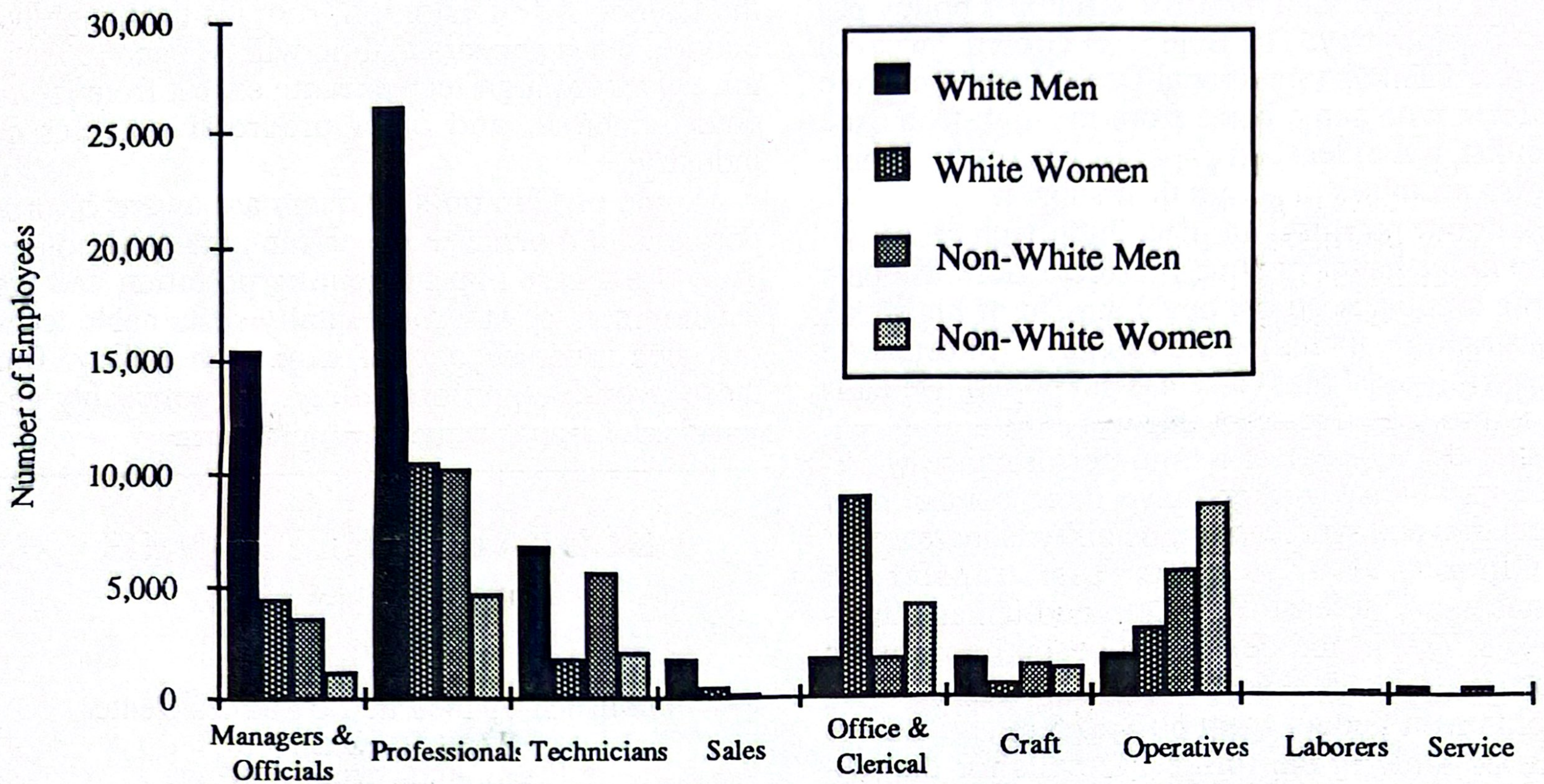
HIGH-TECH MANUFACTURING EMPLOYMENT IN SILICON VALLEY, CALIFORNIA—1990

	Population	Number of Employees										% Pop.	Percentage of Job Category									
		Total	Mgrs	Profs	Techs	Sales	Clerks	Craft	Oper	Lab	Serv		Total	Mgrs	Profs	Techs	Sales	Clerks	Craft	Oper	Lab	Serv
ALL	1,497,577	136,909	24,737	51,468	16,078	2,580	16,598	5,278	18,951	374	845	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	759,503	84,699	19,158	36,373	12,191	1,911	3,474	3,264	7,452	188	688	50.7	61.9	77.4	70.7	75.8	74.1	20.9	61.8	39.3	50.3	81.4
Women	738,074	52,210	5,579	15,095	3,887	669	13,124	2,014	11,499	186	157	49.3	38.1	22.6	29.3	24.2	25.9	79.1	38.2	60.7	49.7	18.6
Whites	869,874	85,739	19,902	36,747	8,460	2,297	10,688	2,377	4,817	69	382	58.1	62.6	80.5	71.4	52.6	89.0	64.4	45.0	25.4	18.4	45.2
Men		55,820	15,525	26,198	6,638	1,722	1,773	1,754	1,841	50	319		40.8	62.8	50.9	41.3	66.7	10.7	33.2	9.7	13.4	37.8
Women		29,919	4,377	10,549	1,822	575	8,915	623	2,976	19	63		21.9	17.7	20.5	11.3	22.3	53.7	11.8	15.7	5.1	7.5
Non-Whites		51,170	4,835	14,721	7,618	283	5,910	2,901	14,134	305	463		37.4	19.5	28.6	47.4	11.0	35.6	55.0	74.6	81.6	54.8
Men		28,879	3,633	10,175	5,553	189	1,701	1,510	5,611	138	369		21.1	14.7	19.8	34.5	7.3	10.2	28.6	29.6	36.9	43.7
Women		22,291	1,202	4,546	2,065	94	4,209	1,391	8,523	167	94		16.3	4.9	8.8	12.8	3.6	25.4	26.4	45.0	44.7	11.1
African-Amer.	52,583	5,495	600	1,429	767	49	1,221	296	1,051	16	66	3.5	4.0	2.4	2.8	4.8	1.9	7.4	5.6	5.5	4.3	7.8
Men		2,938	407	910	583	35	360	179	404	9	51		2.1	1.6	1.8	3.6	1.4	2.2	3.4	2.1	2.4	6.0
Women		2,557	193	519	184	14	861	117	647	7	15		1.9	0.8	1.0	1.1	0.5	5.2	2.2	3.4	1.9	1.8
Hispanic	314,564	12,753	1,062	2,071	1,811	77	2,254	973	4,096	134	275	21.0	9.3	4.3	4.0	11.3	3.0	13.6	18.4	21.6	35.8	32.5
Men		6,201	710	1,306	1,266	51	581	584	1,422	61	220		4.5	2.9	2.5	7.9	2.0	3.5	11.1	7.5	16.3	26.0
Women		6,552	352	765	545	26	1,673	389	2,674	73	55		4.8	1.4	1.5	3.4	1.0	10.1	7.4	14.1	19.5	6.5
Asians	251,496	32,349	3,084	11,066	4,947	149	2,329	1,599	8,901	154	120	16.8	23.6	12.5	21.5	30.8	5.8	14.0	30.3	47.0	41.2	14.2
Men		19,425	2,458	7,848	3,638	98	740	731	3,749	67	96		14.2	9.9	15.2	22.6	3.8	4.5	13.8	19.8	17.9	11.4
Women		12,924	626	3,218	1,309	51	1,589	868	5,152	87	24		9.4	2.5	6.3	8.1	2.0	9.6	16.4	27.2	23.3	2.8
Native Amer.	6,694	573	89	155	93	8	106	33	86	1	2	0.4	0.4	0.4	0.3	0.6	0.3	0.6	0.6	0.5	0.3	0.2
Men		315	58	111	66	5	20	16	36	1	2		0.2	0.2	0.2	0.4	0.2	0.1	0.3	0.2	0.3	0.2
Women		258	31	44	27	3	86	17	50	0	0		0.2	0.1	0.1	0.2	0.1	0.5	0.3	0.3	0.0	0.0
	2,366											0.2										

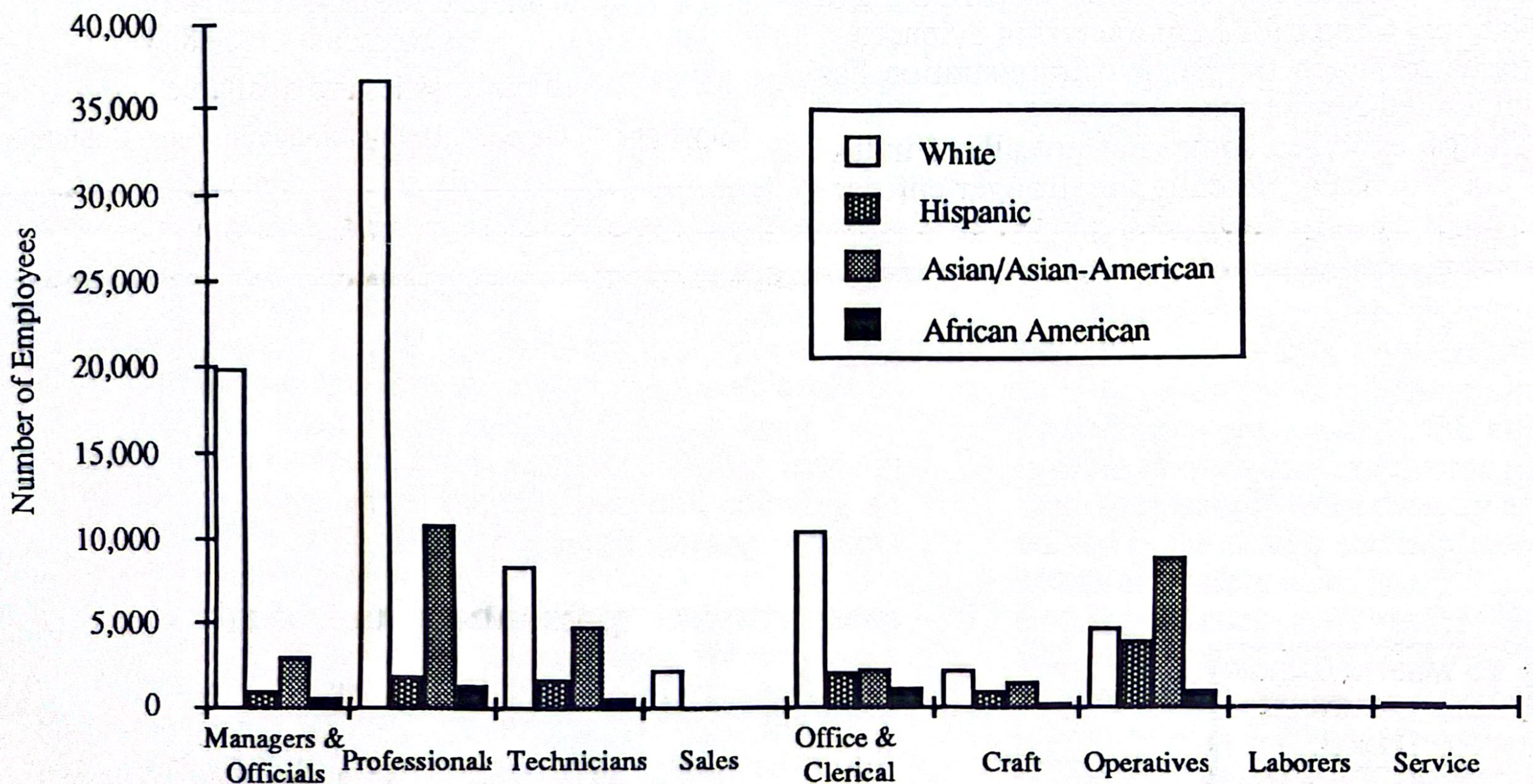
This table was prepared by Lenny Siegel of the Pacific Studies Center from data provided by the U.S. Equal Employment Opportunity Commission. Population figures are from the 1990 U.S. Census. The figures include high-tech manufacturing, but not services.

Terms: Silicon Valley = Santa Clara County; Mgr.= Officials & Managers; Prof.= Professionals; Techs = Technicians; Sales = Sales Workers; Clerks = Office & Clerical Workers; Craft = Blue-Collar Skilled Production; Operatives= Semi-Skilled Blue-Collar; Labor = Laborers/Unskilled Blue-Collar; Service = Service Workers

HIGH-TECH MANUFACTURING EMPLOYMENT PATTERNS: SILICON VALLEY, CALIFORNIA—1990



HIGH-TECH MANUFACTURING RACIAL EMPLOYMENT PATTERNS: SILICON VALLEY, CALIFORNIA—1990



commercially oriented high-tech industry largely because Bush has ignored them, and because his running mate, Tennessee Senator Albert Gore, has worked closely with industry. Clinton's policy paper, "Technology: The Engine of Growth" weaves together Clinton's traditional Democratic economic platform with some items from the high-tech executive wish list, but at least on paper he has made no outlandish promises to garner their support.

Clinton promises to place high-tech responsibility in the hands of Vice-President Gore. He puts strong emphasis on the development of high-tech infrastructure, including the so-called "information superhighways" that Gore has supported. He calls for improved education and worker training, endorsing the concept of a high-performance workplace in which "workers have more control over production and worker responsibility is increased."

Clinton also supports the transfer of "unnecessary defense R & D to civilian and dual-use R & D." In the next three years, he wants to reduce the military share of the federal research and development budget from 60% to 50%, with more shifts possible in the future. He calls for the creation of 170 manufacturing extension centers—also known as incubator centers—including at least 25 focused on areas hit hard by military spending cutbacks.

Clinton explicitly backs cooperative R & D programs such as Sematech, the Microelectronics Computer Technology Corporation (MCC), and the National Center for Manufacturing Sciences—programs in which the Bush Administration has shown limited confidence.

Clinton endorses some, but not all, of industry's tax proposals. He calls for stronger enforce-

ment of trade agreements. And he promises to streamline export controls.

It would be naive to extrapolate the behavior of the Clinton Administration from his campaign literature, but it appears that he will be open to ideas not only from high-tech executives, but from labor, environmental, and other progressive critics of industry.

Some of Clinton's advisers are aware of proposals to democratize American industrial policy. They are aware that preventing pollution and the development of environmentally sustainable technologies must be part of high-tech policy. But those two ideas, unfortunately, are noticeably absent from Clinton's high-tech platform.

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