

# Planning, Computers and Labor Time

Paul Cockshott and Allin Cottrell

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- Democratic control of the economy made possible by planning.
- Planning made possible by computers plus accounting in terms of labor time.



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(Though not about everything! Cf. the continuing technological progressiveness of capitalist economies.)

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How do we answer the Mises/Hayek critique?

How do our proposals differ from what was tried in the USSR?

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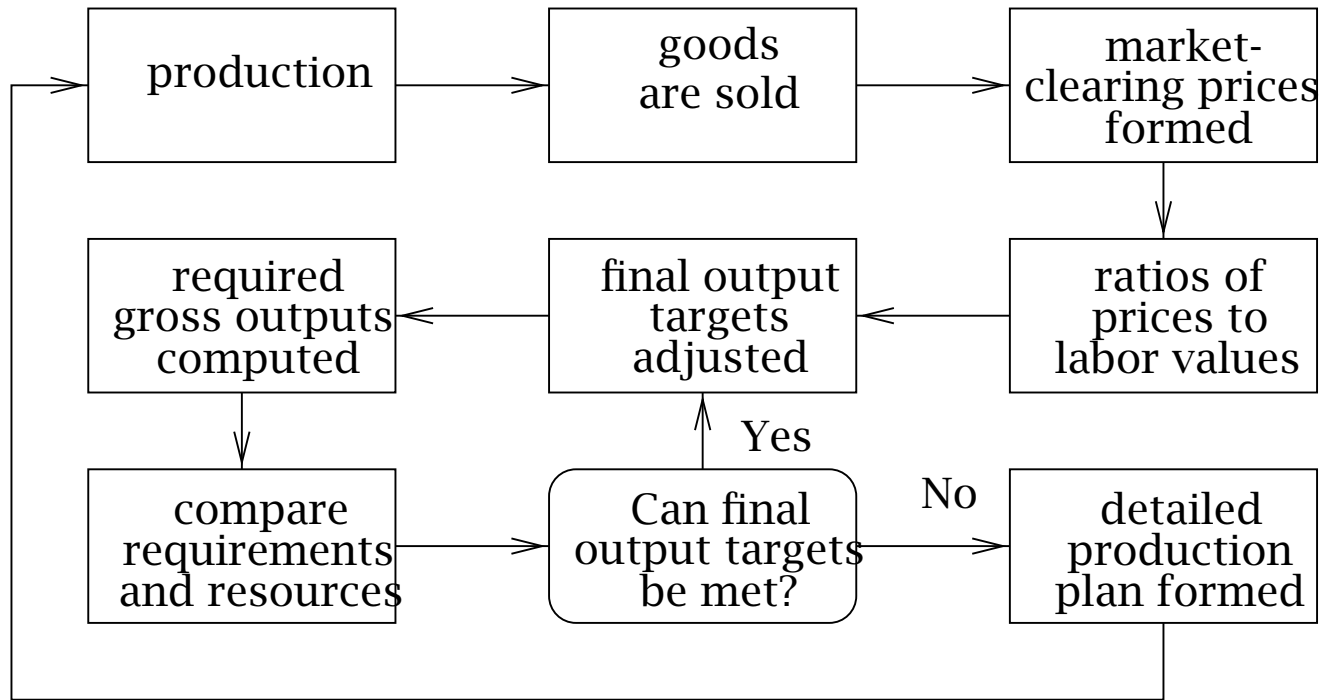
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Labor-time costing of goods.

Social labor-time budget — democratic decision on uses of society’s available labor-power.

# Planning system proposal — outline



# Too many equations

Well, how many equations?

Assume a uniprocessor capable of  $10^8$  multiplications a second, and a multiprocessor capable of  $10^{10}$  multiplications per second (these figures are now very conservative).

Number of products	Multiplications	Time taken in seconds:	
		<i>Uniprocessor</i>	<i>Multiprocessor</i>
1,000	1,000,000,000	10	0.1
100,000	$10^{15}$	$10^7$	100,000
10,000,000	$10^{21}$	$10^{13}$	$10^{11}$

Gaussian solution to labor values

Note:  $10^{11}$  seconds is about 3000 years.

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Number of products	Multiplications	Words of memory	Time taken in seconds:	
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1,000	158,489	31,698	$1.6 \times 10^{-3}$	$1.6 \times 10^{-5}$
100,000	100,000,000	20,000,000	1	0.01
10,000,000	$6.3 \times 10^{10}$	$1.2 \times 10^{10}$	630	6.3

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Looks much better!

# Tacit knowledge

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For information to be made available in a form usable for planning, it is not necessary that the information take the form of explicit knowledge possessed by some human individual.

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People like to share their skills, knowledge, even without pay (see technical usenet newsgroups).

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Need for planning in concrete detail — addressed above.

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- their decisions on how to spend the labor-tokens they earn.





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