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## From contribution to needs: a normative-economic essay on the transition towardsfull communism

Veen, R.J. van der

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door J. Lipschits, L. P. Middel en W. H. van Verschuur. Zie een aantal publikaties in de nuttige *Jaarboeken van het Documentatiecentrum Nederlandse Politieke Partijen*, Groningen, 1978, 1979, 1980 en 1982.

26. Op dit terrein beweegt zich sinds enige tijd vooral M. P. C. M. van Schendelen.

27. Daarbij is het gemakkelijker te denken in termen van bepaalde personen dan van specifieke geschriften (die veelal sterk verspreid worden gepubliceerd): J. W. de Beus, H. Daudt, J. van den Doel, B. A. G. M. Tromp, H. R. van Gunsteren, K. Koch, P. B. Lehning, R. J. van Veen en J. K. De Vree.

28. Te noemen vallen echter P. R. Baehr, A. van Staden en J. K. De Vree.

29. Ook hier zijn natuurlijk personen te noemen die op dit terrein actief zijn. Ik denk daarbij aan L. C. Biegel, M. R. Doornbos, B. J. S. Hoetjes en A. E. van Niekerk, die elk gemakkelijk met een bepaalde 'area' kunnen worden vereenzelvigd, maar ook duidelijk politicoloog (of tenminste duidelijk: sociale wetenschapper) blijven. Te signaleren valt voorts althans één voorbeeld van een vergelijkend-kwantitatieve benadering, de Nijmeegse dissertatie van A. F. Bertrand, *Politieke democratie en welzijn: Een operationalisering door middel van politieke en sociale indicatoren op het niveau van 115 staten*, Alphen, 1981. In deze richting ontwikkelt zich nu ook J. E. Keman.

30. Doch zie de diverse onderzoeksactiviteiten van M. Fennema, en de hierboven bij de opsomming van positieve tekenen genoemde onderzoeksactiviteiten op het terrein van onderzoek naar de geschiedenis van linkse partijen en bewegingen.

31. B. A. Sijes, *De februari-staking 25-26 februari 1941*, Den Haag, 1954; Idem, *De arbeidsinzet: De gedwongen arbeid van Nederlanders in Duitsland 1940-1945*, Den Haag, 1966.

32. Zoals te verwachten was werd ik op dit punt in Helvoirt op ruime schaal gecritiseerd. Critici die wijzen op de in hoge mate politicologische en politieke relevantie van bijv. beleidsonderzoek hebben natuurlijk gelijk. De vraag blijft echter, of niet de druk van praktijkgerichte opleidingen en van door de overheid gefinancierd derde-geldstroomonderzoek er toe zal leiden, dat de minder sterken in het wetenschappelijk bedrijf op politiek 'safe' zullen gaan spelen.

33. Zie H. Daudt, 'De Ontwikkeling van het Politicologisch Onderzoek', in: A. D. Wolff-Albers en H. F. M. Crombag (red.), *Visies op onderzoek in enkele sociale wetenschappen*, Den Haag, 1982, p. 67-84.

34. In enigszins gewijzigde versie in druk verschenen in Dennis Kavanagh and Gillian Peele (eds.), *Comparative government and politics: Essays in honour of S. E. Finer*, London, 1984, p. 159-168.

## From contribution to needs: A normative-economic essay on the transition towards full communism\*

Robert J. van der Veen

### Part I: *The idea of the transition*

I.1. *Introduction.* This essay is addressed to a problem in Marx's *Critique of the Gotha Programme* regarding the transition from the lower stages of communism to the higher stages: how can society pass from an initial régime based upon the principle of labour contribution to a final stage of abundant wealth, where all freely contribute according to ability and receive according to needs? This problem is localized at the intersection of normative political theory and economics. The normative question is to explain, or justify, Marx's assertion that in communism, i.e. in a 'cooperative society based on common ownership of the means of production', needs should ultimately supersede labour contribution as the appropriate standard of distribution. And the problem involves economics because of Marx's claim that the gradual predominance of needs over contribution – which marks a shift from material to immaterial incentives – is compatible with rapid and continuous development of the productive forces, so that what should be, will actually be feasible.

Though Marx strongly suggested that there are valid answers to the question how these claims can be plausibly defended, he did not attempt to provide an answer himself. Our problem may be considered as one of Marx's main challenges to the socialist movement, as well as to anyone intellectually fascinated by his ideal of freedom. In consequence, I feel free to interpret the *Gotha* text (and other writings of Marx) in a constructive rather than exegetical fashion, with the purpose of providing a solution to the problem.

In this first part, the idea of a transition towards full communism is introduced in four sections. First, the issue of distributive justice under communism is briefly dealt with (I.2.). I then show a strong connection between Marx's vision of the expanding 'realm of freedom', in vol. III of *Capital*, and the shift from contributions to needs. This leads to a definition of the transition as a process of economic development along four dimen-

sions, towards a notional end-point which corresponds to Marx's description of fully developed communism in *Gotha* (I. 3.). The actual occurrence of such a process depends on the distribution of the social product under communism, a problem that Marx addressed in his polemic against the German Social Democrats' invocation of the 'right to the undiminished proceeds of labour' (I. 4.). Marx's comments here will not be interpreted as a statement of distributive justice, as is often done. His well-known list of necessary deductions from the social product may be understood as an account of the economic task confronting communist planners who aim at effecting the transition, by means of investment and distribution policies (I. 5.). The economic feasibility conditions of the transition – to be captured under a concept of *weak abundance* – will be discussed in part II of this essay, within a simple model of economic policy. Part II is introduced separately. It will be concluded by a general overview, in which I briefly assess the historical plausibility of the transition, its relevance for the political economy of welfare states and its ethical desirability.

I. 2. *Just production relations: a prerequisite of freedom.* The conception of justice expressed in the *Gotha* comments does not reduce to a statement of two principles of income distribution – contribution and needs – to be applied in temporal succession. As I have argued elsewhere (Van der Veen, 1984), distributive justice in the communist society resides in that society's *production relations*, i.e. its relations of planned cooperation in the use and management of commonly owned assets. In particular, communist production relations constitute the following three background conditions of distributive justice:

- (i) each individual has equal access to means of production (i.e. to the production process) and equal access to the means of developing his labour power (i.e. to processes of training and education).
- (ii) each individual has the equal and unconditional right to a minimum standard of free consumption.
- (iii) each individual has equal access to the decision processes of managing commonly owned assets, on the level of the productive enterprise and on the local and national community level.

One may interpret these three background conditions as the embodiment of economic equality which communism posits as the basis for the development of free individuality in society<sup>1</sup>. Alternatively, they can be regarded as the structural prerequisites of a non-exploitative mode of production. If the institutions of the communist society effectively realize these background conditions, distributive justice obtains in two important respects. First, the distribution of resources, or, as Marx puts it, of the

'conditions of production' is just by virtue of the fact that each person is equally entitled to the use, usufruct and management of the 'social capital'. And secondly, the distribution of income, work effort, leisure and working conditions among persons which arises from their joint cooperation within just institutions is said to be *procedurally just*, whatever its particular shape or pattern may be<sup>2</sup>. To be sure, the background conditions of justice certainly recognize the validity of the common sense precepts<sup>3</sup> of income distribution according to *labour contributions* and according to *needs*. And both are given a considerable role, as from the initial stage of communism. Their role, however, is not to secure a uniquely fair system of income distribution, for once just production relations are established, all distributive outcomes which can emerge under them must be accepted as equally fair. The role of the two precepts is rather to regulate incentives so as to obtain an optimal allocation of labour, leisure and consumption.

I. 3. *The realm of freedom and the shift from contribution to needs.* The idea of the transition towards fully developed communism is captured by two *loci classici*: first, the passage in the *Critique of the Gotha Programme* where Marx envisages the (notional) end-point of the transition:

'In a higher phase of communist society, after the enslaving subordination of the individual to the division of labour, and therewith also the antithesis between mental and physical labour, has vanished; after labour has become not only a means of life but life's prime want; after the productive forces have also increased with the all-round development of the individual, and all the springs of co-operative wealth flow more abundantly – only then can the narrow horizon of bourgeois right be crossed in its entirety and society inscribe on its banners: from each according to his ability, to each according to his needs!' (Marx, 1875, 569)

and secondly, the passage in vol. III of *Capital*, in which the transition process is implicitly described as the expansion, over time, of the 'realm of freedom':

'The actual wealth of society, and the possibility of constantly expanding its reproduction process (...) do not depend upon the duration of surplus-labour, but upon its productivity and the more or less copious conditions of production under which it is performed. In fact, the realm of freedom actually begins only where labour which is determined by necessity and mundane considerations ceases; thus in the very nature of things it lies beyond the sphere of actual material production. Just as the savage must wrestle with Nature to satisfy his wants, to maintain and reproduce life, so must civilised man, and he must do so in all social formations and under all possible modes of production. With his

development this realm of physical necessity expands as a result of his wants; but at the same time, the forces of production which satisfy these wants also increase. Freedom in this field can only consist in socialised man, the associated producers, rationally regulating their interchange with Nature, bringing it under their common control, instead of being ruled by it as by the blind forces of Nature; and achieving this with the least expenditure of energy and under conditions most favourable to, and worthy of, their human nature. But it nonetheless still remains a realm of necessity. Beyond it begins that development of human energy which is an end in itself, the true realm of freedom, which, however, can blossom forth only with this realm of necessity as its basis. The shortening of the working-day is its basic prerequisite'.

(Marx, 1894, 820)

From this passage it can be inferred that the realm of necessity is the domain of paid activities contributing to value added (productive labour); the realm of freedom consists of activities not motivated by the prospect of economic gain, but undertaken for their own sake. It is the domain in which part of the annual product is consumed by individuals, who are in the process of an 'all-round development' and are becoming increasingly 'rich in needs'<sup>4</sup>. The expansion of the realm of freedom and the corresponding contraction of the realm of necessity is made possible by a development of the forces of production – measured in terms of productivity growth – which outstrips the development of individuals' material needs. This expansion proceeds both quantitatively and qualitatively. With respect to quantity, the decrease of average labour-time is the basic prerequisite. We shall regard it as the *first dimension* of the transition towards fully developed communism. Qualitatively, the growing needs of free agents in the realm of freedom require, for their articulation and satisfaction, an increasing amount of consumption goods, both public and private. This is the *second dimension* of the transition.

Individual freedom, however, is not exclusively localized in the realm of freedom. For, as Marx explains, the freedom of productive workers in the realm of necessity consists in the rational interchange between the associated producers and Nature, '... with the least expenditure of energy and under conditions most favorable to, and worthy of, their human nature'. This qualitative increase of freedom in the contracting realm of necessity is based upon a continuous improvement of the conditions, content and organisation of work. We may think of it as a widening of opportunities to perform more varied tasks, participate in the design and planning stages of production and acquire socially valued skills in the production process. Improvement of work quality is the *third dimension* of the transition.

If the communist economy is in continuous progress along these three

dimensions, then ultimately the state of affairs described in the *Gotha* passage will be realized. At this *notional end-point*, the realm of necessity will have contracted, and the activities within it will have improved, up to the point where the distinction between paid work and free activity has been obliterated in practice. This is the sense in which 'labour has become not only a means to life, but life's prime want'. And all this occurs at a stage of economic development in which productivity gains have virtually eliminated the chances of increasing material needs overtaking society's capacity to satisfy them.

Note that this interpretation of 'abundance' – as we shall also see in part II – by no means implies the elimination of scarcity. Nor did Marx imply that communism would finally pass 'beyond' scarcity. For as he explained in *Grundrisse*, even 'on the basis of communal production, the determination of time remains, of course, essential. (...) Economy of time, to this all economy ultimately reduces itself'. Marx further explains:

'Thus, economy of time, along with the planned distribution of labour time among the various branches of production, remains the first economic law on the basis of communal production. It becomes law, there, to an even higher degree. However, this is essentially different from a measurement of exchange values (labour or products) by labour time. The labour of individuals in the same *branch of work*, and the various kinds of work, are different from one another not only quantitatively but also qualitatively. What does a solely *quantitative* difference between things presuppose? The identity of their *qualities*. Hence, the quantitative measure of labours presupposes the equivalence, the identity of their quality'.

(Marx, 1857-8, 172-173)

Here, the existence of scarcity is admitted as a fact of life, scarcity being understood in its abstract sense, as the necessity of choice between alternative uses of time and material resources. Now while in the limit state of fully developed communism, material resources have become less and less scarce relative to material needs, so that large parts of the surplus product might be arbitrarily 'squandered', time will remain scarce as ever. Marx's point, in the above-quoted passage, about the qualitative uniqueness of individual 'labour' may again be interpreted as the limit state in which the realm of necessity, with its régime of abstract labour-coordination, has faded out of existence<sup>5</sup>. In fully developed communism, then, each individual has become the master of his own time. The 'economy of time' is fully individualized, reflecting the all-round development of persons 'rich in needs'.

It is at this limit state of the transition, finally, that material incentives to

produce the social product have become superfluous. Society may now distribute all consumption funds according to individual needs, while relying completely upon the voluntary supply of efforts according to individuals' respective tastes and abilities. Thus, during the transition towards fully developed communism, the shift from contributions to needs is an expression, within the domain of income distribution, of increasing freedom along the transition's first three dimensions. We shall therefore regard that shift, as measured by the proportion of free grants to labour, as the *fourth dimension* of the transition.

1.4. *Distribution of the social product in communism.* In the context of the previous arguments, Marx's polemical dissection of the economic part of the Gotha programme may be given a special interpretation, leading to an indication of the type of model needed to give the intuitive ideas of the transition a reasonably precise formulation and for showing the economic conditions under which the transition process is feasible. Our use of the *Gotha* text here differs from the customary view<sup>6</sup>, in which initially there is a complete predominance of reward according to labour contributions ('socialist justice'), and ultimately the unconditional satisfaction of needs ('communist justice'), nothing much being said about the process in between. This rigid dichotomy strongly rests upon the passages where Marx observes that the 'equal right' of the labour contribution principle, like any right, has its defects:

'Right by its very nature can consist only in the application of an equal standard; but unequal individuals (and they would not be different individuals if they were not unequal) are measurable only by an equal standard in so far as they are brought under an equal point of view, are taken from one definite side only, for instance, in the present case, are regarded only as workers and nothing more is seen in them, everything else being ignored. (...) But these defects are inevitable in the first phase of communist society as it is when it has just emerged after prolonged birth pangs from capitalist society. Right can never be higher than the economic structure of society and its cultural development conditioned thereby'.

(Marx, 1875, 569)

But this customary interpretation is misleading, for however inevitable the defects of the labour contribution principle may be, Marx does propose an array of remedies right from the beginning. That it is possible to do so, by recognizing other types of rightful claim to the social product, follows immediately from the very formulation of the labour contribution principle: 'The right of the producers is proportional to the labour they supply;

the equality consists in the fact that measurement is made with an equal standard, labour' (Marx, 1875, 568). Now since Marx defines 'labour' in terms of productive capacity (rather than in terms of subjective effort), it follows that if the proportionality factor of *labour reimbursed to labour performed* is less than unity, there always remains a 'deduction' of average product. And the producer is not entitled to this portion of average product by virtue of his labour: it can therefore be used in ways that serve the ends and needs of the whole community. This is of course precisely the point of Marx's attack on the slogan in the Gotha Programme, that 'the proceeds of labour belong undiminished, with equal right, to all members of society' (Marx, 1875, 566). 'Equal right' refers here, as before, to the principle of contribution. Consequently, the slogan presupposes a proportionality factor of unity. Against this, Marx asks rhetorically: 'To all members of society? To those who do not work as well? What remains then of the 'undiminished proceeds of labour'? Only to those members of society who work? What remains then of the 'equal right' of all members of society?' (Marx, 1875, 566-7).

Marx now decomposes the 'undiminished proceeds of labour' into seven separate parts (itemized in the text below for easy reference):

'Let us take first of all the words "proceeds of labour" in the sense of the product of labour; then the co-operative proceeds of labour are the total social product. From this must now be deducted:

First, cover for replacement of the means of production used up. (Item 1)

Secondly, additional portion for expansion of production. (Item 2)

Thirdly, reserve of insurance funds to provide against accidents, dislocations caused by natural calamities, etc. (Item 3)

These deductions from the "undiminished proceeds of labour" are an economic necessity and their magnitude is to be determined according to available means and forces, and partly by computation of probabilities, but they are in no way calculable by equity.

There remains the other part of the total product, intended to serve as means of consumption.

Before this is divided among the individuals, there has to be deducted again from it:

First, the general costs of administration not belonging to production. (Item 4)

This part will, from the outset, be very considerably restricted in comparison with present-day society and it diminishes in proportion as the new society develops.

Secondly, that which is intended for the common satisfaction of needs, such as schools, health services, etc. (Item 5)

From the outset this part grows considerably in comparison with present-day

society and it grows in proportion as the new society develops.

Thirdly, funds for those unable to work, etc., in short, for what is included under so-called official poor relief today. (Item 6)

Only now do we come to the "distribution" which the programme, under Lassallean influence, alone has in view in its narrow fashion, namely, to that part of the means of consumption which is divided among the individual producers of the co-operative society. (Item 7)

The 'undiminished proceeds of labour' have already unnoticeably become converted into the 'diminished' proceeds, although what the producer is deprived of in his capacity as a private individual benefits him directly or indirectly in his capacity as a member of society'.

(Marx, 1875, 567)

Here we have the beginnings of a normative theory of distribution. In what follows, I shall simplify the Marxian scheme of deductions in three respects. First, I concentrate on the net social product, disregarding replacement investment (item 1). Secondly, I do not consider the 'reserve of insurance funds' and the 'general costs of administration not belonging to production' (items 3 and 4). This leaves four components of the net social product: net investment (item 2); collective consumption (item 5); personal consumption out of the 'funds for those unable to work' (item 6) and finally, personal consumption out of earnings under the precept of contribution (item 7) Thirdly, the distinction between items 5 and 6 is not relevant for our purposes, given the presence of the background right to the minimum standard of free consumption, irrespective of one's ability to work. I shall therefore consider these two items as one, i.e. as 'free consumption', to be distributed partly in the form of cash grants and partly by means of in-kind transfers. We are then left with three components of net social product, of which the necessary interrelations have to be analyzed in the light of the transition criteria.

I. 5. *The rate of growth and the needs-contribution ratio.* The distribution of consumption according to needs and contributions is measured by the ratio of free to labour income, or the needs-contribution ratio. It can not be considered in isolation from society's decisions on the rate of investment. Indeed, the very sequence of Marx's deduction scheme suggests that the portion of the proceeds of labour needed for the expansion of production ought to receive priority, because Marx considers the first three items on his list as *economic necessities*, which are 'in no way calculable by equity'. As far as net investment is concerned, it is true that objective economic factors, such as technological innovation and availability of stocks and labour, determine the feasible maximum rate of growth. But these factors only

constrain the *socially desired* rate of growth, they do not determine it. Of course collective decisions on intertemporal allocation of resources may well involve equity considerations (of international and intergenerational justice, for example). But if these are ruled out, as Marx insists, there is ample room for bringing considerations of freedom into play. In that case, the ideal of the transition towards full communism may guide the choice of the growth rate. And if this ideal is indeed followed, then the growth rate will have to be fixed within certain limits, to be compatible with the requirements of decreasing average labour-time and increasing per capita consumption.

In view of this I shall interpret Marx's statement on the economic necessity of investment funds as a *social* necessity, which reflects the constraints of objective economic factors and the social desire for progress along the four dimensions of the transition. Now if the growth rate is thus chosen (and there may be a fairly wide range of choices, as we shall see in part II), then the distribution of consumable output among producers incomes and unconditional allotments will be influenced by the structure of material incentives which is required to develop production at the required rate and to stimulate productivity growth, the fountainhead of the transition. These incentives are created by adjusting the needs-contribution ratio, which thereby becomes subject to government policy. But the required incentives do not only depend on the chosen rate of growth. The needs-contribution ratio is also strongly influenced by the average level of work quality in productive enterprises, since the more attractive paid jobs become, *ceteris paribus*, the less will be demanded in return for the work and the more there will be left to be distributed according to needs. As a consequence, the speed of the shift from contributions to needs will depend both on the rate of net investment (itself set in accordance with the first two transition criteria) and on the growth rate of average work quality (thus on the economy's progress along the third dimension of the transition).

## Part II: *Weak abundance as the key to the transition*

II. 1. *Introduction.* It can be shown that under certain simplifying assumptions on economic development, a transition from the initial stages of a just communist economy towards the notional end-point of fully developed communism is economically feasible, provided that some well-stated conditions on the economy's resources, technical innovation, preferences and material needs are fulfilled. I shall subsume these conditions under the

concept of *weak abundance*. To demonstrate this by means of a simple model of a communist market economy is the task of the second part of this essay. I first describe the relevant institutional features of communism (II.2.), then show how the transition can be implemented in a weakly abundant economy (II.3-4) and discuss the possibility of growth-intensive or leisure-intensive transition scenarios (II.5.). Some of our model's assumptions are perhaps too unrealistic even for the purpose of illustrating the 'mechanics' of the transition. The consequence of relaxing them will be briefly discussed in the concluding section (II.6.).

II.2. *A communist economy.* The theory of the transition sketched in part I has been rather vague about the institutions of the communist society. To be sure, the three background conditions of distributive justice were linked to Marx's general definition of communism in *Gotha*: the 'co-operative society based on common ownership of the means of production'. And this linkage implies definite limits on institutions, ruling out, for example, a system of *laissez-faire* capitalism. However, our elaboration of 'common ownership' in terms of equal access rights – which are understood as moral rights of individuals<sup>7</sup> – largely leaves open the general question as to which types of legal property rights and forms of economic organisation are compatible with the three background conditions. There may well be a substantial variety of socio-economic systems that can be classified as 'communist' in the above-mentioned sense, ranging from (duly reformed) welfare capitalism to market socialism<sup>8</sup>. An adequate treatment of this general question most likely requires a detailed comparison of economic systems in relation to concepts of equal access, which I am unable to undertake here. Thus, in order to deal with the problems of feasibility and implementation of the transition towards full communism, I shall proceed from a abstract 'market-socialist' type of economy<sup>9</sup>. Although this totally ignores Marx's banishment of exchange relations under communism (in view of the weakness of Marx's arguments on this score), it does give a recognizable picture of his general definition of communism.

In the communist economy, three kinds of actors are distinguished, individuals, firms and the democratic State. *Individuals* have a free choice whether or not to work (by background conditions (i) and (ii)). They are thus recognized from the beginning as inhabitants of both realms, freedom and necessity, and can move from the one to the other on their own responsibility. In their capacity as producers, individuals set up or enter *firms*, autonomous producers' collectives, which sell their product on the market, attract new members on a free job market and are able to rent land and capital assets from the State. *The State*, finally, acts as the formal

custodian of the social capital, on behalf of society, the collective owner. It is democratically mandated to regulate total investment and the distribution of consumable output between free consumption and producers' income – henceforth: 'grants' and 'wages'. The State's role as democratic manager of the public sector (defense, police, education, health services and the like) is not considered here, in order to concentrate on its investment and re-distributive functions. No direct or indirect taxation is therefore assumed to exist.

Let us consider the market value of a firm's net output. It is in principle divided into two income components: wages (with the average wage rate fixed by the State) and 'collective income', which flows into State investment and consumption funds, and consists of a fixed interest on the rental value of the firm's assets. A firm is motivated to perform efficiently on the market through a system of positive or negative wage bonuses: if its value added exceeds (or falls short of) its fixed wage and capital costs, the firm will be rewarded (or penalized). Thus, firms may engage in quasi-profit maximisation, with 'profits' consisting of additional producers' income. It is further assumed that firms (both existing and prospective ones) set up investment plans and compete with one another for state funds at the fixed rate of interest.

State planners aiming at an efficient long-term *transition policy* will now seek to satisfy two objectives, required by background conditions (i) and (ii) of section I.2.:

1. equality of supply and demand of labour at full capacity utilisation. Full capacity utilisation is required by considerations of efficiency. And the supply of labour must be equal to full capacity-demand, in order to avoid involuntary unemployment, which violates the right of equal access to the means of production.
2. the guarantee of an unconditional consumption grant, set at a democratically approved level which reflects society's estimations of the minimum needs of the average non-producer.

Note that the *average grant* may be distributed in cash or in kind (depending on the optimal size of the public sector, about which nothing is said here) and that its level may conceivably rise above the social minimum.

Finally, the planners (again: subject to democratic control) must choose:

3. a long term target of net investment which makes the resulting growth rate of output compatible with the transition requirements of rising consumption and shorter working hours.

II.3. *The concept of weak abundance.* Under certain plausible assumptions, the three policy objectives of the transition can be satisfied by means of a

certain distribution policy (i.e. a combination of the average wage rate and grant) if and only if the economy is in a state of *weak abundance*. The latter concept will be given a precise definition in this section.

We start with the technology of the economy, expressed by the following three aggregate ratios, which embody an assumption of fixed coefficients:

$$(A1) \quad v = \frac{K}{Y} \quad (\text{the capital-output ratio})^{10}$$

$$(A2) \quad q = \frac{Y}{L} \quad (\text{labour productivity})$$

The coefficient of capital intensity, or the ratio  $K/L = u$  is now determined as follows:

$$(T3) \quad u = \frac{K}{L} = qv \quad (\text{capital intensity}) \text{ from } 1,2$$

The stock of capital  $K$  and net output  $Y$  are homogeneous units of product; total labour  $L$  is measured in hours per annum. In the initial period under consideration ( $T = 0$ ,  $T$  in years) the capital stock is fixed at  $\bar{K}$  units. Net output at full-capacity utilisation  $\bar{Y}$  then equals labour productivity, multiplied by the full capacity demand for labour  $\bar{L}$ :

$$(T4) \quad \bar{Y} = \frac{\bar{K}}{\bar{v}} = q\bar{L} \quad \text{from } 1,2$$

Net output is divided into aggregate producers' income and collective income, which is appropriated by the State for the financing of investment and free consumption:

$$(D5) \quad \bar{Y} = w\bar{L} + (q-w)\bar{L} \quad (\text{division of claims on national income})$$

where  $w$  is the average wage rate.  $(q-w) = r\bar{K}/\bar{L}$  is the average portion of output per unit of labour which is 'deducted' by the State, in the form of a fixed interest on the capital employed per unit of labour. The interest rate  $r$  is equal to the average 'rate of profit' in the economy at the ruling wage rate, i.e.  $(\bar{Y} - w\bar{L})/\bar{K} = r$ . We next define average disposable income  $x$  as the sum of average wage income  $w\bar{L}$  and the average level of the grant  $G$ , with  $\bar{L} = \bar{L}/n$  and  $n$  the number of persons in the economy, producers and non-producers alike:

$$(D6) \quad x = w\bar{L} + G \quad (\text{average disposable income})$$

The needs-contribution ratio  $z$ , mentioned in I.5., is defined as the ratio between the grant and average producers' income:

$$(D7) \quad z = \frac{G}{w\bar{L}} \quad (\text{the needs-contribution ratio})$$

Net national income is expended annually on consumption and investment goods,  $C$  and  $I$ , respectively. And we assume that individuals fully consume their disposable incomes (no private saving) and that the State allows firms to invest a proportion of net national income, the net investment ratio  $a$ :

$$(A8) \quad \bar{Y} = C + I \quad (\text{expenditure of national income})$$

$$(A9) \quad C = nx = w\bar{L} + nG \quad \text{from } 6$$

$$(A10) \quad I = aY$$

The three short-term objectives of transition policy are now introduced. Denoting  $L_s$  as the total quantity of labour supplied, it is required that

$$(R11) \quad L_s = \bar{L} \quad (\text{equality of supply and demand of labour at full capacity utilisation})$$

Denoting the democratically fixed minimum level of the average grant as  $G_{\min}$  (the *social minimum*), the actual level of the grant must be at least equal to the social minimum;

$$(R12) \quad G \geq G_{\min} \quad (\text{background constraint on the average grant})$$

As mentioned in II.2., satisfaction of R11 of R12 ensures that the economy meets the background conditions (i) and (ii). And as will be explained more fully in section II.4., the long-term desiderata of the transition require that the investment ratio  $a$  be positive, but smaller than the product of the capital-output ratio  $v$  and the (exogenously given) growth rate of labour productivity  $i$ :<sup>11</sup>

$$(R13) \quad 0 < a < iv \quad (\text{transition constraint on the net investment ratio})$$

If at all possible, the State planners must select a distribution policy ( $w, G$ ) at which these three objectives are all satisfied. As I mentioned in section I.5., it is assumed that the voluntary decisions of individuals to work or to consume leisure-time respond to changes in incentives. This aspect of behaviour will be reflected in the aggregate labour supply, which is taken to be a function of the wage rate, the size of the grant and of average job quality  $Q$  (an index expressing job features such as physical working

conditions, discretion with respect to content, duration and intensity of tasks, opportunities of training and education, etc.). In particular, we shall first assume:

$$(A14) \quad L_s = L_s(w, G, Q); \quad \frac{\delta L_s}{\delta w} > 0, \quad \frac{\delta L_s}{\delta Q} > 0, \quad \frac{\delta L_s}{\delta G} < 0$$

The three partial derivatives of the labour supply with respect to wages, job quality and the average grant seem plausible enough. Wages are a material incentive to perform work, job quality an 'immaterial' one, and finally the grant represents a material incentive to consume free time, hence a disincentive to work. It should be noted, however, that A14 rules out the possibilities of a backward-bending labour supply curve at low and/or high levels of the wage rate. With respect to the first possibility, this is justified, insofar as the inverse relationship between the wage and the amount of labour offered is caused by a minimum subsistence constraint. For, in view of R12, such a constraint is absent in the communist market economy, due to the guarantee of the unconditional social minimum. Note also that while the level of the wage rate and the grant can vary in the short run, the average quality of labour  $Q$  will change much more slowly and will be taken as fixed, i.e.  $Q = \bar{Q}$  at  $T = 0$ . Thus,  $L_s$  depends on  $w$  and  $G$  in a short-run perspective. We now make a *second* assumption: in the short run, the aggregate labour supply is exclusively determined by the ratio of the grant to the wage rate, or the *material disincentive ratio*,  $d$ . And this relationship is an inverse one. Define:

$$(D15) \quad d = \frac{G}{W} \quad (\text{the disincentive ratio})$$

then:

$$(A16) \quad L_s = L_s(d, Q); \quad \frac{\delta L_s}{\delta d} < 0$$

What the second assumption adds to the first one is this: in cases where the wage rate and the grant move in the same direction, A14 does not tell one how the labour supply will react. With A16 however, the resulting effect upon  $L_s$  in these cases will depend on the change of the grant relative to that of the wage rate, as measured by the disincentive ratio. Thus, suppose that  $d$  rises because the grant increases more than does the wage rate; then the disincentive effect stemming from the first increase is assumed to dominate the incentive effect of the second, as a result of which a lesser quantity of labour will be offered. Given labour supply behaviour as specified in A16 and a fixed average job quality  $\bar{Q}$ , there will be only one value of the disincentive ratio at which the quantity of labour supplied is equal to full capacity demand<sup>12</sup>. Let us denote this datum by  $\hat{d}$ . Thus:

$$(D17) \quad d = \hat{d} \text{ if } f L_s(\hat{d}) = \bar{L} \text{ at } Q = \bar{Q}$$

Now the question is whether there exist values of the instrument variables  $w$  and  $G$ , which satisfy R11, R12 and R13.

If R11 is satisfied, then the economy utilizes full capacity and:

$$(T18) \quad w = \frac{\bar{y}(1-a) - G}{\bar{I}} \quad \text{from 8, 9, 10, with } \bar{y} = \frac{\bar{Y}}{n}$$

Also,

$$(T19) \quad d = \hat{d} \quad \text{from 11, 17}$$

thus,

$$(T20) \quad w = \frac{G}{\hat{d}} \quad \text{from 15, 19}$$

and the average grant at full capacity utilisation now depends on the size of the investment ratio  $a$ :

$$(T21) \quad \frac{\hat{d}\bar{y}(1-a)}{\hat{d} + \bar{I}} \quad \text{from 18, 20}$$

If R11 and R13 are satisfied, then

$$(T22) \quad \frac{\hat{d}\bar{y}(1-\hat{q}v)}{\hat{d} + \bar{I}} < G < \frac{\hat{d}\bar{y}}{\hat{d} + \bar{I}} \quad \text{from 13, 21}$$

Finally, if R12 also holds, the grant is at least equal to the social minimum  $G_{\min}$ . Therefore, a necessary condition for the three short-term objectives to be satisfied is:

$$(R23) \quad \frac{G_{\min}}{\bar{y}} < \frac{\hat{d}}{\hat{d} + \bar{I}} \quad (\text{condition of weak abundance at } T = 0)$$

In other words, only if this condition holds will it be possible to select a distribution policy  $(w, G)$  which ensures equality of supply and demand for labour at full capacity utilisation and at admissible levels of the average grant and the net investment ratio. The state of affairs described by R23 depends entirely on the data of the economy at  $T = 0$ . In particular, the full capacity levels  $\bar{y}$  and  $\bar{I}$  are fixed by the per capita stock of capital  $\bar{K}/n$  and the technology  $(q, v)$ . The full capacity disincentive ratio  $\hat{d}$  expresses labour supply preferences at given data  $\bar{Q}$ ,  $\bar{K}/n$  and  $(q, v)$ . And finally, the social minimum  $G_{\min}$  expresses society's estimation of material subsistence needs.

What R23 shows is the following: if at the given  $\hat{d}$  and  $\bar{I}$ ,  $G_{\min}$  is too large in proportion to per capita national income  $\bar{y}$ , it will not be possible to

provide an unconditional grant of this size at a non-negative rate of investment, except by raising the disincentive ratio above the value  $\hat{d}$ . Doing so would inevitably lead to underutilisation of capital (in violation of R11), because the labour supply would fall below  $\bar{L}$ . And as a consequence, national income would fall below  $\bar{Y}$ , thus involving the economy in a downward spiral. In this case, then, the economy is unfit to sustain the essential preconditions of the transition towards full communism: if the proportion  $G_{\min}/\bar{y}$  is (relatively) too large, it is only possible to satisfy one, or two policy objectives at a time, not all three. To achieve the latter, it is necessary that  $G_{\min}/\bar{y}$  is small enough for allowing the economy to accumulate productive capacity, after the amount of private wage income which is needed to provide the required incentives in the presence of an adequate unconditional grant has been taken into account. Now the size of the ratio  $G_{\min}/\bar{y}$  is inversely related to the difference  $\bar{y}-G_{\min}$ , or the size of the *surplus product* above subsistence needs at full capacity utilisation. If we take this surplus product as an indicator of the society's *relative abundance*, then condition R23 provides a criterion of *weak abundance*, i.e. of the economy's capacity to satisfy minimum needs on an unconditional basis, while preserving its capacity for growth. We stipulate that weak abundance obtains in an economy if and only if  $G_{\min}$  is sufficiently small compared to  $\bar{y}$ , at the other given data (or stated otherwise, if the economic surplus product  $\bar{y}-G_{\min}$  is sufficiently large) that the labour supply can be made equal to full capacity demand at a positive investment ratio and a level of the grant equal to, or in excess of, the social minimum. The first of these requirements is expressed by the value  $\hat{d}$  of the disincentive ratio in the right-hand side of inequality R23; the second and third are expressed by the sign of this inequality.

Weak abundance is clearly a dispositional property of the economy: it only obtains if the objective data (resource availability and technology) are appropriately related to the configuration of dispositionally defined data: the individual preferences for labour and free time which underlie the labour supply function, the quality of jobs provided to workers in firms (which is inversely related to the 'disutility of labour') and the conventional estimations of minimum needs. Weak abundance, finally, signifies abundance in the *weak* sense of the economy's capacity to satisfy *minimum* needs on an unconditional basis, not any set of expensive tastes<sup>13</sup>.

II.4. *Weak abundance and the transition.* If the communist market economy is weakly abundant in the initial period  $T = 0$ , it is historically ripe for the transition towards full communism. But whether the transition will actually occur depends on two further conditions: the economy must *remain*

weakly abundant in all subsequent periods, and the State must be democratically mandated to pursue the three short-term policy objectives at all  $T$  (and sufficiently capable to do so successfully). This involves a continuous effort on the part of the planners to adjust the levels of the wage rate and the average grant to changes in all the relevant data of the economy and to the endogenous change of the capital stock, caused by the positive rate of investment. In this dynamic perspective, the planners will utilize the investment ratio, the wage rate and the level of the grant as instruments of long-term growth policy, subject always to the background constraints.

In this section it will be shown that under certain simplifying assumptions on economic development, the transition is economically feasible if and only if the economy is initially in the state of weak abundance. I first introduce the four Marxian desiderata of the transition (already discussed in section I.3.), as well as the required growth assumptions. I then argue that, with weak abundance at  $T = 0$ , the planners are able to adopt an investment and distribution policy, in conformity with R 11 – 13, in all subsequent periods. And if the planners do indeed adopt that policy, the four transition desiderata will be durably satisfied.

The idea of the transition is defined by the following requirements:

$$(R24) \quad \dot{l} < 0 \text{ (decrease of average labour time)}$$

$$(R25) \quad \dot{x} > 0 \text{ (increasing consumption per capita)}$$

$$(R26) \quad \dot{Q} > 0 \text{ (increasing average job quality)}$$

$$(R27) \quad \dot{z} > 0 \text{ (a rising needs-contribution-ratio)}$$

With respect to economic development the following is assumed:

$$(A28) \quad \dot{n} = 0 \text{ (stationary population)}$$

$$(A29) \quad \dot{q} > 0 \text{ and constant (exogeneously given growth of labour productivity)}$$

$$(A30) \quad \dot{v} = 0 \text{ (constancy of the capital-output ratio)}^{14}$$

so that it follows

$$(T31) \quad \dot{u} = \dot{q} \quad \text{from} \quad 3, 30$$

A29 is obviously a crude assumption, which ignores important feedbacks of capital accumulation on productivity growth. In section II.6. this issue will be further discussed. Purely for expository convenience, the planners

are assumed to aim at a *constant* growth rate of per capita output:

$$(A32) \quad \dot{y} \text{ is constant}^{15}$$

Next, I assume that economic interactions in the communist market economy will lead to a persistent, though perhaps slow, improvement in the average quality of jobs. One may think of several reasons for this, apart from specially designed State policies on job improvement. First, the presence of an unconditional grant puts prospective workers in a good bargaining position vis-a-vis their employers. Secondly, these employers – producers' collectives – are bound by rules of self-management, under the third background condition. This ensures workers at least some power to shape their working conditions after they have entered the firm. Thirdly, for the entrepreneurially inclined, who do not long for pre-formed jobs at fixed wage rates, there is the real option of starting up business on fixed terms of credit. For all these reasons it is supposed that the requirement of rising job quality is satisfied, by and large. The requirement R26, then, is trivially fulfilled by:

$$(A33) \quad \dot{Q} > 0 \quad (\text{rising job quality})$$

It will finally be assumed that the social minimum  $G_{\min}$  may increase, but not faster than average disposable income  $x$ . The assumption will be discussed at the end of this section.

$$(A34) \quad \dot{G}_{\min} \leq \dot{x} \quad (\text{constraint on increase of social minimum})$$

On assumptions 28–30 and 32, R24 and R25 will be fulfilled if and only if the investment ratio is fixed within the limits set by R13:

$$(T35) \quad \dot{y} = \dot{K} \quad \text{from 1, 28, 30}$$

$$(D36) \quad I/K = \dot{K} \quad (\text{the rate of capital accumulation})$$

$$(T37) \quad \dot{K} = a/v \quad \text{from 1, 10, 36}$$

$$(T38) \quad a \text{ is constant over time} \quad \text{from 30, 32, 35, 37}$$

$$(T39) \quad \dot{x} = \dot{y} + (1-a) \quad \text{from 8, 9, 10}$$

$$(T40) \quad \dot{x} = a/v \quad \text{from 35, 37, 38, 39}$$

$$(T41) \quad \dot{q} = \dot{y} - \dot{l} \quad \text{from 2}$$

If R13 is satisfied via the choice of a constant investment ratio (by 38), it follows from equations 35, 37, 40 and 41 that  $\dot{l} < 0$  and  $\dot{x} > 0$ , thus R24 and

R25 are satisfied. Conversely, if  $\dot{l} < 0$  and  $\dot{x} > 0$ , these same equations imply that the constant investment ratio will be positive, but smaller than  $\dot{q}v$ , thus R13 is satisfied in all periods after  $T = 0$ .

If, furthermore, R13 and R11 are durably satisfied – the latter via readjustment of the instrument variables  $G$  and  $w$  – the needs-contribution ratio must rise consistently, i.e. R27 is satisfied. For if the supply of labour is made equal, over time, to full capacity demand at a declining average labour-time, and the quality of labour rises (as assumed in 33), the disincentive ratio  $\hat{d}$  must also rise. And since the quotient of the disincentive ratio and average labour-time is the needs-contribution ratio, the latter will rise *a fortiori*. Thus,

$$(T42) \quad \dot{\hat{d}} > 0 \quad \text{from 11, 16, 17, 24, 28, 33}$$

$$(T43) \quad \dot{z} = \dot{\hat{d}} - \dot{l} > 0 \quad \text{from 7, 15, 24, 42}$$

As noted in I.3., the shift from contribution to needs is indeed an expression, in the domain of income distribution, of the quantitative and qualitative expansion of the realm of freedom, exemplified by R24–R26 and achieved via the satisfaction of R11 and R13. Note, however, that such an expansion is not *necessary* for this shift to occur. For example, if average labour time were made to decline dramatically, as a result of a *disinvestment* policy ( $a < 0$ , entailing  $\dot{x} < 0$  in violation of R25, and  $\dot{l} < -\dot{q}$ ) the shift from contribution to needs would be even more marked – always supposing that A29 would continue to hold in such circumstances. Alternatively, if the labour supply were to remain constant, due to an inadmissibly consumption-intensive growth policy ( $\dot{l} = 0$ , in violation of R24, achieved at  $a = \dot{q}v$  and entailing  $\dot{x} = \dot{q}$ ), the assumed improvements of job quality alone would still ensure a rise of the disincentive ratio (from 14 and 16) and thus of the needs-contribution ratio. In view of this, the shift from contribution to needs is not to be taken as the sole defining property of the transition towards full communism, at least not if the transition concept is understood as in part I of this essay.

In order to achieve the desired full-capacity growth policy at a constant investment ratio, the instrument variables  $G$  and  $w$  must satisfy equations 21 and 20 at all periods after  $T = 0$ . This yields the following pair of trajectories for the average grant and the wage rate:

$$(T44) \quad \dot{G} = \dot{\hat{d}} + \dot{y} - (\dot{\hat{d}} + 1) \quad \text{from 21, 38}$$

$$(T45) \quad \dot{w} = \dot{y} - (\dot{\hat{d}} + 1) \quad \text{from 20, 44}$$

It now remains to deal with the second policy objective R12, requiring the

guarantee of the social minimum at all periods after  $T = 0$ . Equation 44 constitutes an admissible trajectory for  $G$  if and only if the change in the level of the grant's instrument value keeps pace with, or outruns the possible changes in the level of the social minimum, i.e. if and only if:

$$(R46) \quad \dot{G} \geq \dot{G}_{\min} \quad \text{from 12}$$

The fulfillment of R46 is now guaranteed by our final assumption A34. For in view of the rising disincentive ratio, which is due to declining working hours, we have:

$$(T47) \quad \dot{d} - (\dot{d} + \dot{l}) > 0 \quad \text{from 24, 42}$$

$$(T48) \quad \dot{G} > \dot{x} \geq \dot{G}_{\min} \quad \text{from 34, 38, 39, 44, 47}$$

Hence, R46 is satisfied. *In conclusion:* under the stated assumptions, and provided the economy is weakly abundant in the beginning, the planners can satisfy the three short-term policy objectives R11-R13 and the Marxian desiderata R24, R25 and R27 of the transition at all points in time thereafter. Thus again, weak abundance at  $T = 0$  is crucial for the economic feasibility of the transition.

The final proposition T48 depends in part on A34. This assumption, which rules out a kind of 'inflationary' pressure on the social minimum, may be considered rather speculative. One valid objection against it could be to point out that the agreed-on minimum requirements of rising numbers of non-producers might be 'artificially' bid up in the democratic process, through self-interested behaviour, perhaps even envy, on the part of the non-producers. This is indeed a possibility which could well produce the untruth of our assumption. However, if the economy is actually set on a transition course (by R11 and R13), then the actual grant income of the average non-producer will rise appreciably faster than average consumption does ( $\dot{G} > \dot{x}$ ), due to the rise of the disincentive and the needs-contribution ratios. In such circumstances of increasing income equality between non-producers and producers (the latter taken as an average), no good reason exists for supposing that democratic pressures of the type described above would occur. Therefore, assumption A34 can be given a conditional justification: its plausibility rests largely (though not completely) on the supposition that the planners will actually try to achieve the sort of policy which the transition to full communism requires.

II.5. *Tradeoffs between consumption, leisure and the shift from contribution to needs.* In a weakly abundant economy, the communist planners have a range of choices with respect to the investment ratio, given our assumption

of exogeneous growth of labour productivity. Thus there will exist a latitude for choosing between *consumption-intensive* transition scenarios on the one hand, with relatively high investment ratios, high rates of net output and consumption and correspondingly small increases in free time, and on the other hand *leisure-intensive* transition scenarios, with relatively low investment ratios, slow increases of consumption and correspondingly fast increases in the average amount of disposable free time. This may be regarded as one basic *tradeoff* of communist transition policy. And the range of admissible options in this respect is fully determined by the size of labour productivity's growth rate, as equations 38, 39, and 41 immediately show.

In other words, depending on the extent to which the material forces of production develop over time, a society embarking upon a transition course towards full communism is free to decide whether it wishes to stress the qualitative or quantitative expansion of the realm of freedom – i.e. adopt a consumption- or a leisure-intensive scenario. However, the selection of any particular investment ratio will inevitably feed back upon the economy's movement along the fourth (distributional) dimension of the transition. Let us assume for the moment that the speed at which average job quality improves is unaffected by the choice of a particular transition scenario, so that  $\dot{Q}$  is exogeneously given. Then it is clear, from our assumptions (14 and 16) on labour supply behaviour, that the lower the investment ratio is fixed and consequently, the more average labour-time declines, the stronger the rise of the disincentive ratio  $\dot{d}$  will have to be, in order to ensure equality of the labour supply and the full capacity demand for labour. Therefore, the less consumption-intensive the chosen scenario happens to be, *ceteris paribus*, the faster the shift from contribution to needs will take place in society, as can be read off from equations 38, 39, 41 and 43.

As I mentioned in section I.5., the actual rate of increase in the needs-contribution ratio depends crucially upon the rate of job improvement; this holds for any particular choice of scenario. But it remains the case that under the stated assumptions there exists a *second tradeoff*, of an indirect nature, between the qualitative expansion of the realm of freedom (exemplified by  $\dot{x}$ ) and the rate of supersession of the labour contribution precept by the precept of needs (exemplified by  $\dot{z}$ ).

The existence of these two tradeoffs, between  $\dot{x}$  and  $\dot{l}$ ,  $\dot{x}$  and  $\dot{z}$ , respectively, is of some importance for understanding the nature of the transition model. It shows, firstly, that for any given combination of productivity-quality growth rates ( $\dot{q}$ ,  $\dot{Q}$ ) in the economy, it will be impossible to maximize the *overall* speed of the transition. For any attempt to maximize

progress along one, or two, of the three dimensions on which a choice of the investment ratio affects the rate of growth will inevitably minimize progress along the other dimension(s). Secondly, an economy's comparative overall rate of progress along all four dimensions depends upon the specific combination of data ( $\dot{q}$ ,  $\dot{Q}$ ). For instance, compare two economies with the same capital-output ratio, but with different productivity-quality rates of performance ( $\dot{q}_1$ ,  $\dot{Q}_1$ ) and ( $\dot{q}_2$ ,  $\dot{Q}_2$ ). It then follows that for the same admissible value of the investment ratio in both economies (hence the same  $\dot{x}$  by equation 40), the first economy will move faster along the remaining two investment-sensitive dimensions  $l$  and  $z$  if and only if the first economy's productivity-quality performance dominates that of the second – i.e. iff  $\dot{q}_1 \geq \dot{q}_2$  and  $\dot{Q}_1 \geq \dot{Q}_2$ , with one of these inequalities holding strictly. If two economies do not dominate one another in the productivity-quality sense, then it is impossible to tell which of them will exhibit the fastest overall rate of progress, at least without some additional judgements about the relative importance of achievable  $\dot{x}$ ,  $\dot{l}$ ,  $\dot{Q}$  and  $\dot{z}$ .

To sum up the conclusions of this section: in the rather mechanistic growth setting of our weakly abundant communist market model, the possibilities of achieving a more, or less, rapid transition towards full communism are determined by success in two separate, but interrelated fields: technological innovation and the 'humanisation' of productive work. And given the society's achievements in these two fields, it is more, or less, free to shape its own transition course by opting for a consumption-intensive, labour-intensive or intermediate scenario. In the next section I shall discuss the results of Part II, taking account of the crudity of some of the model's assumptions.

II.6. *Concluding remarks.* Though I wish to claim that the transition idea, as developed in this essay, captures the essential economic elements in Marx's vision of communism, it does by no means paint a complete or even faithful picture of that vision<sup>16</sup>. As noted earlier, important Marxian features of communist society, such as the ban on market exchange and the abolishment of money, have been explicitly disregarded here. Also, the non-acquisitive and social nature of communist man was not stressed very heavily. In part this is a bias of presentation. For the logic of the transition model implies an ever-growing 'informal' area of non-market activity, as the realm of freedom expands. As the limit point of full communism approaches, the market, along with the State, recedes into insignificance. Thus, the market and acquisitiveness are not ruled out by decree; they rather tend to disappear through their own initial success. In these respects, the transition model is similar in spirit to Keynes's optimistic projections, in *Economic Possibilities for our Grandchildren* (1930):

'The strenuous purposeful money-makers may carry all of us along with them into the lap of abundance. But it will be those peoples, who can keep alive, and cultivate into a fuller perfection, the art of life itself and do not sell themselves for the means of life, who will be able to enjoy the abundance when it comes'. (Keynes, 1930, 368)

If Keynes did not need to make unrealistic assumptions about technological development, taking 'purposive man' and the propensity for accumulation for granted (Keynes, 1930, 370), I still owe the reader a discussion on the consequences of scrapping the postulate of exogeneously determined productivity growth. Let us therefore drop A29 and consider instead the proposition that since innovations are largely embodied in capital goods, the rate of innovation depends positively upon the rate of accumulation, especially if the economy grows at full capacity utilisation<sup>17</sup>. Given a nearly constant capital-output ratio, this amounts to the following assumption:

$$(A49) \quad \dot{q} = \dot{q}(\dot{K}), \quad \dot{q}' > 0 \quad (\text{replacing A29})$$

On this assumption there may, but not necessarily will, exist a range of positive rates of accumulation  $\dot{K}$ , such that  $\dot{K} = a/v < \dot{q}$  and R13 may be satisfied. If such a range does not exist, it will be impossible to realize a positive growth rate of output and consumption together with a negative growth rate of labour demand. But then weak abundance at  $T = 0$  is no longer the sole condition of feasibility for the transition, unless one is prepared to make *further assumptions* on the form of the function  $\dot{q}(\dot{K})$ , which ensure that R13 can always be fulfilled. It is difficult to be confident about such assumptions, however, in view of the complex and imperfectly understood causal relations between capital investment, effective demand and the rate of innovation.

It may also be noted that if  $\dot{x} > 0$  and  $l < 0$  happen to be realisable in practice, the menu of choices between relatively consumption- or leisure-intensive transition scenarios will change significantly. For on A49, a choice for the former type of scenario entails the generation of higher rates of productivity growth than a choice for the latter. This may somewhat reduce the attractiveness of a markedly slow-growth transition path. (But as we shall presently see, there can be other reasons for disfavoring consumption-intensive options).

As noted, the presence of endogenous restrictions on the rate of innovation has undermined our proposition that weak abundance at  $T = 0$  is necessary and sufficient for setting the economy on a transition course. However, weak abundance still remains a prerequisite. More generally,

the concept may be of use in the political economy of modern welfare states. It opens a perspective for dealing simultaneously with two pressing and related problems: (1) persistent (technological) unemployment, paired to labour market rigidities, (2) overloaded and increasingly unworkable social security systems. To recapitulate, if an economy is weakly abundant, there is the objective possibility to provide each person with an unconditional minimum level of consumption, while at the same time, the labour supply may be brought into line with the full capacity demand at a positive net investment ratio in the economy. I believe that such a possibility – which was here illustrated in the context of an abstract communist market economy – is well worth investigating.

But is it at all plausible to suppose that contemporary industrial societies are in a state of weak abundance? Would it not be safer to assume that economic life would be forced into a downward spiral of underutilisation and impoverishment, if it were attempted to liberate the labour market by instituting a system of universal grants? The fact that I have presented weak abundance as a feasibility condition of the transition process – rather than building it into the assumptions on short-term economic data – shows that I do not have a ready answer to these questions. Nor, I think, does anyone at the present moment. Nonetheless, the notion of weak abundance points to some economic relations essential for obtaining valid answers. Referring back to Section II.4., this may be illustrated as follows. Consider the replacement of all existing social security laws by a grant system, as in our model, in which the average level of the grant is fixed at a democratically acceptable social minimum:  $G = G_{\min}$ . Assume that the labour market – freed from minimum wage and other restrictions – is in equilibrium, at full capacity, with an average wage rate  $w = G_{\min}/d$ . Then the condition of weak abundance may be rewritten in the form:

$$(R50) \quad \frac{\bar{y} - G_{\min}}{\bar{y}} > \frac{w\bar{l}}{x} \quad \text{from 6, 20, 23}$$

The existence of weak abundance depends on a comparison between two ratios. First, the share of the economic surplus above the minimum needs of the population in net national income. Secondly, the share of wages in total disposable income. As we have seen, the first ratio is indicative of the economy's relative abundance: it tells how much there will be left over for wages and investment, if the social minimum were granted to each person, producer or non-producer. This ratio concerns the question of the grant's *payability*. The second ratio (on the right hand side of 50) indicates the size of material incentives that are needed to obtain labour market equilibrium

at full capacity utilisation, *given* that the social minimum is unconditionally granted to all. It then tells us how high the wage rate must be in proportion to disposable income, in order to preserve the aggregate willingness, on the part of grant receivers, to produce the output from which the grant is paid. The second ratio concerns the economic *viability* of the grant, perceived from the supply side. Thus interpreted, the question whether a thoroughgoing economic reform leading to a universal grant system (combined with a largely free labour market) is economically feasible can be inferred from condition R50: it will be possible to invest at a non-negative rate only if the 'coefficient of payability'<sup>18</sup>  $(\bar{y} - G_{\min})/\bar{y}$  is at least equal to the 'coefficient of viability'  $w\bar{l} : x$ . While it is relatively easy to determine the value of the first coefficient, that of the second is very hard to estimate, since little can be known, in advance, about aggregate labour supply behaviour in a novel and radically different institutional setting.

Interesting though these questions are, it may be asked: what is the general connection between the universal grant and the Marxian concept of the transition towards full communism? Now in my account, the transition takes place in a society with just production relations, of which the unconditional right to a share of the 'Social Dividend' is one important institutional expression. It must be pointed out that such an interpretation of communist social relations has no serious basis in any of Marx's writings that I know of. Thus, from a Marxist point of view – in which conceptions of distributive justice, if not rejected all together, are not examined very closely – the connection between the transition process and the institution of a universal grant is by no means obvious. Speaking for myself, however, the connection between the two is well worth elaborating, on normative grounds. This is the reason why Marx's idea of a transition towards a fully liberated society has been linked, in this essay, to certain background conditions of social justice<sup>19</sup>, by means of the notion of weak abundance.

If the transition idea was born in the mid-nineteenth century, it is natural to ask whether there has been any actual progress along its four dimensions in the advanced countries of the world. To ask this question is to answer it: yes, working hours have become shorter, per capita consumption has risen dramatically, jobs and working conditions have improved and the share of legal income transfers in net output (even though most of these transfers are conditional on work performed) has steadily risen in the last century and a half. If the transition towards full communism could be counted among Marx's many predictions on the evolution of capitalism (*quod non*), it would be one of the more accurate ones. With regard to future economic developments, Marx exhibited the same historical optimism about the potentialities of the communist society as Keynes did – though only briefly

– about those of capitalism. In the words of the latter:

'I draw the conclusion that, assuming no important wars and no important increase in population, the *economic problem* may be solved, or at least be in sight of solution, within a hundred years. This means that the economic problem is not – if we look into the future – *the permanent problem of the human race*'.  
(Keynes, 1930, 366)

Of course Marx and Keynes differed fundamentally on the nature of the social relations under which the potential for solving the economic problem could lead to a real development of free individuality. For Marx, the abolition of class relations was an essential pre-condition, to be satisfied well in advance. Keynes held a lighter view:

'All kinds of social customs and economic practices, affecting the distribution of economic rewards and penalties, which we now maintain at all costs, however distasteful and unjust they may be in themselves, because they are tremendously useful in promoting the accumulation of capital, we shall then be free, at least, to discard'.  
(Keynes, 1930, 369–70)

In linking the transition to requirements of justice I have, in a sense, sided with Marx. But in contrast to Marx, I have not interpreted the transition as a strictly post-revolutionary course of events. Also, I have formulated the idea in essentially conditional terms. Weak abundance apart, any set of economic policies conducive to a transition process is subject, in my account, to the democratic decisions of individuals with equal rights of managing the social capital in their best interests. As far as communist justice is concerned, the adoption of a long-term transition policy is not favored in any way, let alone prescribed. For on my understanding of communist justice, all democratically chosen policies which respect the background conditions are procedurally just. From the point of view of individual negative freedom, finally, it could hardly be otherwise. For to move into the realm of freedom voluntarily entails the freedom not to do so, or to do so only in part.

In fact there are various ethical reasons why a society would not wish to pursue a transition course even if it were economically feasible to do so. At least some of these reasons can be classified according to whether they invoke arguments for either zero growth or maximal growth. Those who take environmental arguments seriously, in which the possibility of irreversible damages caused by growth policies is stressed (pollution, depletion), may be prepared to sacrifice both productivity gains and consumption for the prospect of a social adaptation to circumstances of increased

scarcity. By means of such austere policies, the quality of life of future generations could possibly be increased. At the other extreme, there are arguments for adopting maximal growth policies, which involve rising average working time, a decreasing ratio of grants to wages, and thus, a shift from needs to contribution. Barring purely 'consumerist' motivations, one might imagine that a society decided to start out on the transition towards full communism at a later stage, after it had become sufficiently clear that the state of weak abundance was attained. In the meantime, that society could pursue an aggressive growth policy. Alternatively – and far more idealistically – the desire, on the part of affluent nations, to redistribute capital and income on a large scale for the benefit of nations far removed from abundance could provide good reasons for promoting growth, in order to finance the international transfers.

By its nature, the transition is something in between these two extremes of altruistically motivated austerity or growth. Such altruism may perhaps not be necessary, or it may not be forthcoming in any case. If either of these are true, the idea of the transition, as described in this essay, seems to offer the most attractive type of scenario. Investment is undertaken not purely for growth's sake, but to obtain high degrees of labour productivity and labour quality; the economic gains are then divided between free time and consumption. And as a result, the distribution of income will become less attuned to contributions and more to individual needs.

## Notes

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1. Such equality is implied in Marx's description of communism, in the *Manifesto*: 'an association in which the free development of each is the condition for the free development of all' (Marx, 1848, 238).

2. This notion is taken from Rawls, 1971, 83–88. It should be understood that the justice of institutions, through the operation of which all income distributions become procedurally just, is *itself* defined by reference to distributive principles on other 'holdings' than income. In our case, there is only one such principle, the principle of equal access to society's 'conditions of production'. Within this particular conception of justice, therefore, procedural arguments do not apply to the distribution of the 'conditions of production' themselves.

3. 'Common sense precepts' are principles of distribution, such as the two ones

mentioned in the text, which have always existed in societies (for a good discussion: Perelman, 1942) and typically apply to separate institutions or situationally defined interactions, not to the whole 'basic structure of society'. See Rawls, 1971, 303-310.

4. On the philosophical meaning of the concept of 'man rich in needs', see Heller, 1974, 44-48. Ch. 5 of this book also provides a useful background for understanding Marx's philosophy of freedom, which lies behind the idea of the transition.

5. Complete absence of abstract labour under communism, where 'abstract labour' is taken in the general sense as institutionally co-ordinated labour, only makes sense in the (unreachable) limit state of fully developed communism, not in the 'real world' of a transition towards this limit state. See also: Van der Veen, 1981, 17-19.

6. Summed up briefly in Sen, 1979, 88-89. For a more nuanced statement, see Husami, 1978, 56-61. A point of view similar (not identical) to the one expressed here, can be found in Ryan, 1980.

7. The rights of equal access to the 'conditions of production' are moral rights, in the sense that individuals, by these rights, have certain claims against social institutions and practices. Their validity is grounded in the idea of a just distribution of the 'conditions of production'; it is not derivable from positive law or custom. See Scanlon, 1981, 122-123.

8. The operation of a transition process in a 'duly reformed' welfare capitalism is illustrated in Van der Veen and Van Parijs, 1984. On the property rights-structure of market socialism, see Selucký, 1979 and DiQuattro, 1982. For detailed descriptions of systems in between these two, which also might be classified as 'communist', after slight adjustments, see: Nove, 1983 and Hodgson, 1984.

9. In the following, I have used the description in Vanek, 1975.

10. The Letters D, A, R and T in front of the numbers by which formulas are identified, indicate that the propositions they express are definitions, assumptions, requirements and theorems, respectively.

11. The growth rate of any variable  $a$  is denoted by  $\dot{a} = (a(T+1) - a(T)) : a(T)$ , for each period  $T$ . For the growth rate of  $ab/c$ , the approximative formula  $\dot{a} + \dot{b} - \dot{c}$  is used.

12. Equation 16 can also be derived from A14, D15 and the additional assumption  $\delta L_s / \delta w : \delta L_s / \delta G = -G/w$ . An aggregate labour supply function with these properties is in turn derivable from individual utility functions of the 'Cobb-Douglas' type, as used in the expository section of Cooter and Helpman, 1974 and in the 1982 version of this essay. Note that the possibility of the transition towards full communism does not hinge on equation 16. For the derivation of a labour supply function satisfying A14, but not A16, from a different type of utility function, see Van der Veen and Van Parijs, 1984.

13. The notion of weak abundance is first developed in Van Parijs, 1983.

14. On the plausibility of this assumption, see Maddison, 1982, Ch. 3.

15. From here on, we omit the bars above the symbols  $K$ ,  $Y$  and  $L$ , which indicated full-capacity levels at  $T = 0$ .

16. For a useful overview, see Ollman, 1978.

17. This proposition can be inferred from Maddison's empirical discussion of

the relationship between accumulation and productivity growth, in sixteen capitalist nations. See Maddison, 1982, Ch. 3 and 5.

18. There is a similarity between this coefficient and Cohen's use of the economic surplus above subsistence needs, in developing a measure of growth of the productive forces. Cohen, 1978, 61-62.

19. Although I share Heller's point of view that 'In a free future, there should be as many just norms and rules as ways of life' (Heller, 1983, 26), I think that certain minimal norms of justice, pertaining to the use of personal and material resources, are indispensable for securing the chances for such a free future.

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