

The Three-Tier Enterprise System

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Introduction

This essay is an introduction to the three-tier economy of Prout, or to be more precise, to its three-tier system of enterprise management. Prabhat Ranjan Sarkar, the propounder of Prout, considered the three-tier system to be one of Prout's special features and we can better understand it by making comparisons to enterprise management in two economic systems that are well known to us, capitalism and communism.

There are generally considered to be three ways to own and manage a business: government ownership, private ownership and cooperative ownership. Ownership is an important consideration, because whoever owns and controls the means of production generally gets the lion's share of what is produced. According to communist dogma, all businesses have to be government owned, and in theory the people get equal shares of the product. According to capitalist dogma, all businesses ought to be in private hands, and in theory output is shared in proportion to the contributions made by the persons involved.

Despite their obvious differences, capitalism and communism have three characteristics in common: 1) they are both wedded to their dogma, 2) in both there is a huge gulf between theory and actual outcomes, and 3) both produce highly centralised economies. Communism is (or was) centralised by design (Sarkar called it *state capitalism*) whereas capitalism inevitably becomes highly centralised driven by the relentless pursuit of profit. Companies must merge in order to survive, leading to fewer but ever larger companies.

During the 20th century capitalism and communism battled for ideological supremacy and of course it is now a matter of history that capitalism defeated communism. It is generally agreed that a contributory factor to the demise of communism was a grossly inefficient system of production. According to one argument, the government controlled industrial complex of the USSR was unable to respond to President Reagan's Star Wars Program and the country collapsed in the endeavour to do so.¹

Of particular interest is that in the ideological struggles of the 20th century, the cooperative system did not play a visible role. In order to understand this

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invisibility and in order to understand Sarkar's three-tier proposal, it is helpful to review some of the history of the cooperative system.²

The Cooperative System

The basic principles of the cooperative system were laid out in the early 19th century by the Welshman Robert Owen (1771-1858) at a time when the British working class was reeling from the impact of the industrial revolution. Owen was a successful businessman who nevertheless believed that a company could maintain good labour relations and promote the welfare of workers while still remaining profitable. In 1800, when Owen became manager of the New Lanark mills and its 2,000 workers, he introduced a system of labour negotiations which relied on reason rather than violence to achieve workplace agreements. In 1829 he was instrumental in establishing the formal cooperative movement which held its first conference in Manchester, 1831.

Owen's early views on management would be considered paternalistic by today's standards, but he quickly came to promote cooperative equality and self-management. It is not often appreciated that Owen's cooperative vision was more than just factory cooperatives. He saw cooperatives as part of a broader program of urban renewal and educational reform. However, such reforms would have required government participation and thus endorsement of the cooperative principle. Despite the fact that New Lanark enjoyed great success and became widely famous in Owen's lifetime, the British government of the day refused to embrace the cooperative model and refused to involve itself in social welfare more generally. The economist and academic Hugh Stretton believes that this *laissez-faire* doctrine cost Britain its early industrial leadership and allowed the French, Germans and subsequently the Americans to become greater industrial powers.³

By contrast, 100 years later, when Japan embarked on its own industrial revolution, and spawned its own Robert Owen in the form of Muto Sanji, also a successful director of a cotton spinning business, the Japanese government was prepared to embrace Sanji's cooperative doctrine. Sanji's initial intention was just to improve his own firm but success spurred him to develop a management philosophy which linked the welfare of factory workers to the success of Japanese industry and therefore to the success of the nation as a whole. With government backing, a system developed whereby Japanese workers enjoyed security, skills training and high levels of respect in return for cooperative service. This system, although not cooperative by the contemporary definition, nevertheless served Japanese workers and the nation well until the late 20th century.⁴

The cooperative system did not become an ideological force in the 20th century (despite a shadow of it persisting in Japan) because cooperatives do not lend themselves easily to centralised control. Hence capitalists and communists both

oppose the cooperative system. Furthermore, cooperative production cannot compete with multinational companies which have the power to impose low wages and externalise social and environmental costs. Nor do they prosper in the modern world of economic rationalism where profit and efficiency are very narrowly defined. Today, however, the defects of economic rationalism are becoming more apparent and the cooperative model is once again attracting attention.

The Three-Tier Enterprise System

Prout's economic model is first and foremost based on the cooperative system and in this respect it stands in marked contrast to both capitalism and communism. However, Sarkar has not succumbed to a 'dogma of cooperatives'. Rather he recognises (and experience has clearly demonstrated) that all three systems of business ownership are appropriate in different circumstances. Advocating a balanced and practical approach, he proposes "a three-tiered economic structure, that is, small-scale privately owned businesses, medium scale cooperatives and large-scale key industries managed by the immediate government."⁵

This at least, is a brief summary to convey the general idea. There remains some confusion partly because the early translations of Sarkar's works were ambiguous in crucial places and partly because he described the system over a period of years. In later years, he summarised the idea in a single sentence such as the one quoted above and it is easy to forget that the discourses of 30 years earlier provided considerable detail. One motivation behind this article is to return to the early discourses with the most recent translations that have since become available.

Important Concepts

Sarkar formally introduced Prout in 1959, but in the two preceding years he had already described many of the important concepts in *Human Society Part I*⁶ and *Problems of the Day*.⁷ (A more recent compilation, *Proutist Economics*⁸ contains most of the author's economic ideas.)

For our purposes the relevant part of *Human Society* is the section headed Business People. The context is India not long after achieving independence from Britain. The cold war is underway and India is caught between the imperial might of Britain and the communist might of its northern neighbour, the USSR. There is much discussion within India about its economic direction – capitalism, socialism or a mixed model such as welfare capitalism? Mahatma Gandhi (1869-1948) is also in the picture with his opposition to modern technology and his promotion of small cottage industries symbolised by the spinning wheel.

Sarkar approaches the topic by stating that there are three possibilities to owning and running a business: state control, cooperative and private. He quickly rejects the wisdom of widespread nationalisation of industry. He argues that the technological complexity of the modern state makes it impossible for central bureaucrats to run and supervise all large-, medium- and small-scale enterprises. Nationalisation of all business is simply inefficient. Note that with this argument Sarkar accepts the reality of the modern state, with all its technological complexity, and thus implicitly rejects Gandhi's anti-technology position.

Next Sarkar rejects as "unrealistic" the proposal that everything should be run as cooperatives. He observes that cooperatives must possess basic characteristics if they are to be genuinely cooperative and it is not possible for all enterprises to have those characteristics. A cooperative enterprise, he says, is built with the collective labour and intelligence of a group of people who "share a common economic structure, have the same requirements, and have markets available nearby for the goods they produce (or purchase)." He concludes that an enterprise will not have the fundamental characteristics of a cooperative unless all three factors are present. (The characteristics of cooperatives are discussed further in the section *Corporate structure and governance*.)

Finally Sarkar also strongly rejects an economic system based on state regulation of privately run businesses and the various mixed economic models that were popular at the time. His main argument is that private owners will always be fighting against the constraints imposed by government which will lead to black market activities, tax evasion, etc. He believes that welfare capitalism is an inherently flawed concept which is more concerned to preserve the power of capitalists than it is to promote welfare.⁹

So what does Sarkar propose? He presents his vision in the context of the Indian agrarian economy and the production of essential commodities. The dominant economic role is to be played by three kinds of cooperative: farmer cooperatives, producer cooperatives and consumer cooperatives. Farmer cooperatives, says Sarkar, offer economies of scale, sorely needed in India where agriculture is dominated by peasants working small plots of land. Aggregating small fields will allow farmers to arrange seed more efficiently and to increase crop production by taking advantage of "proper scientific methods".

Sarkar promotes a system where the production and distribution of each individual commodity is assigned either to the public, cooperative or private sector. The best option is for farmer and producer cooperatives to produce all essential foods, fibres, clothing and fuel, while consumer cooperatives should be responsible for the distribution and marketing of the same. Housing materials should be manufactured and distributed by the state government

(through the mechanism of *autonomous bodies*) or by large cooperatives supported by the state government. The right to manufacture medicines should be entrusted to autonomous bodies which can distribute the medicines themselves or through consumer cooperatives. Autonomous bodies are not directly defined but appear to be statutory entities similar to public utilities.

Sarkar is explicit about the dangers of business people having a dominant role in the rural economy. He defines business people as “those who profit by trading and broking without being directly involved in production”. It is important to be clear about this definition. Sarkar is not opposed to businesses that produce real wealth, that is, real goods or services – quite the opposite. He is however opposed to those people (‘middle men’) who would insert themselves into a chain of production for the purpose of creaming off the surplus. Such people should not own arable land, nor should they act as intermediary merchants. He is also opposed to the feudal-like system where peasants work hard but must deliver their harvest to a wealthy landowner.

“Almost everyone in the world today has in principle acknowledged that only genuine farmers should own arable land, and that no third party should come between them and the revenue department of the government. So it must be accepted that in the production of food, the question of ownership by non-producing business people does not arise at all.”¹⁰

Business people should not control the distribution of food grains because when in private hands “it is absolutely impossible to stop hoarding, speculation, black marketing and adulteration in food markets.”¹¹ Nor should business people be given scope to gain control of key commodities. It is no accident that the greatest fortunes are made by those who control key commodities such as oil, steel and communications. The production and distribution of non-essential foods, non-essential housing materials and the like is the appropriate domain for private businesses.

Sarkar sums up his general attitude in the following passage:

“The less private enterprise is provided with business opportunities and the more production and distribution are carried out through cooperatives and autonomous bodies, the better. The less the government is involved with the public in the areas of production and distribution the better its relationship with them will be, and the less power the central government has in these areas the better.”¹²

In *Human Society Part I*, we begin to see Sarkar’s vision of a cooperative economy. Other ideas appear which are to be elaborated over subsequent years, for example, the distinction between essential and non-essential goods and the importance of a decentralised economy. However there is no specific mention of the three-tier economy. That concept appears for the first time in the following year (1958) in *Problems of the Day*:

“Industry, agriculture, trade and commerce – almost everything – needs to be managed, as far as possible, through cooperative organizations. For this, special facilities will have to be provided to cooperative organizations whenever necessary. Adequate safe-guards will have to be arranged, and slowly private ownership, or the system of individual management, will have to be eradicated from specific areas of agriculture, industry, trade and commerce. Only those enterprises which are difficult to manage on a cooperative basis because they are either too small, or simultaneously small and complex, can be left to individual management. Similarly, the responsibility for those enterprises which cannot be conveniently managed on a cooperative basis because they are either too large, or simultaneously large and complex, can be undertaken by the immediate state government (in the case of a federation), or by the local body (in the absence of a federation).”¹³

It is clear once again, that Sarkar considers the cooperative system to be the standard means of owning and managing a business. We depart from it only when there is good reason – when efficiency and common sense tell us to. Notice that the definitions of *size* and *complexity* are with reference to some standard of cooperative practice – more on this later. The term *immediate government* will also be explained later, but for the moment think of these businesses as *public utilities* owned by and operated on behalf of the general public. Public utilities were a common way of producing key commodities prior to the ascendancy of economic rationalism.

The language of the above passage allows us to construct a table (Table 1) showing the operating domains of the three types of business. It should be mentioned in passing that Table 1 could not have been constructed from earlier translations of the same passage. Therefore it is important when studying Sarkar to obtain the most recent translation available.

Table 1

The mode of business ownership and management according to the three-tier system of Prout is determined by business size and complexity.

Size of Enterprise	Complexity of the Enterprise	
	Not complex	Complex
Too large for a coop	public utility	public utility
Large	cooperative	public utility
Medium	cooperative	cooperative
Small	cooperative	private
Too small for a coop	private	private

On October 19th 1959, Sarkar added another component to the three-tier enterprise system by introducing the concept of *key industries*.¹⁴ The term is not defined directly but from context and examples, key industries are those that have a central or strategic role in the economy. Obvious contemporary examples are the oil and coal industries. While Sarkar is generally in favour of economic decentralization, key industries are the exception. These are of such importance that they require centralized planning.

“If a particular country or district is highly industrialized, that will not help in uplifting or changing the economic standard of other parts of the world or country. Hence industry should be decentralized but key industries should be centralized. For example, the spinning industry should be centralized, and around it there should be a weaving industry run on [the basis of] decentralization principles. Even in areas where the climate is extreme, industries such as spinning can be established through artificial vaporization. This will help to create a self-supporting economic unit, which is badly needed.”¹⁵

Most key industries will also be very large, so it often appears that the term is synonymous with very large-scale industry. However Sarkar later made a distinction:

“There are some special types of key industries which can conveniently function as either small-scale industries or medium-scale cooperative industries. If some key industries are structured in this way, they must be under state control. Care should be taken to ensure that they are properly organized and widespread. Such key industries should never be controlled by capitalists, otherwise the interests of the people will be partially, if not fully, ignored. Moreover if they are left in the hands of capitalists, many kinds of problems will arise.”¹⁶

Key industries are a modification to the basic template of Table 1. When an industry is declared to be a key industry by an appropriate government authority, it comes under state control and central planning. Large-scale key industry is centralized while small-scale key industry is geographically distributed. This is a strategic consideration. Examples of small-scale key industries might be town water supplies, treatment of sewage and the manufacture of ball bearings. None of these is necessarily large scale but without them modern civilisation would collapse. Factories that produced ball bearings were specially targeted in World War 2 bombing raids.

We now have two refinements to the template in Table 1. One involves the distinction between a key industry and non-key industry and the other involves a distinction between essential and non-essential goods and services. Note that these two distinctions are independent of one another. The former distinction is made with respect to the strategic role of an industry while the latter distinction

is with respect to what consumers normally buy. It is unlikely that ball bearings will appear in a weekly shopping list and a bakery does not rate as a strategic industry. But of course both distinctions will vary according to the circumstances of the age.

Sarkar formally introduced Prout in 1959, in the final chapters of *Idea and Ideology*.¹⁷ He traces the rise of capitalism as well as the individualism and selfish tendency which contain the seeds of its eventual demise. He then lays out the philosophical, constitutional, legal and socio-economic justification for Prout. He introduces ideas such as the *guaranteed minimum requirements, incentives, guaranteed purchasing capacity* and the need for a *merit based economy*. He concludes with Five Fundamental Principles (Appendix 1) which are a succinct statement of the economic principles of Prout. These are later included in a set of 16 aphorisms that summarise Prout.¹⁸

Sarkar's third exposition of Prout, *Discourses on Prout*,¹⁹ includes a summary of the three-tier system:

“Large-scale and small-scale industries should remain side by side. Key industries should be managed by the immediate government, because it is not possible to run them efficiently on a cooperative basis due to their complexities and hugeness. Small-scale industries should run on a cooperative basis, and the small industries which cannot be managed by cooperatives should be left to private enterprise. Thus: 1) small businesses should be left to individuals; 2) big industries should be owned by the immediate government; and 3) the industries in between the big and small industries should be run on a cooperative basis.”²⁰

The three tiers of enterprise are described again in different ways over subsequent years. The wording varies on each occasion but all the important ideas were introduced by 1959. One should interpret the later summaries by returning to the original expositions.

Three Categories of Goods and Services

Something more must be said about the distinction between essential and non-essential goods and services because it is profoundly important in a Prout economy. Essentials and non-essentials are treated differently because if essential goods are in short supply people may suffer greatly, but an absence of luxuries can be tolerated, at least for a while! For example, excise taxes might be applied to luxuries but not to essential goods. And while Sarkar encourages free trade in non-essentials, everyone must be guaranteed their essentials before trading the surplus. It is morally unacceptable that malnutrition is widespread in India and yet some 80% of its wheat crop is exported to developed countries to fatten beef cattle.

In 1988, Sarkar formalized the classification of commodities by introducing a third category.

“Commodities can be divided into three categories: essential commodities, such as rice, pulse, salt and clothing; demi-essential commodities, such as oil and antiseptic soap; and non-essential commodities, such as luxury goods. If hoarders create artificial shortages of non-essential commodities common people will not be affected, but if they accumulate essential commodities then common people will suffer tremendously. This situation can be avoided if consumers cooperatives purchase essential commodities directly from producers cooperatives or agricultural cooperatives.”²¹

In subsequent paragraphs, Sarkar specifies the relation between commodity type and enterprise type.

“If the distribution of essential commodities is done through consumers cooperatives, middlemen and profiteers will be eliminated. ... Demi-essential commodities, which may be affected by artificial shortages causing suffering to common people, should be produced by producer cooperatives. The production of luxury goods can be left in the hands of the private sector. Essential commodities or services of a non-farming nature coming within the scope of producers’ cooperatives, and which require huge capital investments, should be managed by the government. The railway system is an example. So, for the establishment of a healthy society, agricultural cooperatives, essential commodity producer cooperatives and essential commodity consumer cooperatives are a must.”²²

A reading of the various texts suggests Table 2.

Table 2

The mode of production used to produce a commodity will in part be determined by its category, essential, demi-essential or non-essential.

Category of commodity or service	Public Utility	Cooperative	Private
Essential	✓	✓	X
Demi-essential	X	✓	X
Non-essential	X	✓	✓

The Enterprise Pyramid

To place Sarkar’s three-tier classification of enterprises in a more concrete context, it is useful to examine the distribution of business sizes in a well-developed economy such as Australia. Businesses in Australia are typically divided into four categories. By far the largest category, embracing some 82%

of Australia's 1.11 million businesses (in 2002), are the micro-businesses owned by one or two people and employing few or no staff. Micro-businesses have limited resources and each produces a limited range of goods and services. They are price takers and have no market power (Table 3). At the other end of the scale are huge businesses, employing more than 200 people. They dominate the market over a wide geographical range and are price setters.

Of particular interest is that there are very few large businesses and many small ones. In fact, research has established that the distribution of business sizes is so consistent between countries and over time that it appears to be governed by three laws.²³ The first law, known as the 95% rule, says that large businesses rarely exceed 5% of the total number of businesses in a country. In Australia it is less. The second law is the *pyramid law* which says that the number of businesses of a particular size is in inverse proportion to their size. The third law says that these patterns vary little over countries and over time.

Table 3

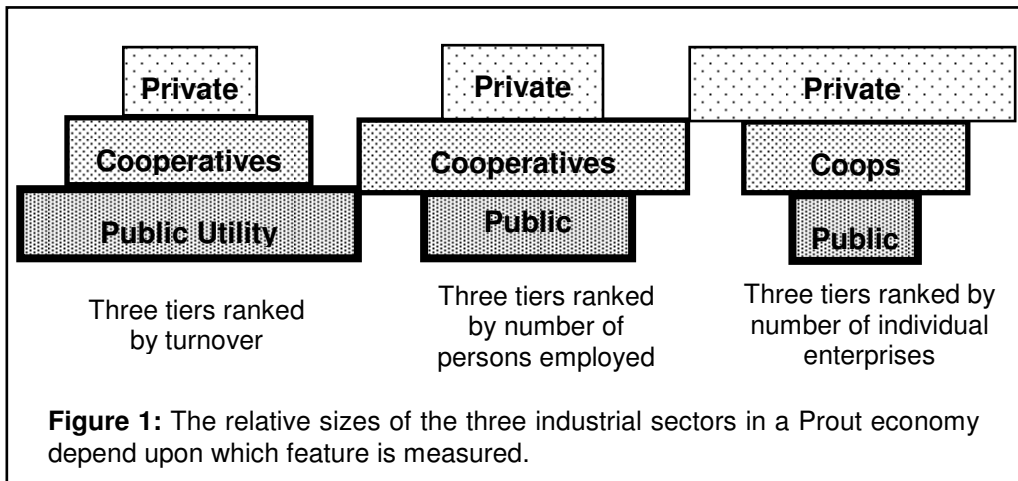
Like many other countries, business sizes in Australia follow the pyramid rule, that is, there are very many small businesses and few large ones. The term *frequency* in column 2 refers to the number of businesses in Australia. The numbers in columns 2 and 4 are obtained from the Australian Bureau of Statistics, Year Book 2002.²⁴ Note that these ABS figures exclude public trading and general government entities and businesses in the agriculture, fishing and forestry industries.

Business Category	Frequency (number of businesses)	Number of staff per business	Total persons employed in business category	Prout category
Large	2,700 (0.24%)	>200	1.75 million	Public Utility
Medium	36,900 (3.3%)	20-199	1.80 million	Large coop
Small	167,100 (15%)	5-19	1.44 million	Small Coop
Micro	907,800 (82%)	0-4	1.74 million	Private
TOTAL	1,110,000 (100%)	-	6.73 million	-

The formal division into four categories is used in Australia to make distinctions concerning workplace regulations. It is tempting to propose that the same categories could be applied to Prout's three-tiers of enterprise (right most column in Table 3). Micro-businesses fall into the private enterprise category, small and medium businesses fall into the cooperative category, while large businesses fall into the public utility category. Assuming that the pyramid law persists in a Proutist economy (an entirely reasonable

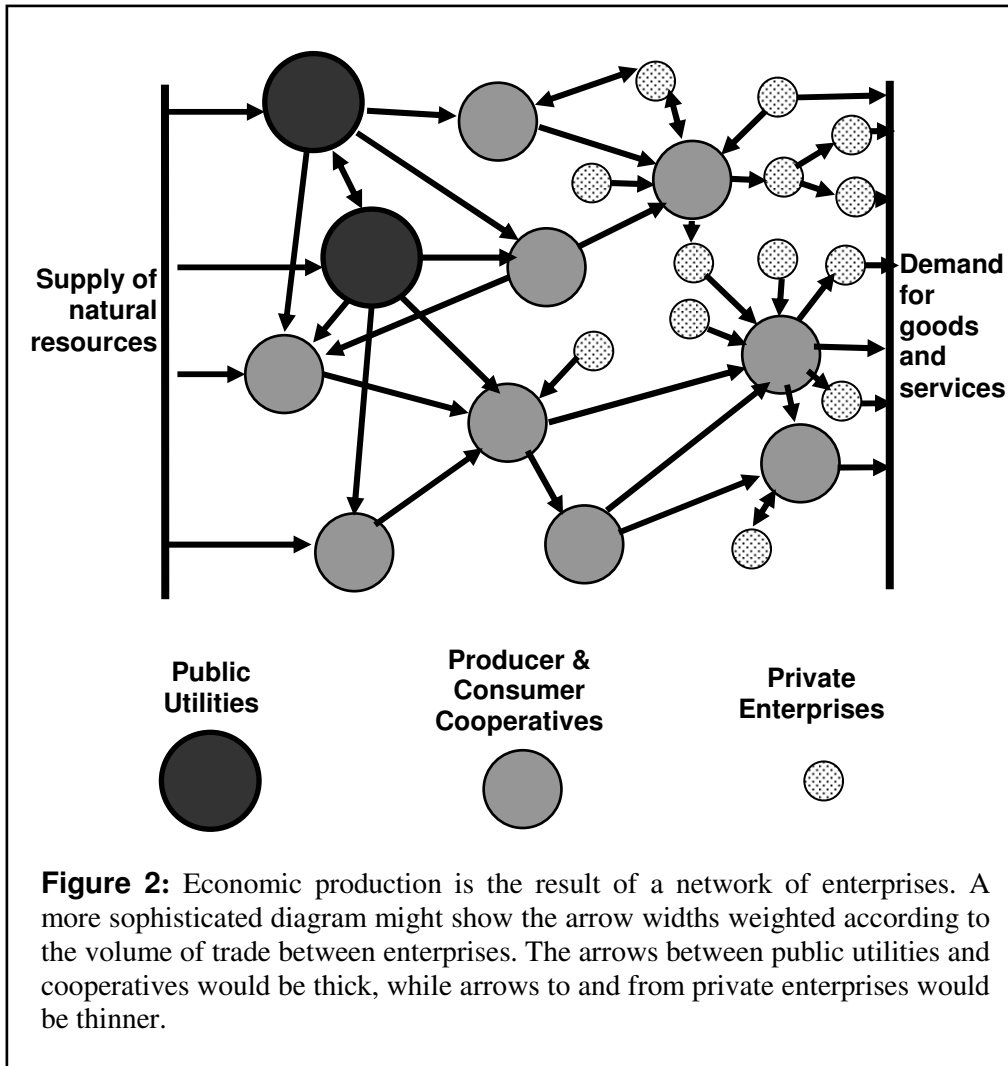
assumption), then privately owned micro-enterprises would constitute the largest category of business.

However, as shown in Table 3, the total numbers employed in the cooperative sector would far exceed those in the other sectors. And when turnover is taken as the criterion for size, then the large-scale public utility sector is most likely to be dominant (Figure 1). The most meaningful of these criteria is the human one – number of persons employed. In a Prout economy, Sarkar’s intention is that the majority of people would work in cooperatives. From a social and cultural perspective, it is desirable that cooperatives dominate the collective psychology.



The Enterprise Network

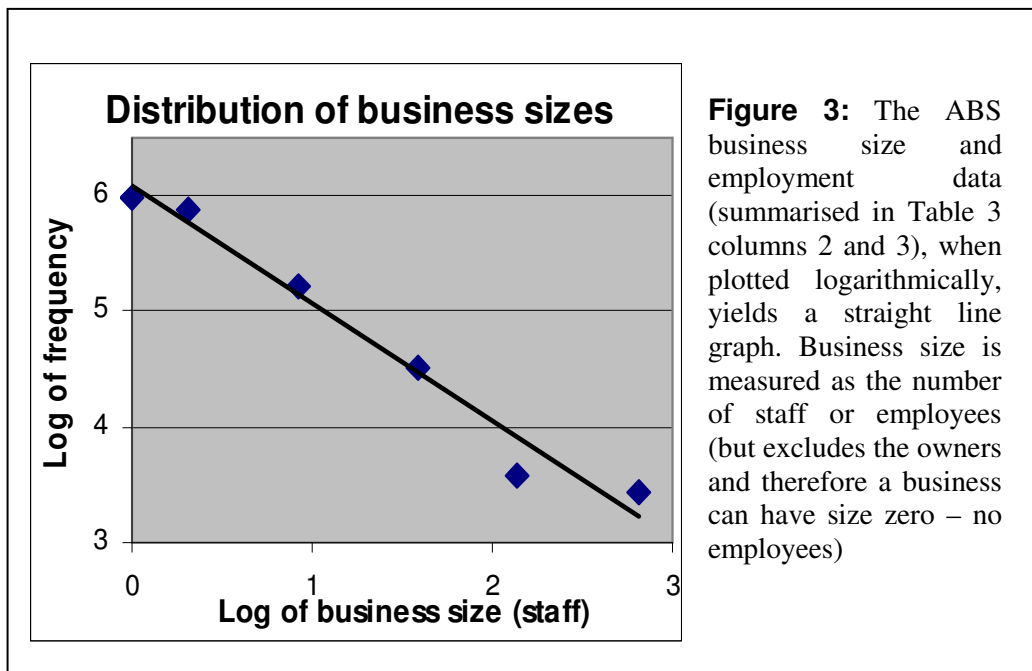
Another way to consider the relationship between public utilities, cooperatives and private enterprises is to view economic production as a network of enterprises (Figure 2). In Sarkar’s vision of economic development, cooperatives will tend to cluster geographically around sources of raw materials, which will often be extracted and processed by public utilities. In turn, private enterprises will tend to cluster around cooperatives exploiting non-essential niche markets wherever they can. For example, a factory producing yarn might be classified as a key industry in a particular area. It would be placed near sources of cotton, wool or artificial fibres as the case may be. Cooperatives producing a variety of fabrics and clothes would be located in the vicinity of the yarn factory. Finally a fabrics industry would attract a variety of individually working artists and fashion designers, whose services would be purchased by cooperatives interested in enhancing their products and gaining a competitive edge.



The notion of a production network can be used to formalize the concept of a *key industry*. As noted above, studies in many countries have revealed that there is a surprising consistency in the pattern of business sizes. When the ABS data in Table 3 are plotted using what is called a log-log plot (Figure 3), the result is close to a straight line. Such a result is highly significant and of immediate interest to scientists, because similar distributions are found in many parts of the natural world. For example, neurons in the brain are connected such that a few neurons have many connections and many neurons have few connections. One can draw a log-log plot of the distribution and obtain a straight line just like the one shown in Figure 3. Genes within living cells regulate other genes. Most genes will regulate only a few other genes but there are a few genes with many regulatory links. The same distribution occurs on

the internet. Most internet web pages have only a few links to other pages but there are a few major pages, known as *hubs*, that have many links.

In general, networks of this type are called *scale free networks*.²⁵ They are found widely in the natural world and they have interesting properties. If we assume that large businesses also supply (that is have links to) many other businesses, then the enterprise network also appears to be scale free. Hub businesses, which are of particular importance to the integrity of the network, can be identified mathematically by the pattern of their connections. Key industries can be defined and identified in this manner as network hubs.



The Enterprise Life-cycle

Research is beginning to reveal many interesting parallels between national economies and biological systems. The existence of scale-free networks in both domains is just one example. Another is the pattern of business bankruptcies or dissolutions over centuries, which has similarity to the pattern of species extinctions over evolutionary time.²⁶ It is also helpful to think of the founding and growth of a business as being a *life cycle*. Most commonly, businesses are born small, perhaps in a garage. Some succeed and grow to become multinational corporations (Apple Computing is the archetypal example) – others never get out of the garage.

To get from garage to corporation requires an enterprise to catch a technological wave and to stay on that wave. Today's convenience becomes tomorrow's necessity. Sarkar is explicit, even enthusiastic, in his support of science and technology in a Proutist economy and about the need to expand the domain of necessities as technology progresses.²⁷

“The number of items considered essential commodities should be continually and progressively revised and expanded with the changes in time, space and person. Such revisions should be made by the government and not by the board of directors of a particular cooperative. What is considered a demi-essential commodity today may be treated as an essential commodity tomorrow.”²⁸

In the Proutist enterprise environment, the same dynamics will tend to push businesses through a life-cycle. Some thought needs to be given to the important transition stages in that life cycle; the transition from private business to cooperative, from cooperative to public utility and even the transition from public utility back to cooperative when a technological wave has swept through and had its day. One way to ease a passage through these life-cycle stages would be to consider the possibility of transitional enterprises and partnerships between the different enterprise types.

Transitional Enterprise Models

Businesses have a life-cycle. A successful business will grow and, in the Proutist framework, may need to negotiate its way through the entire three-tier system during its life time. But are there only three models? Why could there not be a spectrum of management models from the single owner-operator of a micro-business to the complex hierarchical management of a large-scale government corporation? It would certainly be useful to have intermediate business models between the private concern and a cooperative because they are so different, not just in size but also in the psychology of their management.

One way to approach the issue of transitions is to think in terms of mixed models and partnerships. For example Sarkar's discussion of service cooperatives (see later) includes doctors who pursue private practices within a cooperative framework. This is a model that already has successful parallels in Australia. The Independent Groceries Association (IGA) enables individual owners to manage grocery stores under the umbrella of a larger organisation which achieves economies of scale by sourcing and distributing supermarket items nationally. This is particularly useful in sparsely populated parts of Australia where there may not be the population to support independent consumer cooperatives. Another example, closer to the author's home, is the Praxis Cooperative in Brisbane, Australia. Its six members and associates work both as individuals and cooperatively, offering a range of professional services.²⁹

Many franchises in a capitalist economy could operate as cooperative-private partnerships. One might even imagine a multinational franchise, such as MacDonald's, operating as a group of dispersed national cooperatives, sharing the same recipes. The critical issue is that those resources which can be purchased locally are purchased locally and that profits (whether of the cooperative or the franchises) be retained locally.

In a mixed cooperative-private model, a business registered as a cooperative would retain within it individuals who are operating their own private business. This model would work particularly well for individuals providing professional services, that is, doctors, lawyers, accountants and artists. The arrangement would preserve the spirit of cooperation but allow for individual diversity.

In the same manner, a large public utility might act as the umbrella organisation for a group of cooperatives. They might do this to undertake large-scale public works or, as in the case of the Mondragon cooperatives in the Basque region of Spain, to survive in a capitalist world dominated by large corporations. Mondragon's 100 worker-owned enterprises and affiliated organizations are today integrated into the Mondragón Cooperative Corporation (MCC). MCC firms are the leading producers of domestic appliances and machine tools in Spain, the largest domestically-based supermarket chain in the country, and the third largest supplier of automotive components in Europe.³⁰

The dubious PPPs (public-private partnerships) so popular in Australia over the past two decades could become public-cooperative partnerships (PCPs). The PCP model could assume considerable importance in a Proutist economy as a means to decentralize an otherwise centralized key industry. We have already noted Sarkar's opposition to highly centralised industry and his support of science to achieve *economies of decentralisation*. PCPs might be the appropriate managerial structure to move in this direction.

So we now have a five-tier system instead of the basic three-tier system: the basic three tiers plus PCPs and cooperative-private partnerships. This is a richer way of viewing the possibilities and deals with transitional issues. Other intermediary managerial models will undoubtedly be adopted as required but we should not lose sight of the primary objectives – to ensure that everyone has their minimum requirements of life, to achieve efficient production, to decentralise production by building strong local economies.

An Expanded View of the Cooperative Sector

So far we have considered three kinds of cooperative: farmer, producer and consumer cooperatives. Sarkar also refers in various places to service, banking, housing and family annuity cooperatives.³¹ The last is not elaborated but

clearly Sarkar envisages cooperative enterprises providing the full range of goods and services required by a modern technologically advanced economy.

Over the past decade or so, traditional worker and consumer cooperatives (such as those above) have come to be regarded as just one component of a third economic sector sometimes referred to as the *social purpose* or *mutual* sector (see Figure 4). Social purpose can be defined more or less narrowly and the objectives of an enterprise may lie somewhere on a continuum between purely social purpose and purely commercial purpose. According to the Wikipedia entry on Social Economy (December 2009),³² a purely social purpose enterprise must satisfy the following three criteria:

- The ideal of the enterprise must be a clearly defined ethical concept.
- The primary objective of the enterprise must be the improvement of disadvantaged peoples, to which we might add disadvantaged animals and plants.
- The profits and the resources must be verifiably reinvested for the benefit of the disadvantaged.

Pearce³³ divides the social purpose sector into three sub-sectors: the formal cooperative sector consisting of cooperative enterprises as described above; second, the voluntary sector which in Australia is called the *not-for-profit* sector; and thirdly the informal household economy. Two further terms are commonly used in reference to the social purpose sector, the *social economy* and *social enterprises*. The social economy, as can be seen from Figure 4, is the formal trading part of the social purpose sector. Social enterprises may be defined quite generally as those trading businesses whose principle objective is something other than making a profit. This includes cooperative enterprises and *not-for-profits* and collectively they constitute the social economy.³⁴ Note that social enterprises will typically have a mixture of social and commercial purposes – it is their *principle* objective, however, which determines their classification. In the case of a worker cooperative, which clearly must have commercial objectives in order to be economically sustainable, its principle objectives will nevertheless probably be concerned with 1) provision of goods and services required by the local community, 2) provision of employment opportunities in the local community and 3) safe and enjoyable working conditions.

In this essay, we will sometimes use the term *cooperative sector* synonymously with the social purpose sector. Using the word *cooperative* in this more general sense draws attention to the manner in which the various components of the sector operate – that is, cooperatively. They do not rely upon the command structure which is typical of private and state owned enterprises.

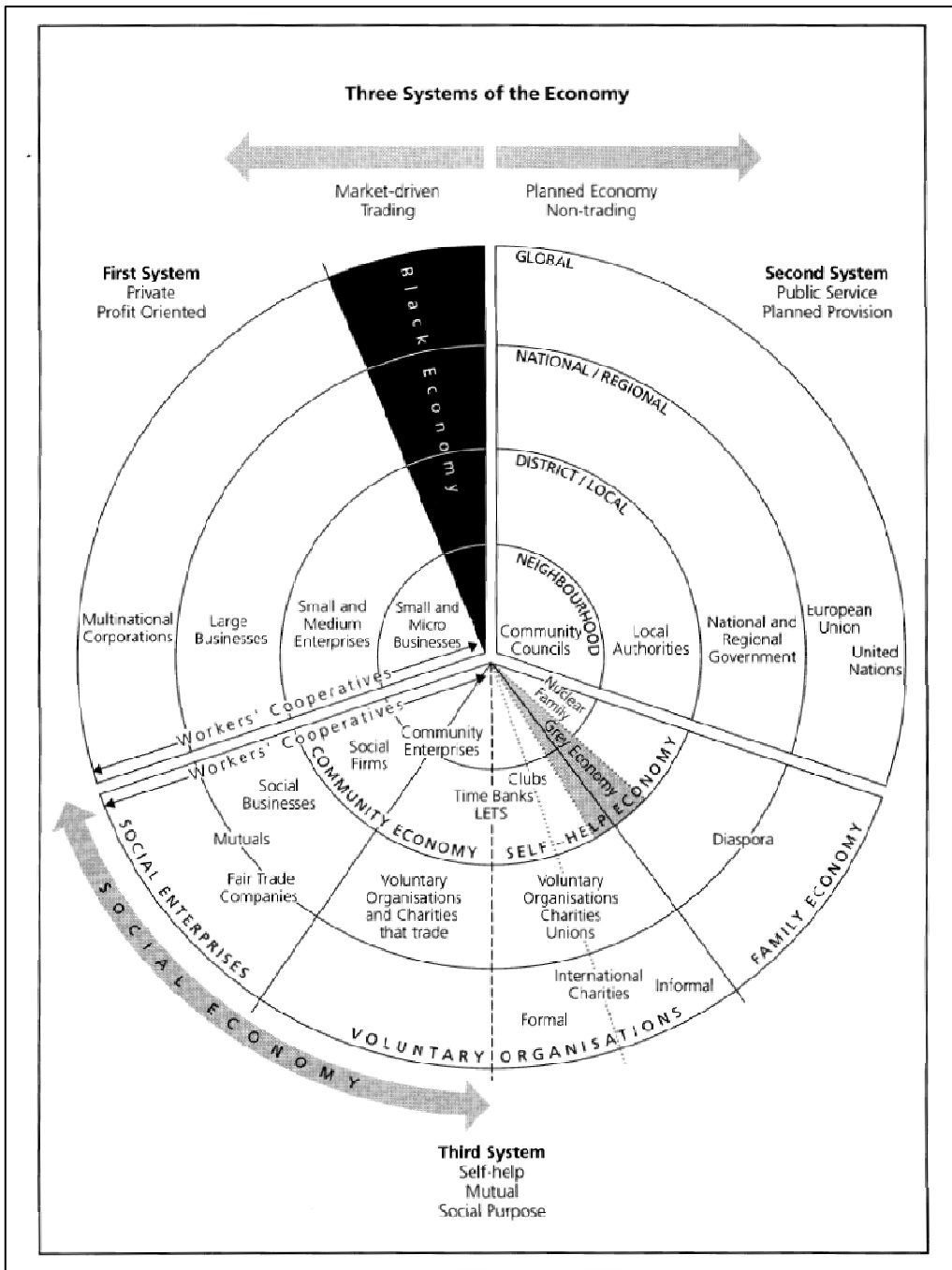


Figure 4: Diagram to illustrate the different sub-sectors of the cooperative sector of a modern capitalist economy. The cooperative sector is more sophisticated and important in a capitalist economy than is indicated simply by the number of workers cooperatives. (From Pearce, 2003)

The voluntary sector in Pearce's enterprise typology consists of cooperatively managed NGOs, charities, clubs and societies. Examples are church groups, the RSPCA, AMURT, Amnesty International, the World Wildlife Fund and Greenpeace. Such groups exist for the welfare of marginalised people and care of the environment. They survive from donations and small business activities. They are becoming increasingly important in the modern world and have a significant presence in the United Nations. Such organisations do not exist primarily for production or profit but they are economically important because they represent self-help, filling the gaps where governments and big business have failed. At the local level, they attend directly to problems of unemployment, disaster relief, injustice and pollution where these arise. It is estimated that the *not-for-profit* sector in Australia contributes 4.7% to the GDP. Given their essential contribution to the productive economy and to providing people with the essentials of life, these organisations will continue to have a prominent role in a Proutist economy.

One measure of the health of a community is the degree of participation in voluntary organisations, clubs and societies. Sociologists, such as Putnam,³⁵ have expressed concern about the decline in club memberships since the 1970s. It is interesting to note a parallel decline over the same period in the Calvert-Henderson real economic indicators.³⁶

Recognition of the importance of the social economy has been a long time coming to Australia and the country is probably a decade behind Europe and the UK in this regard. However this is about to change judging by various institutes that have opened in the last few years, including the Centre for Social Impact at the University of New South Wales³⁷, The Australian Centre for Philanthropy and Nonprofit Studies at the Queensland University of Technology³⁸ and Social Traders.³⁹ A particularly important research interest for these centres is *social accounting*, that is, how to measure the success of the social purpose activities of social enterprises. More will be said on this subsequently.

The Informal Economy

The third component of the social purpose sector in Pearce's typology (Figure 4) is the almost invisible but tremendously important household economy. Best estimates suggest that informal household production accounts for as much as a third of productive economic activity in Australia⁴⁰ and yet it is totally ignored by the formal national accounts. Such activities include care of aged parents, construction of household furniture and the myriad acts of kindness that people do for one another in daily life. It would be futile to absorb the informal household economy into the formal economy (although tax collectors would dearly like to!) but the health of the formal economy ultimately depends on the smooth running of the informal household economy. Hence the importance of public parks and other public amenities that help to make family life easier.

In passing we should mention the larger informal economy. In countries such as India and Brazil, less than 25% of the working age population is employed formally in the private or public sectors. The remainder make themselves a living invisible to the collectors of statistics and taxes. The informal economy is not planned or measured and therefore not incorporated within the national accounts. It includes undeclared small businesses, black market activities and criminal activity in addition to the legitimate informal household production that we have already described.

Unfortunately we cannot ignore the contribution of black markets and criminal activity to the modern capitalist society (see the black sector in Figure 4). According to a United Nations report,⁴¹ drugs money worth billions of dollars kept the financial system afloat at the height of the Global Financial Crisis in 2008. Antonio Maria Costa, head of the UN Office on Drugs and Crime, says he has evidence that the proceeds of organised crime were “the only liquid investment capital” available to some banks on the brink of collapse in 2008. As a result, profits from global drug trafficking to the tune of about \$350 billion were laundered through the banking system in order to keep the global economy afloat.

Corporate Structure and Governance

There is a wealth of literature on corporate structure and regulation that would be relevant in a Prout economy. In this section we summarize some of the basic ideas, pointing out areas where the three-tier enterprise system differs from conventional practice.

Cooperative Enterprises

There are seven internationally recognised principles of cooperation that are also embraced by Sarkar’s model of the cooperative system:

1. Voluntary and open membership
2. Democratic – controlled by their members
3. All members contribute fairly to their cooperatives, which they own in common. Cooperatives pay a limited return on the money a person invests to become member.
4. Autonomy and independence – cooperatives are autonomous, self-help organizations controlled by their members.
5. Education, training and information
6. Cooperation among cooperatives
7. Concern for the local community

Besides these, Sarkar insists that successful cooperatives also depend on common motivation, strong supervision, ethical management,⁴² whole hearted acceptance by the local community and the availability of local markets.⁴³ In

the Prout system, cooperatives are still subject to the discipline of the market place and if a cooperative cannot get a viable market share in its own locality, it is unlikely to get it elsewhere. Finally Sarkar notes that the cooperative system in general needs to be accepted at the government level with appropriate legislation to encourage a positive climate for cooperatives. (Recall Robert Owen's vision of government support for cooperative villages.) This includes everything from an education system which espouses the virtues of economic cooperation to legislation that offers protection from the predatory activities of large corporations (a situation that might occur if a government were trying to introduce cooperatives into a capitalist free-market economy).

The generally recognised advantages of the cooperative system include:

- There is no conflict between owners and employees because the employees are the owners. The adversarial basis of labour relations is removed. Sarkar puts it thus: "In capitalist and communist countries the mode of production is defective. In capitalist countries, labour does not work in the interest of management and management does not allow the rolling of money due to wealth concentration. In communist countries labour does not feel one with the job and that is why there is sluggish production. The cooperative model of Prout is free from both defects."
- Workers have more incentive to work efficiently because they enjoy the benefits of their hard work.
- Cooperatives allow workers to reap the benefits of labour saving technology because automation reduces working hours but not income.
- A well-managed cooperative offers security of employment. Workers need not live in fear of losing their jobs because they are also the owners.
- Cooperatives do not exist purely to make a profit. They have multiple goals, multiple bottom lines - for example, to provide worthwhile work and to produce products that improve the quality of life of the local community.
- Cooperatives are closely linked to their communities ensuring that cooperative boards of management will make decisions that take community interests into account. For example, coops are less likely to pollute the environment because their owner-workers must live with the pollution they create! A frequent criticism of private corporations is that they are not accountable to the communities affected by their decisions.

Sarkar admits that cooperatives have failed in many countries, giving rise to doubts regarding their viability as an alternative business model:

"On the basis of the examples to date, it is not appropriate to criticize the cooperative system. This is because most countries could not evolve the indispensable conditions necessary for the success of the cooperative system. Cooperatives depend upon three main factors for their success –

morality, strong supervision and the wholehearted acceptance of the masses. Wherever these three factors have been evident in whatever measure, cooperatives have achieved proportionate success.

“Take the case of Israel. Because the country is surrounded by enemies on all sides, the people are extremely aware of the need to be self-reliant. People want wholeheartedly to consolidate the national economy. Thus, they have converted arid deserts into productive agricultural land through the cooperative system.

“As this kind of mentality was never created in India, India is a classic example of the failure of the cooperative system. Indian cooperatives were not created for economic development but for the fulfilment of political interests. Under such circumstances it was impossible for the cooperative system to succeed.”^{44 45}

Fortunately, today we can say that there are many cooperative success stories around the world. The best examples of large-scale cooperatives are to be found in Mondragon.⁴⁶ Good examples of medium- and small-scale cooperatives can be found in Maleny, Australia. This small town boasts over 20 cooperatives, including a cooperative bank, food coop, waste recycling coop and several housing coops. Housing cooperatives are common in many parts of the world especially Turkey and Scandinavia.

Government Business Enterprises

Recall that in Prout’s three-tier economy, all key industries and all enterprises which are too big to be run conveniently as cooperatives are operated as government enterprises. Their capital is ‘owned’ by the public and they operate in the public interest. Public ownership is established by a statute which also defines the goals and governance of the enterprise. The enabling legislation is the responsibility of the nearest appropriate level of government, or to use Sarkar’s term, the *immediate government*. For example, in Australia, which has a federal system, the national airline operates under federal legislation, the electricity boards operate under state legislation, and many of the water and sewage authorities operate under local government. In the 1940’s, 50’s and 60’s, prior to the era of privatisation, government business enterprises had an important role in managing natural monopolies, for example harbour and airport authorities and hospital boards. A Prout economy would certainly reverse the privatisation trend, but Sarkar is cautious of politicians having a direct business role. It is important that the legislation defining a government enterprise maintains a distance between politicians and the actual running of the enterprise.

Business corporations, including those which are state owned, typically have a board of directors who represent the owners (that is, the public) and who make policy. Policy execution, on the other hand, is in the hands of one or more

executive officers headed by a CEO. A major issue is the degree of government influence over policy making versus the degree of independent public control. This is determined by the enabling legislation which describes the composition of the board. The possibilities include government appointment, election by an appropriately constituted electoral college, election by the employees, election by the public, or some combination of these. Given Sarkar's preference for government to have minimal direct involvement in business, it is not surprising that he describes government enterprises as *autonomous bodies*. An autonomous body has the legal authority provided by statute but after that it operates independently of government control. Independence is ensured by having the board constituted independently of government and giving the board (and not the government) power to appoint the executive. In New Zealand before privatisation, the District Hospital Boards, the Port Authorities and the Electricity Boards, etc., were elected by the general public at the same time as other local body elections. Sarkar suggests that worker's representatives, elected by the workers themselves, should also have position(s) on the board.

Once a board is established, it (or the chair person) appoints the executive officers. The officers are answerable to the board and the board is answerable to the immediate government representing the people. Executive officers may be selected from among the board members or from elsewhere, but these days it is considered best practice to ensure a majority of non-executive directors.⁴⁷ In the various organisations which he founded, Sarkar also allows for executive officers to be selected from suitably qualified persons outside the board.

Consistent with their role as public utilities, government enterprises in the Proutist model operate on the principle of *no profit and no loss*. That is, they set their prices so as to equate income with expenditure. However, this raises three questions, concerning optimum pricing, efficiency and tax revenue.

Pricing

The public management of large-scale industries is justified where there are unavoidable economies of scale that lead to a natural monopoly. In these circumstances, market forces would push a cooperative or private enterprise to increase profits by restricting supply. According to standard economics text books, government regulation can correct such market 'distortion' in two ways. One is to require the firm to produce to its marginal cost (marginal cost pricing) and the other is to produce to its break even point (average cost pricing). The former policy increases supply but the firm makes a loss over the long term. The latter policy ensures that the firm breaks even in the long term but there is a so-called 'deadweight loss' or inefficiency associated with lower production. Sarkar would appear to be an advocate for average cost pricing, since elsewhere his notion of a rational profit requires accounting for all long term fixed costs, investment, sinking funds, etc.

However, there is strong argument that public utilities should produce up to their marginal costs because they are typically producing goods that are essential for public welfare. In other words, they should maximise production and fixed costs should be met out of government expenditure. A further argument is that the products of public utilities have *positive externalities* which are not captured in normal cost accounting. Proutists have yet to give adequate thought to these issues. The economics literature offers other proposals, such as a compromise between average cost pricing and marginal cost pricing, for example.⁴⁸

Efficiency

The second issue to arise from the *no profit and no loss* principle concerns efficiency. In the capitalist system, profit is used as a surrogate measure of efficiency and therefore as a guide to long-term investment. Some might argue that removing the profit orientation of a large enterprise removes the possibility of monitoring its efficiency but this is not the case. Firstly, there are other ways of striving for efficiency and secondly, public utilities have community service goals in addition to achieving financial efficiency. This is well illustrated by a long-running debate in Australia concerning the privatisation of Australia's telecommunications giant, Telstra. Opponents of privatisation argue that a privatised Telstra would cut back on its rural services which yield lower profit margins. They argue that Telstra should be considered a public utility and should be compelled to accept lower profit margins in providing rural services. This proved to be such a potent political argument that the government delayed privatisation for many years. (Up until the privatisation era, it was accepted practice for public utilities to subsidise their rural services from more profitable urban services.)

In the absence of profit motive, public enterprises can monitor their performance according to the established 'best practice' of the day. Relevant indices might be labour productivity, capital productivity and service standards. Companies can compare themselves with other companies and with international best practice.

Taxation

The third issue arising from the *no profit and no loss* principle is taxation. Tax is normally levied on profit and a well run public utility can be an excellent source of public revenue. Venezuela is funding its ambitious social programmes to reduce poverty from the profits of its state owned oil company, PDVSA. In Australia, some public utilities operate in the manner of private companies but with the government as sole or principle shareholder, which therefore reaps the dividend. At the time of writing, Southeast Queensland's electricity company, Energex, runs on this model and it delivers substantial

revenue to the Queensland State Government. However it leaves Energex open to government interference and the State Government (at the time of writing) stands accused of putting pressure on management to maximise the dividend paid to the government at the expense of maintenance and investment in infrastructure. Sarkar is clearly opposed to this model.

Prout's taxation policy is discussed in Towsey⁴⁹ but suffice to note here that the tax mix depends more on resource taxes than on income and profit taxes. Public utilities consume a high proportion of natural resources, such as water, air, minerals, fossil fuels, etc. In other words, the tax stream would come from the inputs to public utilities and not from their output. Resource taxes would not only yield revenue but also offer governments the opportunity to regulate the mix of resource consumption and thereby ameliorate environmental problems.

As a topical example, what might be the Proutist approach to reducing greenhouse gas emissions? Much argument rages over the merits of a carbon tax versus carbon trading. But it does not have to be either-or. We can learn much from two previously successful campaigns that changed public opinion and industry behaviour: the introduction of compulsory seat belts and the controls over cigarette smoking. In the face of initial strong opposition, both these campaigns were successful because both relied on a spectrum of tools, such as discriminatory taxation, incentives, regulation and education. Likewise reducing greenhouse gas emissions will require a combination of carbon taxes, carbon trading, incentives, regulation and education. In the Proutist context, a carbon tax might be applied to polluting key industries but the cooperative sector might respond better to a carbon trading scheme. The three-tier enterprise system encourages more flexible policy options.

Global Enterprises

As the world becomes increasingly globalised, industries may emerge that invite management on a global scale, presumably by an autonomous body legislated for by a United Nations like body. The production of fibre optic cables is a possible contemporary example, where just seven companies produce 98% of the world's requirements. However Sarkar warns against centralising industry on a global scale and always prefers to decentralise as far as is efficiently possible. Given the strategic importance of fibre optic technology, research should be directed towards efficient production on a national or even smaller scale.

Private Enterprises

Recall that private enterprises in the Proutist model are small scale and provide non-essential goods and services. In the Indian context, Sarkar gives betel shops, tea stalls and restaurants as examples.⁵⁰ Consequently there is no need

for the more complex managerial apparatus of larger enterprises. Most private businesses in a Proutist economy would be family businesses or partnerships of a few people. Such enterprises would operate pretty much as small businesses do today, chasing niche markets where these arise and setting prices as high as the market permits. They might also be crucibles of entrepreneurial activity that pave the way for larger cooperative enterprises. According to capitalist theory, private businesses need only be motivated by profit but in practice most small business operators care about what they do and often continue in businesses that do not yield much profit.

Shareholding

A fundamental feature of the cooperative system is that the workers in a business are also its owners. Ownership is established by the workers purchasing shares, thereby having a personal stake in its financial success. This is the entrepreneurial or risk-taking element of being involved with a cooperative. It is also standard practice to place a limit on the proportion of the total shares that may be held by any one person or group.

If non-worker shareholders exist at all, they may receive a dividend but have no say in management. “In cooperatives, voting rights should be on an individual basis and not on the basis of the number of shares a person holds.”⁵¹ Furthermore, shares should return a dividend based on the “net profit earned by the enterprise”, and there should be no system of preferential shares, that is, shares which earn a fixed amount of interest regardless of whether the enterprise makes a loss or profit. In other words, individuals who invest in a cooperative must share the risk of its success or failure. The fundamental principle is this – cooperatives must never be allowed to become purely investment or money-making ventures. If this happens the spirit of cooperation will be destroyed and cooperatives will fall into the hands of commercially-minded business people who will forget the social and environmental objectives of cooperation.

With one exception, shares should not be transferable or tradeable.

“Members who purchase shares in the cooperative should have no power or right to transfer their shares without the permission of the cooperative, but their shares may be inherited. If some cooperative members have no descendants, then their shares should pass on to their legally authorized successors who will become members of the cooperative if they are not already members.”⁵²

The reason for this policy is once again to prevent a concentration of share ownership in the hands of business minded people who place commercial interests above community. The following passage demonstrates how Sarkar envisages cooperatives having strong community links.

“In different countries there are different systems of inheritance, so the right of inheritance [of a deceased person’s shares in a cooperative] should be decided according to the system in vogue in a particular country. For example, in Bengal the Dáyabhága system is followed, in other places in India the Hindu Code is the established system, while in other countries other systems are practised. If this arrangement is followed, cooperative members will not need to go to court or get involved in litigation. As all members of the cooperative will be from the same vicinity or members of the same village, they will all know each other, and thus there will be little difficulty in deciding who should be the legally appointed recipient of the shares. The members of the cooperative themselves will be able to decide who can claim the right of inheritance to the shares owned by the deceased members.”⁵³

In order to raise capital, a cooperative would, in the first instance, turn to the cooperative banking system. Indeed, the role of cooperative banks is to build the cooperative sector. Large-scale investments in infrastructure, perhaps involving government-cooperative partnerships, would be allocated funds in the government budget. Some of the financial instruments in a modern capitalist economy may be appropriate in a cooperative economy, some not. Once again the guiding principle is to protect the practice of cooperation and to avoid the domination of profit motive. Public utilities might issue bonds if large capital investment programs were not to be entirely funded by government. But such a system would draw savings from the cooperative sector. It is clear that Proutists have yet to research finance in a developed cooperative economy.

Profit in a Prout Economy

Profit motive lies at the heart of capitalism. To quote James Killen, a former Australian cabinet minister (1975-1982), also renowned for his wit: “Anyone who does anything for anything other than profit is either a bankrupt or a madman!” Indeed the pursuit of profit is so ingrained in the culture of modern capitalist society that we have forgotten how life might be different.⁵⁴ Sarkar argues strongly that the profit motive cannot be the dominant guiding principle of a healthy socio-economic system. Instead he promotes the principle of *production for consumption*, that is, the production of what people need.

We have already noted the disturbing contradiction between the fecundity of capitalism and the poverty which accompanies it. A combination of competition and the blind pursuit of profit concentrates business ownership to the point where most production is captured by a relatively few people who produce only that which yields *them* maximum profit. Basic necessities are therefore neglected even as luxuries become cheaper. Sarkar argues that replacing the profit motive by a *consumption motive* will remove this defect. Indeed the *production for consumption* motive lies at the heart of a cooperative economy just as the profit motive is the heart of capitalism.

Of course profit and loss accounting exists in a Proutist economy because profits are an incentive to work and accounting is required, amongst other reasons, to determine a just distribution of profit. Sarkar promotes the idea of a *rational profit*. A well run business, he says, should be able to add a mark-up of 15% after all costs, sinking funds, etc., have been taken into account.

“A rational profit is about 15%. This amount or part of it will be distributed amongst those who manufactured the machines. This will be their incentive. As they get more incentive, workers will try to manufacture more machines. This is not the case in state capitalism [Sarkar’s terminology for communism as practised in the USSR] because workers get fixed incentives which become part of their salary. Incentives should encourage greater work and better quality work, so they should be directly linked to production. When this system is adopted, the *per capita* income and the standard of living of the workers will automatically increase.”⁵⁵

A 15% mark-up will not enable people to get rich fast, but it will promote productivity and a steady accumulation of wealth in the community. Note that from a macroeconomic point of view, a 15% mark-up for each individual firm will lead to an approximately 70%-30% split (between wages and profit) of total output from the entire business sector. This comes about because firms within a chain of production are adding a mark-up to the mark-ups of prior firms in the chain.⁵⁶ A 30% profit share of gross business output is fairly typical for a modern economy. A 15% mark-up is *rational* because it leads to a *balanced* income distribution between *secure income* (wages) and *incentive income* (bonuses and dividends). The crucial issue, of course, is that in a capitalist economy the major portion of profit goes to a few majority shareholders who constitute a very small proportion of the population. In an economy dominated by cooperatives, the 30% profit share is distributed to the owners of cooperatives who are the workers themselves. In other words, the cooperative system leads to a more equitable distribution of wealth. In the case of workers in public utilities, Sarkar advocates bonus systems and non-financial rewards.

Efficiency and Multi-lateral Accounting

We have already noted that profit in the capitalist system is frequently a surrogate for efficiency. Obviously therefore, the systems of accounting used to determine profit are worthy of attention. *Efficiency* (the ratio of outputs divided by inputs or benefits divided by costs) is an important criterion by which we measure the success of many human endeavours. In theory, more efficient businesses should yield larger profits. Capitalism prides itself on being an extremely efficient system to allocate resources and to build wealth, yet in truth, it is a very inefficient system if we take into account the poverty and pollution that always accompany it.

From a theoretical point of view, the inefficiencies of capitalism can be traced to a market mechanism that is unable to signal the true short- and long-term costs of the traded goods and services. This problem is compounded by accounting systems that are concerned only with financial costs and ignore so-called *external costs* which typically emerge over the longer term. In fact the competitive pursuit of profit encourages businesses to externalise as many costs as possible and to think only in the short term. For example, it is estimated that US corporate profits in 2000 amounted to \$500 billion, but the unaccounted *external costs* associated with producing that profit amounted to \$2,500 billion. These costs, which included diseases associated with air pollution, cancers induced by work place conditions, environmental clean-ups and so on, did not appear as costs in corporate balance sheets but rather were paid by taxpayers or victims. See the *Endgame* website⁵⁷ for more detail about this analysis.

Capitalist accounting also ignores *positive externalities*, that is, benefits that arise from work such as care of children and the elderly, and hence these jobs are relatively poorly paid. A just-released report from the New Economics Foundation⁵⁸ has compared the remuneration of bankers with child care workers and found the discrepancy to be at odds with a proper accounting of cost-benefit to society.

High-earning investment bankers in the City of London are among the best remunerated people in the economy. But the earnings they command and the profits they make come at a huge cost because of the damaging social effects of the City of London's financial activities. We found that rather than being 'wealth creators', these City bankers are being handsomely rewarded for bringing the global financial system to the brink of collapse. While collecting salaries of between £500,000 and £10 million, leading City bankers destroy £7 of social value for every pound in value they generate.

Both for families and for society as a whole, looking after children could not be more important. As well as providing a valuable service for families, childcare workers release earnings potential by allowing parents to continue working. They also unlock social benefits in the shape of the learning opportunities that children gain outside the home. For every £1 they are paid, childcare workers generate between £7 and £9.50 worth of benefits to society.⁵⁹

From the foregoing it is apparent that measures of profit and efficiency very much depend upon what one decides to count as costs and benefits. And this, in turn, depends on the state of scientific knowledge and the relative political power of the stakeholders involved. In other words, measures of economic efficiency are highly political and intensely contested. Given what is at stake, this will probably always be the case, even in a Proutist economy. However, the principles of Prout clearly indicate a commitment to incorporating a broad range of factors in the balance sheet, including intellectual, social, affective and

spiritual. Is it possible to account for such a diverse range of resources in a meaningful way, thinking for the future as well as the present? Yes, it is. In fact several exciting initiatives have already been adopted by businesses and local governments around the world.

Triple Bottom Line Accounting

A widely adopted initiative is known as *triple bottom line accounting*. It attempts to make hidden costs explicit by having three parallel balance sheets that account for the financial, social and environmental effects of a business. The balance sheet identifies known benefits and costs to all stakeholders, including workers, local community, nation and the environment.⁶⁰

It is worth mentioning recent interest in a *fourth bottom line* concerned with the ethical dimension of economic activity.^{61 62} Very few companies have an ethical audit of their board decisions. As noted already, Sarkar is insistent that successful cooperatives are dependent on a high ethical standard of management.⁶³ The ethical bottom line has come under the spot-light following the bankruptcies of high flying companies such as Enron and WorldCom. According to Wong,⁶⁴ Enron was brought down by its paucity of social-spiritual capital:

“Enron's senior management failed to maintain a relationship of openness and trust with employees... Senior management cared more about self-enrichment than the needs of employees. They showed little regard for meaning and ethics beyond the bottom line... Enron's deficiency in social-spiritual capital proved to be fatal!”

We can expect the number of accounting dimensions to increase over coming decades as we become ever more aware of the multiple social, environmental and ethical consequences of our economic activity – hence the open-ended term, *multi-lateral accounting*. But this is for the future. In 2009, social and environmental accounting must still be regarded as very much in their infancy. Protocols are still being developed and contested.

Social Accounting

Two social accounting models that we shall note here are those promoted by the Social Audit Network⁶⁵ (SAN) and Social Ventures Australia (SVA).⁶⁶ They serve to illustrate two sides of an important debate about whether the three bottom lines should be kept separate or whether they can meaningfully be merged into a single bottom line accounted in dollars. SAN is a grassroots network that grew out of an initiative of the New Economics Foundation. Over the past decade it has developed widely used tools for social accounting and auditing. SVA is a more recent entry into the field and commands the support of some big businesses. In particular it promotes the social accounting tool known as SROI (Social Return on Investment). The SAN tools and SROI are

very similar in all but one crucial respect – whereas the SAN approach is to account in quantities and qualities, the SROI approach finally converts all quantities to dollar values. This is a step some would question on the grounds that the social quality of life cannot (or should not) be quantified in dollars. The motivation for converting the triple bottom line to a single dollar bottom line is precisely the difficulty of making comparisons between the three differently accounted lines. SROI attempts to estimate the financial benefits generated by an organisation's commercial and social activities and then compares those financial benefits to the investment required to generate them. "This return ratio tells us the extent to which the funds are being effectively leveraged."⁶⁷

Environmental Accounting

Exactly the same debate arises in environmental accounting. The Wentworth Group of Concerned Scientists has recently put forward a proposal for a set of National Environmental accounts.⁶⁸ Data for the accounts would be collected on a regional basis and would monitor the health of five classes of environmental assets, land, water, atmosphere, marine and urban. The accounts would be published each year and would become the basis for determining the effectiveness of all environmental restoration programs. One consequence of a set of water accounts would be, for example, a sustainable allocation of irrigation water in the Murray-Darling basin.⁶⁹

The Habitat Hectares program⁷⁰ in the state of Victoria, Australia, offers another example of environmental accounting, in this case land quality and in particular its biodiversity. However the Habitat Hectares program goes a step further and sets up a market that allows land developers to trade in biodiversity. The idea is that the environment provides ecosystem services, that is, it performs important functions that improve human life. For example, trees, purify water, prevent erosion and so on. If a dollar value can be put on those services then market mechanisms can be put in place to retain or even increase that value.⁷¹ As an example of this approach which is the environmental equivalent of SROI, New York's water supply comes from a large natural watershed and it is estimated that it would cost \$9 billion to purify the city's water supply if nature were not doing it for free.⁷² If water is priced with this cost in mind, the revenue can be used to further improve environmental quality.

Politicians like putting a dollar value on ecosystem services because it makes it easier to weigh up conservation costs against competing budget items. But the approach is fraught with difficulty. Most obviously it assumes that all the services provided by a particular ecosystem can be known. But ecosystems are incredibly complex and all its services cannot possibly be known. Furthermore how does one put a price tag on the aesthetic, cultural or spiritual value of a particular lake or forest. There is however, a more fundamental objection – the notion of ecosystem services is entirely focused on benefit to humans. But an

ecosystem is really a living entity in itself, not an abstract concept, and therefore has its own moral right to be healthy, quite independent of its value to humans.⁷³

To reiterate, social and environmental accounting are still very much in their infancy but they point the way to the future.

Philanthropy

The distinction between philanthropy and social enterprise must be kept clear. Philanthropy is the practice of a person or business investing in a community without expectation of a financial return. Typically philanthropy is practiced by individuals who have made much money running privately owned and highly profitable businesses. A social enterprise on the other hand is a business whose dominant concerns are with community benefit rather than with profit. The distinction can become confused because the object of many philanthropic organisations is to help social enterprises in various ways.⁷⁴

Philanthropy has long been a strong tradition in the United States but it has not been so strong in welfare economies such as that of Australia. But over the past decade, the Australian government has been attempting to increase the role of big business philanthropy, while at the same time attempting to diminish its own budget commitments in the areas of social welfare and scientific research. One response of big business has been the adoption of formal accounting systems to monitor the performance of what they call their *community investment programs*. One such is the London Benchmarking Group (LBG).⁷⁵ A question arises as to the appropriate roles for government social programs versus philanthropy and the balance between the two. While business philanthropy is obviously to be encouraged it should not be a substitute for well-planned government social action. In particular, it does not absolve governments of the responsibility to seek out and fill gaps of disadvantage.

Regulation

In a modern economy, the different enterprise types require legislative support, that is, acts of parliament which lay out basic principles of governance and broad parameters of what can and cannot be done using that enterprise structure. In the case of public utilities, each typically has a dedicated act of parliament, or statute, which lays out the social purpose of the enterprise, its governance and the nature of its link to the executive branch of government.

The legislative support for cooperatives in Australia is weak and varies from state to state, reflecting the weakness of the sector in general. For example, it used to be that a cooperative could not be formed in Queensland without the active involvement of 25 persons. That number has since been reduced because it was an unnecessary impediment. An interesting new development in

Australia is the emergence of national cooperatives that operate in several states and therefore do not come under the umbrella of any one state's legislation.⁷⁶ To respond to this need, the federal, state and territory government have agreed to adopt a national scheme for cooperative legislation. Of interest is that a cooperative can be formed with a minimum of five people, which is the boundary (in the Australian system of business classification – see Table 3) between a micro-enterprise and a small enterprise.

As noted at the end of section 3, there is a spectrum of enterprise possibilities and those which are selected as relevant for a particular country require acts of parliament to support them.

Regulatory Authorities

The success of the three-tier enterprise system depends on two kinds of decision; firstly which goods are essential, demi-essential and non-essential and secondly, how to demarcate the enterprise types. These are qualitatively different kinds of decision. The former deals directly with people's quality of life and therefore properly belongs to the legislative branch of government, that is, to the elected representatives of the people.

Decisions about enterprise demarcation will require expert legal and economic knowledge. How large can a private business become before cooperative management is appropriate? And, in the case of an essential commodity, how to choose between a cooperative or key industry as the best mode of management? Such decisions should be the province of a dedicated regulatory authority, not dissimilar to Australia's existing competition authority known as the ACCC (Australian Competition and Consumer Commission). It would also resolve disputes, for example, when a private enterprise industry (in the small complex category of Table 1) claims that it can produce an essential commodity more efficiently than a cooperative.

It is worth reiterating why we even care about such considerations. We care because the *way* in which goods and services are produced is as important as *what* is produced. The way goods and services are produced affects the efficiency with which we use scarce resources; it also affects our economic security and ultimately our quality of life.

According to Sarkar, decisions about enterprise demarcation "should be based on the principles of self-reliance, maximum utilization, rational distribution, decentralization, rationalization and progressive increases in the standard of living of all peoples."⁷⁷ These principles interact in complex ways but nevertheless we attempt a brief introduction to each of them.

Principle of self-reliance

The principle of self-reliance or self-sufficiency is concerned primarily with social, political and economic security. Countries which import many of their essential foods and medicines are vulnerable to foreign pressure. Brazil in the early 2000's contemplated abandoning its free trade agreement with the USA until the latter threatened to withhold supplies of insulin. Brazil discovered that it did not produce this essential medicine.

As usually defined in the Proutist literature, the principle of self-reliance refers to the ability of a country or local community to produce its own minimum requirements of life, namely basic foods, clothing, housing, education and health care. However, in "Economic Self-sufficiency for Bengal",⁷⁸ Sarkar clearly extends the concept to include the production of cash crops and manufactured goods to be traded for semi- and non-essential commodities. In other words, self-sufficiency includes the ability to maintain a balance of trade, as well as the ability to produce one's minimum essential requirements.

Such is the importance of self-reliance that Sarkar advocates the establishment of key industries even if it is not immediately efficient to do so. We have already had the example of establishing a spinning industry using artificial vaporization in regions where climate is unsuitable for crops. Why? Because textiles and clothing are an essential requirement but a secure weaving industry can only be established if local yarn is available. In these cases, the spinning industry would be considered a key industry and given appropriate support even though purely economic considerations might support importation of cotton.

Principles of maximum utilization and rational distribution

Businesses must manage the coming together of the *factors of production* – labour, space, raw materials, tools, machinery, capital, etc. The managerial process itself must satisfy some measure of efficiency. The principle of *maximum utilisation* implies that the number of managers and their degree of involvement should be sufficient but not excessive. The principle of *rational distribution* implies that the managerial style will depend upon the technology and degree of automation. In short, the pursuit of efficient management will frequently suggest the business category.

Principle of rationalization

In its broadest sense, rationalization is any reorganization of a company's operations to increase efficiency – but by what definition of efficiency? In recent times, the term has become associated with the ideology of economic rationalism, where efficiency is very narrowly defined. We interpret the principle here to mean the adoption of new technology to achieve broader efficiency goals, such as increased output, shorter working hours, safer and

more interesting work. We note in passing that Prout does not support automation where it leads to unemployment. But in this discussion we assume a cooperative economy where automation gives scope for decreasing work hours without decreasing income, because the rewards of increased labour productivity are distributed to the owner-workers.

Most usually, rationalisation is intended to take advantage of economies of scale, leading to larger enterprises and increased managerial requirement. Assuming that economies of scale motivate a cooperative to expand, at what point is it advantageous to convert to a public utility? At least three factors come to mind.

(1) Cooperatives are community based enterprises and ideally they adopt *appropriate technology*, that is, *technology which, for a given level of output, maximises the use of locally available resources*. In a Proutist economy, the geographical area known as a *block* defines a cooperative's community and a *block* has a population of around 100,000 persons – about the same size as the average local government body in Australia. For a typical cooperative, the *block* would be its major source of labour, raw materials, finance and of course the market for its product. The linking of cooperatives to *blocks* having a particular population immediately sets some constraints on the maximum size of a cooperative. If a cooperative outgrows its community and its technology can no longer remain *appropriate* by the above definition, then converting to a public utility may be the best solution.

(2) Within a *block*, cooperatives compete for market share. They extend their market indirectly by trading with coops in other *blocks*. If economies of scale cause cooperatives to merge with one another, the point will come where a large coop can exert undue influence on the local price by restricting supply. Placing upper limits on the size of a cooperative is the equivalent to anti-monopoly legislation. If splitting a large coop cannot be justified, then forming a public utility may be the only option.

(3) The persons working in a cooperative are also a community. Larger cooperatives in Mondragon, Spain, have reported difficulty in maintaining cooperative integrity when the number of workers exceeds about 500. In this regard, it is interesting to note a recent report by the Queensland Education Department (Australia) that when primary schools exceed a size of about 500 students, it becomes difficult for the students to feel a sense of school community. One of the defining characteristics of a cooperative is that all workers have a sense of personal responsibility for the final product and for the quality of the work place. When a company becomes very large, a major shift in management style becomes necessary, not just to handle complexity, but also to maintain a sense of personal responsibility. This is achieved by shifting to hierarchical systems of management, where personal responsibility revolves around one's team or department within the company.

Principle of decentralization

In today's world, we take it for granted that companies must search for economies of scale if they are to survive under competition. In our discussion of the principle of rationalization, we noted that an expanding cooperative in a Proutist economy would eventually come up against the boundaries of its community, more formally the *block* in which it resides. For the capitalist, such a restriction is an intolerable frustration. Nothing should be allowed to stand in the way of the search for profit. In the Proutist economy however, value is given to economic security. An appropriately decentralized economy offers local people control over their resources, and over how their community develops. They are not subject to blackmail by large companies who threaten to move elsewhere if workers do not accept lower wages.

Capitalist society is so driven by the need to chase economies of scale that most scientific and technological research is devoted to meeting that objective. But the research impulse could just as well be steered towards *economies of decentralization*. Economic decentralization is probably the most significant strategic feature of a Proutist economy. It motivates economic planning, scientific research and collective psychology.⁷⁹

Key industries are usually large-scale, capital intensive and difficult to decentralise. However, Sarkar recognises many "adverse effects of industrial centralisation" and encourages attempts to decentralise key industry as far as is consistent with principles of efficiency.

"Normally only very large-scale key industries should be centralised instead of decentralised. But industries which cannot be readily decentralised today may be decentralised in the future due to changing circumstances. At that time the decentralisation of key industries must be implemented."⁸⁰

Advocates of free-markets, deregulation and globalisation dismiss the importance of a decentralised, community oriented economy. They might derisively refer to the failure of Mao Tse-Tung's development program symbolised by the slogan "an iron foundry in every backyard". Sarkar is not advocating this kind of irrational decentralisation. Rather he advocates decentralisation driven by the desire for economic security and made possible by scientific research.

"As far as possible, the establishment, operation and distribution of all industries should be done at *block* level. Only when this cannot be done should industries be organised at a higher level. Obviously, industries such as iron and steel factories cannot function in every village, block and district, so they should function in a larger area."⁸¹

Principle of progressive increase in the minimum standard of living

It is obvious from the foregoing discussion that there will be tensions between the various principles when deciding how an industry is best managed. Efficiency may suggest public utility management, but economic security may favour cooperative management. Both calculations will depend on what criteria are taken into account. The ultimate arbiter in these cases is another principle, *the endeavor to progressively increase the standard of living for everyone*. This endeavor is the driving force of a Prout economy and finds its justification in human psychology. Years of work with no apparent improvement in one's circumstances have a depressing effect on the individual and society. Stagnancy of this kind was a causal factor in the collapse of communism. There are three parts to this principle: 1) an index to measure the standard of living, 2) an increase in the index over time, and 3) that the index should increase for everyone. This principle has many ramifications but here we are only interested in its bearing on enterprise management. There are two levels of concern, the microeconomic and the macroeconomic.

At the microeconomic level, work should be safe, healthy and interesting. But just as important, it should be socially useful and personally meaningful. Decisions about the mode of management for an industry must consider such factors. The bigger the enterprise, the more likely it is that workers become cogs in a machine. The great advantage of cooperative management is that it enables workers to feel at one with their job.

At the macroeconomic level, a variety of indices are becoming available to measure the different components of quality of life. According to economic rationalists, increasing per capita GDP is said to be evidence of an increasing quality of life. This assertion is wrong on two counts. First, per capita GDP is an average figure that hides great inequality of incomes and inequality of access to the minimum requirements of life. Secondly, GDP measures any kind of economic activity whether it contributes to quality of life or not. Military spending, policing, surveillance and the like, contribute magnificently to GDP, but the circumstances which make them necessary suggest something is wrong with our quality of life.

An exciting range of new economic indicators has been developed by the Calvert-Henderson group.⁸² These include literacy rates, school dropout rates, infant mortality, nutritional indices, cholesterol levels, average calorie intake, water quality, sanitation standards, access to telecommunications, access to affordable housing, tests for various types of intelligence, the status of women and minorities, pollution levels and natural resource depletion. Friends of the Earth have an interactive website⁸³ which demonstrates how different combinations of socio-economic indicators can be combined into a single index. The Kingdom of Bhutan is the first nation to have formally adopted a

new economic indicator known as the *happiness indicator*, an innovation which has reportedly attracted the attention of the UK Treasury.⁸⁴

The way in which large-scale businesses are managed impacts directly on standard of living indices. For example, consider a privately owned telecommunications enterprise. As the business grows, its sphere of operations will eventually encompass both rural and urban areas. Rural areas are the least profitable, so the easiest way to increase profits is to cut rural services. GDP might increase but the standard of living for some has declined. The same company operating as a public utility would subsidize rural services with its more efficient urban services because its enabling legislation (an expression of public will) requires it to do so. GDP increases (perhaps not as much) but the standard of living in rural communities also increases.

The Audit Branch of Government

The *separation of powers* is a fundamental principle of democratic societies. It emerged out of a 2000 year struggle in Europe to establish the humanist ideal, that is, to put human dignity and worth above the dictates of kings, queens and tyrants. Sarkar expresses grave concerns about the gradual erosion of the separation of powers in the 20th century. He goes further and suggests that, in addition to the *legislature*, the *executive* and the *judiciary*, there should a fourth branch of government, the *audit branch*.⁸⁵ In simplest terms, the role of the legislature is to decide what to do, the role of the executive is to do it and, in Sarkar's proposal, the role of the audit branch would be *to ensure they have done it*. (And of course the role of the judiciary is to resolve disputes between the other three branches.) The audit branch would not have any role in preparing the budget because this is a policy matter that remains the preserve of the legislature.

In keeping with the notion of triple bottom line accounting, the audit branch of government might also be responsible for a country's social and environmental auditing. That is, it would subsume the bureau of statistics and calculate economic indices, measures of welfare, etc. It would monitor the degree of self-sufficiency of local government areas (*blocks*) and report to the legislature when it becomes apparent that there is an unhealthy draining of wealth from one *block* to another. In the environmental area, it would monitor the hydrological cycle, soil erosion and greenhouse gas emissions. Apart from reducing the scope for corruption in the public sector, a separate audit branch of government would have many other advantages, including, for example, preventing politicians from redefining *quality of life* indices to suit their own agendas.⁸⁶

Competition and cooperation

One of the seven international principles of cooperatives is *cooperation among cooperatives*. And yet at the same time, cooperatives are subject to the discipline of the market place. If a cooperative does not produce good quality products, consumers will seek other suppliers. This raises the interesting synergy of cooperation and competition. Australia has a competition watch dog whose job, in theory at least, is to ensure fair and efficient competition. There are many instances, especially with very large corporations, where competition does not make sense. A classic example is competition which leads to a proliferation of competing protocols and standards in telecommunications and computing. To avoid such non-productive competition (the fierce war between Betamax and VHS for video format dominance is a classic example), large businesses cooperate. Finding the right balance of competition and cooperation, that is both rational and serves the interests of consumers, is probably a never ending struggle. It may turn out to be helpful to study the synergy of cooperation and competition in the natural world. (See for example the section *Patterns of Competition and Co-operation in Nature and Society* in David Holmgren's treatise on permaculture.⁸⁷)

Worker's Organisations and Unions

Traditional trade unions sometimes have difficulty coming to terms with the cooperative model. A case in point is a long running dispute in Italy, where cooperatives form an important sector of the Italian economy. There are estimated to be some 40,000 cooperatives in Italy, which of course give work to many times more people. Most of these workers are not employees in the traditional sense but rather *working partners*. As they combine features of a partner in a commercial company (some sort of entrepreneurship) with those of an employee (the fact of earning a wage), working partners are at the centre of an important fight between trade unions and cooperative associations. To simplify greatly, the question is whether the working partner should be considered more of a 'partner', and therefore bear the risks of economic activity, or more of a 'worker' and hence be fully protected by industry-wide collective agreements.

Unfortunately this debate takes place against the backdrop of the long historical struggle between workers and bosses who see their interests as antagonistic. And indeed they usually are in a capitalist society. Cooperatives do not fit conveniently into the polarised world of labour versus capital. Yet, as the Italian author of a report on this debate comments,⁸⁸ trade unions around the world promote many cooperative initiatives, mainly in field of social welfare. The *working partner* dispute exposes an ideological tension between unions and cooperatives - two worlds that actually have many cultural and practical connections, despite their differences.

Sarkar accepts the view that workers should organise unions where they see the necessity. He does not, however, address the issue of the relationship between unions and cooperatives. The easiest interpretation is that trade unions are primarily relevant to the large government-run enterprises. And in these, Sarkar also advocates worker representatives elected to the boards of directors.

In the case of cooperatives, many of them will employ workers from different social classes. It is quite easy to imagine a scenario where better educated upper-middleclass workers become entrenched in better paid management positions and the differential wage between managers and non-managers increases excessively. Sarkar accepts that intellectual and managerial skills should be adequately rewarded but he also insists that there should be some maximum ratio between the lowest paid and the highest paid. Indeed most existing cooperatives have such a maximum ratio, but it is interesting to note that the managers of the Mondragon cooperatives have attempted to increase that ratio from 1:3 to 1:10 as they have become more successful.

The lesson appears to be that there will always be a need for regulatory authorities to monitor working conditions in all enterprises, whether private, cooperative or public. Furthermore, workers organisations will be helpful to guard against class exploitation within cooperatives, and they could also take the role of guilds and trade associations to assist in the dissemination of new technology and to ensure a uniformity of quality standards through an industry. However, care should also be taken that trade unions do not undermine the cooperative spirit. It will probably take some time for the appropriate balance to emerge.

The Rural Sector

The Corporate Conquest of Farming

Agriculture in under-developed countries has long been problematic, but as we enter the 21st century even agriculture in developed countries has reached a critical juncture. The combination of climate change, rising energy costs and exposure to unfair competition in the name of 'free trade' has rendered the traditional family farm unviable. The family- or owner-operated farm is rapidly giving way to *corporate agriculture*, that is, large-scale farming dominated by a few corporations able to command large-scale investment funds. The Australian government is promoting corporate agriculture as the way of the future, arguing that family farms no longer have the economies of scale to survive in a globalised world. Large multi-national corporations have long dominated the production of inputs to farming and also the distribution of farm output, but until recently the actual farming itself had mostly remained in the hands of small family businesses.

The corporate conquest of farming will have hugely important consequences. A particularly worrying feature is that the agri-corporates see themselves first as financial investment managers and only second as farmers. Yet they are now the largest holders of prime agricultural land in Australia and by contracting out the actual farming, they still determine what is planted and where. One of Australia's largest agri-corporates, Primary Yield,⁸⁹ describes itself as follows:

“Primary Yield is an investment manager specialising in the agricultural sector. For investors and advisors looking to build a well diversified portfolio, Primary Yield offers simple access to a range of quality agribusiness investments managed by industry leading specialists in sectors participating in strong global markets.”

The *yield* in Primary Yield is not bushels per acre but cents in the dollar – with the disturbing consequence that farming will inevitably become embroiled in speculative take-over battles, as one agri-corporate attempts to swallow up another.

Needless to say many Australian farmers are disturbed by the shift to corporate agriculture. They use terms such as *corporate feudalism* to describe emerging trends in the rural economy,⁹⁰ where arable land is farmed by a class of essentially powerless ‘serfs’ but owned by a class of aristocrats (powerful corporations) who also reap the product. The term is ironic, since it also describes the reality of farming in third world countries, despite the great difference in technology and scale. Sarkar is adamant in his rejection of the feudal nature of agriculture in India.

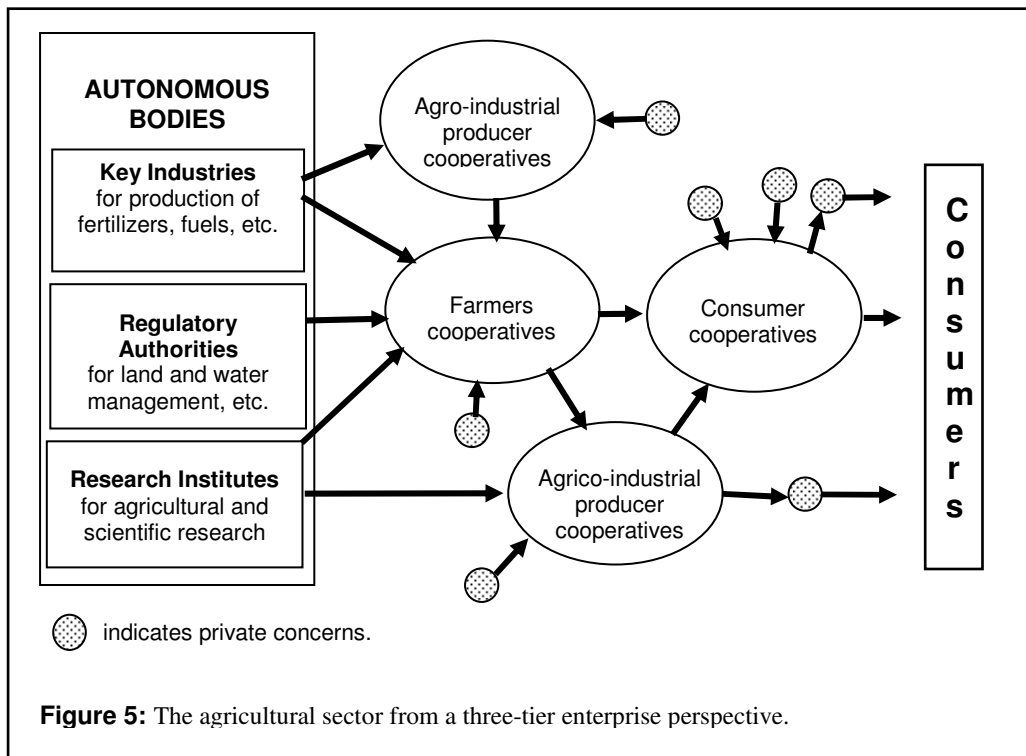
The previous four paragraphs were researched in 2006-2007. At that time there were three major agri-corporates in Australia, Primary Yield, Great Southern and Timbercorp. The government of the day had great faith that such companies would be the salvation of Australian agriculture.⁹¹ It is worth noting the status of these three giants as of 2009. Primary Yield collapsed in November 2008 with a debt of \$100 million AUD. Timbercorp collapsed in April 2009 with a debt of \$300 million AUD.⁹² Great Southern declared bankruptcy in May 2009 owing investors up to \$4 billion AUD. The managing director of Great Southern gave himself a \$2 million retirement benefit just before the company collapsed.⁹³ Billions of dollars of prime agricultural land are now tied up in legal battles.

A Cooperative Rural Sector

Sarkar accepts that farming must be viewed as an industry and subject to the same criteria of efficiency as required for manufacturing industries. However he insists that farms must be owned and managed by the farmers themselves and that in order to achieve the required economies of scale, farming is best organised cooperatively. Sarkar envisions the rural economy as dominated by a variety of cooperatives, primarily farmer cooperatives, producer cooperatives

and consumer cooperatives. The first are engaged in primary production. The second are of two kinds: *agro-industries* which produce tractors, hoes and other commodities required to grow food and fibre, and *agrico-industries* which value-add by processing and refining farm output. Consumers cooperatives are responsible for the distribution, marketing and sale of agricultural produce. Sarkar also refers to *farmers-cum-producers* cooperatives which both grow and value-add. Public utilities would supply key raw materials requiring large-scale infrastructure for their production and distribution, for example fertilizer, irrigation water and fuel. Privately owned small businesses would provide specialised agronomic and veterinary services and of course specialty foods and gourmet items (Figure 5).

Cooperatives are nothing new in the world's rural economies. Indeed in the 19th century and well into the 20th century, farmer owned cooperatives dominated the processing and distribution of agricultural produce. It is only in the last 20 years with the emergence of economic rationalism that private corporations made concerted efforts to take over rural cooperatives in a process known as *demutualisation*. Farmers allowed this to happen partly because they were not able to stand against the power of large corporations and partly because they had forgotten the advantages that lead their predecessors to form cooperatives in the first place.



Sarkar's proposal might be described as the *remutualisation* of the rural economy, with the difference that the actual farming is also mutualised. Farming cooperatively, says Sarkar, offers many advantages. First and foremost, it offers economies of scale and therefore financial stability. Farmers will be able to invest in the latest machinery and take advantage of the latest scientific and technological developments. Financial stability will lead to a second advantage – farmers will enjoy an enviable life-style. Automation will reduce hard physical labour and allow time for intellectual, artistic and spiritual activities. A third important consequence is that farming will be planned over larger areas of land and therefore achieve more effective management of water, soil erosion, drainage, etc.

Sarkar would have endorsed the following observation of Colin Tudge:

...once we start to think seriously about the fate of cities, and environmental stress in general, and human employment and dignity – we see that for the foreseeable future, and probably forever, the economies and physical structure of the world must be primarily agrarian. In the current crude, unexamined dogma, 'development' and 'progress' mean urbanization. The primary requirement, in absolute contrast, is to make agrarian living agreeable. It can be. It's just that at present, all the world's most powerful forces are against it.⁹⁴

This does not mean that a majority of people would be 'toiling in the fields'. It does mean that the economy and culture of a region would be securely grounded in the ecological dynamics of its landscape. In Sarkar's view, a healthy well-developed society would have about 25% to 30% of its active work force engaged directly in agriculture. This compares with 80% in underdeveloped countries, and 5% in what Sarkar calls over-developed countries such as Australia and the USA. A strong cooperative sector is required to make agrarian living agreeable. However, Sarkar warns against the hasty formation of farmers cooperatives.

...it is not wise to suddenly hand over all land to cooperative management because cooperatives evolve out of the collective labour and wisdom of a community. The community must develop an integrated economic environment, common economic needs and a ready market for its cooperatively produced goods. Unless these three factors work together, an enterprise cannot be called a cooperative.⁹⁵

Even worse would be any attempt to impose the cooperative system on an unwilling rural population. This would inevitably lead to failure, as was the case when the Soviet Union attempted to imposed collective farming.

The leaders of the Soviet Union were ignorant of the collective psychology of the people, so they tried to impose collective farming by force. This produced severe famines and massive civil unrest. While

trying to cope with these problems, the administration resorted to brute force instead of adopting psychological measures, and as a result they annihilated many people.”⁹⁶

Those attempting to establish a Proutistic economy, says Sarkar, “will never go against the spirit of a country and cause its ruin.”

Four Phase Program for a Cooperative Rural Economy

Sarkar proposes a four phase program for the introduction of farming cooperatives.

Phase One: In the first phase, *uneconomic* farms, that is, those where the market price of the produce is less than the cost of production, including all capital, labour and machinery costs, would be encouraged to join a farmers cooperative. The contributing farmers would still retain title to their land. 50% of the net profit would go to the land owners (in proportion to the productivity of their contributed land) and 50% to the labourers (in proportion to their net wage). The advantage of cooperative management at this stage is an increase in production because uneconomic land holdings become economic. Economies of scale are achieved in the more efficient provision of irrigation, use of machinery and land management practice. In this phase, there is no point in attempting to include economic holdings. Parallel to the formation of farming cooperatives would be the formation of agri- and agrico-cooperatives to generate local demand for farm produce and to provide employment within the local community.

Phase Two: In the second phase, farmers owning economic holdings would be invited to join the cooperative system but this phase begins only after all non-economic holdings have been consolidated. Profit in farmer cooperatives is now divided 25% to land owners and 75% to labour. Land owners would still enjoy two income sources, one from their labour, the other from their land contribution.

Phase Three: In this phase, there would be rational redistribution of land. Rational means that farm boundaries would be adjusted to landscape management requirements and that farm sizes would be sufficient to support a family. This policy implies, although Sarkar does not explicitly state it, that farming families would be responsible for particular areas of land, just as they are today, but that they would work cooperatively with their neighbours in order that the landscape might be managed as a whole.⁹⁷ There is now no distinction between labourer and landowner. All members own the land through their cooperative and consequently 100% of profit is shared in proportion to contribution of members labour.

While one of the advantages of a farmer cooperative is economies of scale, the farms should not be too large:

“In this phase, it will be easy to establish big cooperatives with the extensive application of science, but these cooperatives will not be anything like the huge collective farms of the Soviet Union or China. If cooperatives are allowed to become extremely large, it will be difficult to utilize natural resources efficiently and this will lead to complications in the sphere of production. One of the main defects of the collective farms in socialist countries is their unmanageable size.”⁹⁸

The ultimate size and composition of the cooperatives, says Sarkar, should be determined by the farmers themselves.

Phase Four: Sarkar notes that the establishment of a cooperative rural sector will not happen overnight. Indeed he implies that it may take many years for a culture of thinking cooperatively to gradually permeate society. This process is what sociologists would refer to as the accumulation of *social capital*. The final phase will be characterised by no conflict over the ownership of land, by full employment and by an agreeable rural life-style.

The most important feature of Sarkar’s rural development programme is that it works from bottom up. It proceeds at the pace which farmers and rural communities are willing to embrace the cooperative system. When cooperatives are pushed from the top with little psychological preparation, the outcome must be uncertain. Venezuela and Bolivia make an interesting comparison. President Chavez in Venezuela is creating cooperatives and communal councils from top-down. In Bolivia, by contrast, cooperatives are arising out of a people’s movement, bottom-up. If Chavez loses power the entire Venezuelan cooperative program would likely fall apart. In Bolivia, political leaders are almost irrelevant because their cooperative movements have been built by local communities who offer ultimatums to politicians. One reason for the difference is that Bolivia’s movement has indigenous roots, with a culture quite different from traditional Latin-American culture.

The Service Sector

In this section we describe the application of the three-tier enterprise system to the structure of two service industries, health and finance. Sarkar defines a service cooperative as “a subtle type of cooperative coming within the arena of cultural cooperatives.” Into this category he includes the work of intellectuals and artists. But he gives as an example, the formation of physicians service cooperatives. The reader may like to extend the application of the three-tier enterprise concept to other sectors, such as education, media and communications.

The Health Sector

Health services constitute a significant part of a modern economy and consume a large portion of its resources. Consequently delivery of health services must

be subject to principles of efficiency, decentralisation, etc., as described in the previous section.

“Doctors should start service cooperatives. These cooperatives may also be called “physicians’ service cooperatives”. Suppose a doctor is not able to open his or her own practice, he or she may form a service cooperative with five or ten other doctors. Such a cooperative is an intellectual service cooperative. Doctors who have little capital and cannot afford to establish their own practices can also work in this type of cooperative. Such a system will solve the unemployment problem of doctors. In addition, doctors can start research through these cooperatives, although a doctor’s job is ninety-nine percent practical and hardly one percent theoretical.”⁹⁹

It seems natural to adopt the three-tier system to structure the provision of health services through hospitals, clinics and private practitioners. A public hospital would be a large institution typically with several hundred staff and managed as they usually are today by an autonomous or government body of some kind. Cooperative clinics and hospitals would offer a wide range of standard and specialty services under the same roof but would not offer the high-tech diagnostic services of a major hospital (e.g., MRI). Finally, private practitioners would offer a variety of health services and premium services such as home visits.

With regard to the provision of medicines, Sarkar argues that the right to manufacture medicines should be entrusted to autonomous bodies, while their distribution can be through the same autonomous bodies or through consumer cooperatives.¹⁰⁰

It is interesting to note that with the advent of economic rationalism, hospitals in the Australian state of Queensland, have employed managers at a greater rate than nurses, so that some hospitals now employ more managers than nurses. Despite this, Queensland hospitals continue to be plagued by crisis. Doctors are scarce, nursing is more stressful than ever and hospitals are overcrowded. When business people run hospitals, efficiency apparently comes at considerable cost.

In most developed countries, health care is funded partly by government and partly by personal health insurance. Sarkar does not discuss this contentious issue, other than to insist that everyone must be guaranteed their minimum health requirements. The issue has been discussed briefly in Towsey [2003] who observes that “there is a common perception that government involvement in public insurance promotes equity while non-government insurance schemes are economically more efficient.” He then proposes a mixed health funding scheme:

“There is an important distinction in Prout between the *minimum required* allocation of a commodity or service and the additional *amenity* component which makes life easier but is not essential. In the case of

health care, the Australian government makes the same distinction. The government provides essential health services, while private insurers cover *optional extras*, such as doctor of choice, massage and optometry. This arrangement or something like it, seems elegant. In a Proutist system, government would have a constitutional obligation to ensure that everyone gets the minimum health care services so it should be given the necessary powers to achieve this goal, thereby taking care of the equity objective. Health insurance cooperatives could provide cover for the additional health amenities that become desirable as a community becomes more wealthy.”¹⁰¹

Given the expensive medical technology currently available to save lives, this apparently elegant solution hides extremely difficult policy decisions – what is a minimum health requirement and what is an amenity? A workable health policy is yet another area requiring attention from Proutists.

The Financial Sector

It is patent that in our days not alone is wealth accumulated, but immense power and despotic economic domination is concentrated in the hands of a few This power becomes particularly irresistible when exercised by those who, because they hold and control money, are able also to govern credit and determine its allotment, for that reason supplying so to speak, the lifeblood to the entire economic body, and grasping, as it were, in their hands the very soul of production, so that no one dare breath against their will.

Pope Pius XI Encyclical "Quadragesimo Anno".

Sarkar would probably have appreciated the intensity of language used by Pius XI. His response would have been to insist that the banking system should not be in the hands of private individuals “because past experience has shown that managers who are dishonest business people have seldom protected the hard earned savings of ordinary depositors. Many have profited by illegally or recklessly investing the bank’s money; their activities have also ruined many middle-class families.”¹⁰² As if to prove his point, in recent years the United States has witnessed the Savings and Loans scandals, Enron, WorldCom and the sub-prime mortgage meltdown, to mention just the big ones. In Australia we have had the collapse of HIH. Each of these calamities wiped out the life savings of many families. They were caused in each case by a few dishonest and reckless managers.

In a Proutist economy, the central bank would be an *autonomous body* at arms length from political interference. In fact the current practice of an independent central bank, whose operations are defined by statute, appears to be entirely appropriate. The problem is that the banking system to be regulated is in private hands and managed to serve the selfish interests of comparatively few private interests. In a Proutist economy, the banking system would be a

combination of large-scale banks, operating as key industries on a *no profit and no loss* basis, and community scale cooperative banks or credit unions.

A widespread system of cooperative banks and credit unions would decentralise money allocation decisions. Cooperative banks build local prosperity because they keep money circulating within the local community rather than letting it bleed to outside investors. To reap this advantage, it is necessary to ensure that the majority of a credit union's funds are borrowed from and lent within their *block* or community. Prout's three-tier system would place an upper limit on the expansion of individual credit unions, thereby preventing any one institution gaining disproportionate power. The profits of cooperative banks would be distributed to shareholders, the majority of whom would be employees and customers living within the same *block*.

There is an increasing number of innovations in the field of community banking, for example micro-credit¹⁰³ and the interest free loans of the JAK banks in Sweden.¹⁰⁴ These innovations deserve the opportunity to achieve success, but within the constraints of cooperative management and service to the community.

Broking and advisory services are appropriate roles for the private and cooperative sectors, depending on the scale of the service provided. Sarkar refers to *family annuity cooperatives* which appear to provide special types of superannuation and insurance services. Presumably they would operate in conjunction with other cooperatives to provide workers with pension-saving schemes. Conceivably payments to annuity trusts could become compulsory, just like superannuation payments are today. This suggests that community savings, especially retirement savings, may well become an important source of capital for new cooperative enterprises in a cooperative economy.

The financial sector, even in an established Proutist economy, will always require careful regulation to guard against unscrupulous activity. A cardinal rule for policy makers is that a regulatory authority should always be independent from the actual providers of the regulated products and services. It is an obvious rule born out of centuries of experience. Yet it is a rule that is blatantly broken even today in the financial sector of Australia's economy. Trading in shares and securities is regulated in Australia by the Australian Securities Exchange (ASX).¹⁰⁵ While the ASX regulates other companies listed on the ASX, it cannot regulate itself, and is instead regulated by a statutory authority, the Australian Securities and Investments Commission (ASIC). That may appear safe but the problem is that the ASX is also a for-profit company with a duty to maximise returns to its shareholders. So while the regulatory role of the ASX is to supervise securities trading, it also stands to profit from the increased volume of that trading. It now appears that the ASX has compromised its regulatory role by promoting dubious investment products and hedge fund activity. This has contributed to share market instability and,

worse still, to the use of superannuation savings for high risk investments.¹⁰⁶ One is reminded again of Sarkar's warning about financiers recklessly investing the savings of middle-class families, thereby bringing about their ruin.

To conclude, financial management will always be about walking a tightrope – it should enable entrepreneurs to respond to perceived opportunities but without giving the selfish minded of them a chance to rort the system. The larger goal is to ensure financial security into the future.

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Appendix

The Five Fundamental Principles of Prout

- (1) No individual should be allowed to accumulate any physical wealth without the clear permission or approval of the collective body.
- (2) There should be maximum utilization and rational distribution of all mundane, supramundane and spiritual potentialities of the universe.
- (3) There should be maximum utilization of physical, metaphysical and spiritual potentialities of unit and collective bodies of human society.
- (4) There should be a proper adjustment amongst these physical, metaphysical, mundane, supramundane and spiritual utilizations.
- (5) The method of utilization should vary in accordance with changes in time, space and person, and the utilization should be of progressive nature.

Notes

¹ In the later phases of the cold war, the US adopted what became known as the *Strategy of Technology*. The idea was to overwhelm the Soviet Union's economic ability to maintain military parity. See <http://en.wikipedia.org/wiki/Strategy_of_Technology>, link valid 12 December 2009. Of course this economic or technological argument is only part of the story. Suppression of intellectual freedom and human rights must surely have contributed to the relatively sudden collapse of the USSR.

² For a more detailed account of the early cooperative movement see Michael Towsey, "The Biopsychology of Cooperation", in *Understanding Prout*, Volume 1, 2009.

- ³ Stretton, Hugh (1999) *Economics – A New Introduction*. Pluto Press: London, p101
- ⁴ For more on Japan's industrial revolution read chapter 11 of Stretton, Op. Cit.
- ⁵ Sarkar, P. R. (1984) *Socio-economic Movements*. Part 9 of *A Few Problems Solved*. In the 6th electronic edition of *The Works of P.R. Sarkar*.
- ⁶ Sarkar, P. R. (1959) *Human Society Part 1*, AM Publications, 1st edition. Note that the 1st edition was published in Bengali based on transcriptions of talks given by Sarkar in late 1957. The first English translation edition appeared in 1962
- ⁷ Sarkar, P. R. (1958) *Problem of the Day* (26th Jan, Bhagalpur). Republished in Sarkar (1992). See following note.
- ⁸ Sarkar, P. R. (1992) *Proutist Economics – Discourses on Economic Liberation*, AM Publications.
- ⁹ Elsewhere, Sarkar acknowledges Bertrand Russell's description of Nehru and colleagues as 'socialist show-boys'.
- ¹⁰ Sarkar, 1959, Op. Cit.
- ¹¹ Sarkar, P. R. (1998) *Human Society Part 1*, AM Publications, 4th Edition. p139
- ¹² Sarkar, 1998, Op. Cit., p142
- ¹³ Sarkar, 1958, Op. Cit., section 11
- ¹⁴ Sarkar, 1959, Op. Cit.
- ¹⁵ Sarkar, 1959, Op. Cit., 19th October, Jamalpur, India
- ¹⁶ Sarkar, P. R. (1988a) *Socio-economic Decentralisation*, in Sarkar, 1992, Op. Cit., pp226
- ¹⁷ Sarkar, P. R. (1959a) *Idea and Ideology*. AM Publications.
- ¹⁸ Sarkar, P. R. (1962) *Ananda Sutram*. AM Publications. Revised English Edition 1984.
- ¹⁹ Sarkar, P. R. (1959b) *Discourses on Prout*. AM Publications, 6th electronic edition of *The Works of P.R. Sarkar*.
- ²⁰ Sarkar, 1959b, Op. Cit., Section 3
- ²¹ Sarkar 1992, Op. Cit., Ch 15
- ²² Sarkar 1992, Op. Cit., Ch 15
- ²³ Gittens, Ross (2006) *Few are Great, Many are Small*. The Age, Melbourne, Australia 23-08-2006.
- ²⁴ <http://www.abs.gov.au/>
- ²⁵ This is a technical term to describe the connectivity structure of a certain kind of network. It is of interest because such networks occur widely in the "real-world", for example, social networks, computer networks, neural networks, gene regulatory networks and even disease transmission. In scale-free networks, a few nodes are highly connected hubs despite most nodes having few connections. This pattern of connectivity remains the same no matter how large the network. For more information see the Wikipedia entry, http://en.wikipedia.org/wiki/Scale-free_network

- ²⁶ Ormerod, Paul (2005) *Why Most Things Fail: Evolution, Extinction and Economics*. Pub: Faber and Faber. ISBN 0-571-22012-6
- ²⁷ See Michael Towsey, 2009, *The Biopsychology of Cooperation* in this volume for a further discussion of the controversial issue of economic growth.
- ²⁸ Sarkar 1992, Op. Cit., p140
- ²⁹ <<http://www.communitypraxis.org/>>, link valid 12 December 2009.
- ³⁰ <<http://www.ownershipassociates.com/mcc-intro.shtm>>, link valid 12 December 2009.
- ³¹ Sarkar 1992, Op. Cit., p271
- ³² <http://en.wikipedia.org/wiki/Social_economy>, link valid 21 Decmber 2009.
- ³³ Pearce, John (2003) *Social Enterprise in Anytown*. Pub Calouste Gulbenkian Foundation.
- ³⁴ Another useful typology of enterprises describes four types based on two dichotomies – private versus public ownership and social versus commercial purpose. See <http://en.wikipedia.org/wiki/Social_economy>, link valid 21 Decmber 2009.
- ³⁵ Putnam, Robert D. (2000) *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- ³⁶ Henderson et al. (2000) *Calvert-Henderson Quality of Life Indicators: A new tool for assessing national trends*. Editors: Hazel Henderson, Jon Lickerman, and Patrice Flynn. See also <<http://www.flynnresearch.com/calvert.htm>>, link valid 12 December 2009.
- ³⁷ <http://philanthropywiki.org.au/index.php/Centre_for_Social_Impact>, link valid 21 December 2009.
- ³⁸ <<http://www.bus.qut.edu.au/research/cpns/>>, link valid 21 December 2009.
- ³⁹ <<http://www.socialtraders.com.au/>>, link valid 21 December 2009.
- ⁴⁰ Stretton 1999, Op. Cit.
- ⁴¹ See report in The Guardian, <<http://www.guardian.co.uk/global/2009/dec/13/drug-money-banks-saved-un-cfief-claims>>, link valid 16 December 2009.
- ⁴² Sarkar, P. R. (1987) *Human Society Part 2*, AM Publications, Retranslated 3rd Edition. p277
- ⁴³ Sarkar 1998, Op. Cit., p136
- ⁴⁴ Sarkar 1992, Op. Cit.
- ⁴⁵ Firdaus Ghista (*pers com*) has also alerted the author to the uncooperative behaviour of some cooperatives in India. “In Bihar today, some coops grow their own crops, use the proceeds to buy up other crops very cheaply from poor farmers and then sell that produce for a hefty profit to the government. The government is unable to control this type of cooperative capitalism even if it wanted to do so. How do you stop coops from becoming predatory corporations? If the government does so, then it gives the state a loophole to interfere in the cooperative economy whenever it wants. So moral struggle in coops is something people must be psychologically prepared for.”
- ⁴⁶ <<http://www.mondragon.mcc.es>>, link valid 12 December 2009.
- ⁴⁷ Carver, John (2000) *A Theory of Corporate Governance – finding a new balance for boards and their CEOs*. <<http://www.carvergovernance.com/pg-corp.htm>>, link valid 12 December 2009.

- ⁴⁸ Futagami, Koichi (1999) *The Range of the Public Sector and Efficiency*. Financial Review, **52**, pp1-13. <http://www.mof.go.jp/english/f_review/fr52e.htm#futagami>, link valid 12 December 2009.
- ⁴⁹ Towsey, M. (2003) *Tax in a Proutist Economy*, Prout Institute of Australia.
- ⁵⁰ Sarkar, 1959, Op. Cit.
- ⁵¹ Sarkar, 1992, Op. Cit., Section C
- ⁵² Sarkar, P. R. (1988b) *Cooperatives*. In Sarkar 1992. Op. Cit.
- ⁵³ Sarkar, 1988b, Op. Cit.
- ⁵⁴ Adam Smith, in *Wealth of Nations*, acknowledged the importance of cooperation within an economy. It was the subsequent Neoclassical approach (later to become *neoliberalism*) which narrowed and distorted economic thought. (Alanna Hartzog, *pers com*)
- ⁵⁵ Sarkar, P. R. (1980) *Prout in a Nutshell*. Part 18, AM Publications, p69.
- ⁵⁶ Stretton, 1999, Op. Cit., p427
- ⁵⁷ <<http://www.endgame.org/endgame.html>>, link valid 17 December 2009.
- ⁵⁸ Eilis Lawlor, Helen Kersley and Susan Steed (2009) *A Bit Rich: Calculating the real value to society of different professions*. Pub. New Economics Foundation, © NEF December 2009, ISBN 978 1 904882 69 5. Downloadable from <www.neweconomics.org>, link valid 18th December 2009.
- ⁵⁹ Ibid, p3.
- ⁶⁰ Pearce, 2003, Op. Cit., Chapter 11.
- ⁶¹ Garratt, Bob (2003) *Thin on Top*. Pub Nicholas-Brealey Publishers.
- ⁶² Cruver, Brian (2003) *Enron – anatomy of greed*. Pub Arrow Book.
- ⁶³ Sarkar 1987, Op. Cit. p277
- ⁶⁴ Wong, Paul (2002) *Lessons from the Enron Debacle: Corporate Culture Matters!* http://www.meaning.ca/articles/print/lessons_from_enron.htm
- ⁶⁵ <<http://www.socialauditnetwork.org.uk/>>, link valid 21 December 2009.
- ⁶⁶ <<http://www.socialventures.com.au/>>, link valid 21 December 2009.
- ⁶⁷ <http://www.socialventures.com.au/content/Social_Return_on_Investment_SROI_Tool/>, link valid 22 December 2009.
- ⁶⁸ Wentworth Group of Concerned Scientists (2008) *Accounting for Nature: A Model for building the National Environmental Accounts of Australia*. April 2008. Downloadable from <http://www.wentworthgroup.org>, For a good introduction to the model, see also Peter Cosier, *Accounting for Nature*, Fenner Conference on the Environment, 10-12 March 2009, Canberra.
- ⁶⁹ For the issues surrounding the Murray-Darling basin water allocations see Michael Towsey (2009) “Water and Land Use in Australia”, *Understanding Prout*, Volume 1, 2009.
- ⁷⁰ <http://www.environment.gov.au/archive/biodiversity/toolbox/templates/pubs/habitat-hectares.pdf>, link valid 23 December 2009.

- ⁷¹ <http://www.abc.net.au/rn/backgroundbriefing/stories/2008/2392756.htm>, link valid 23 December 2009.
- ⁷² Ibid.
- ⁷³ This is the distinction between the deep ecology and the utilitarian approaches to environmental management. See <http://en.wikipedia.org/wiki/Deep_ecology>, link valid 23 December 2009.
- ⁷⁴ For example the Westpac Foundation is a charitable trust providing grants to help not-for-profit organisations in Australia. It seeks to create and sustain social enterprises in disadvantaged communities. <http://www.westpac.com.au/about-westpac/sustainability-and-community/westpac-foundation/>, link valid 20 December 2009.
- ⁷⁵ <<http://www.lbg-online.net/>>, link valid 12 December 2009. See also the LBG Review, a special six page report in *The Australian*, Thursday 12 November, 2009.
- ⁷⁶ <<http://www.coopdevelopment.org.au/natlinks.html>>, link valid 12 December 2009.
- ⁷⁷ Sarkar, 1984, Op. Cit., under the heading *100% Employment for Local People*
- ⁷⁸ Sarkar, 1992, Op. Cit., Part 6 p295
- ⁷⁹ Firdaus Ghista (*pers com*) has offered the author an interesting historical perspective on the origins of the centralised national economy. He cites Braudel's *Civilization and Capitalism, 15th–18th Centuries (The Wheels of Commerce Volume 2)* for the argument that economic centralization and imperialism go hand in hand. “In medieval France, there were a number of kingdoms/dukedom such as Bordeaux, Provence, etc. Each of these kingdoms had their own economies, market networks. These economies were not very developed and not very centralized. They were largely based on geography and were in a sense bioregional. As a result of the struggle between the monarchs and nobles, some of these economies, like Bordeaux, became regionally centralized. During the age of *absolutism*, the economy of France became more and more centralized to feed the growing imperialism of Louis XIV. After the Revolution this centralization accelerated as the new government broke up the provincial structure and created smaller geometrical divisions that had no relationship to geography or market networks. This was essentially the destruction of the provincial economies by the national economy (i.e. the economy of elite Parisian merchants). The entire infrastructure was then developed to enable all these provinces to feed the Parisian hub. In our time these national hubs now feed global hubs like London, Tokyo, Amsterdam and New York.” Economic decentralization would transform the highly centralized structure of modern global trade into a global network of trade between bioregional entities.
- ⁸⁰ Sarkar, 1992, Op. Cit., p227
- ⁸¹ Sarkar, 1992, Op. Cit., p226.
- ⁸² Henderson, 2000, Op. Cit.
- ⁸³ <http://www.foe.co.uk/campaigns/sustainable_development/progress/>, link valid 12 December 2009.
- ⁸⁴ Desty, Amos (2004) *The New Wealth of Nations – Does Bhutan have a better way to measure national progress?* *American Scientist*, Nov-Dec p513.
- ⁸⁵ Sarkar, P. R. (1961) *Compartmentalized Democracy*. Prout in a Nutshell **XIV**, part 7.
- ⁸⁶ The U.S. Government Accountability Office (GAO), the investigative arm of Congress, fulfils some of these audit functions, <<http://www.gao.gov/>>, link valid 12 December 2009.

- ⁸⁷ Holmgren, David (2002) *Permaculture: Principles and Pathways: Beyond Sustainability*. Pub. Holmgren Design Services. page 167.
- ⁸⁸ <<http://www.eurofound.europa.eu/eiro/1997/08/feature/it9708210f.html>>, link valid 12 December 2009.
- ⁸⁹ <http://www.primaryyield.com.au>, link valid in 2007, broken in 2009.
- ⁹⁰ Masters, Chris (2007) *Treechange*, Four Corners, ABC Television, Australia. Transcript online at <<http://www.abc.net.au/4corners/content/2007/s1892893.htm>>, link valid 12 December 2009.
- ⁹¹ Ibid. See for example the promotion of Managed Investment Schemes by politicians, especially the zeal of Wilson Tuckey.
- ⁹² Australian Associated Press, *Timbercorp rent default jeopardises ownership of crops*, The Australian, 08 August, 2009.
- ⁹³ Klan, Anthony (2009) *Big payout as forestry group Great Southern teetered*, The Australian, 19 May, 2009.
- ⁹⁴ Tudge, Colin (2005) *The Secret Life of Trees*, Penguin Books, ISBN-13: 978-0-141-01293-3, p368.
- ⁹⁵ Sarkar, 1992, Op. Cit., p113.
- ⁹⁶ Sarkar, 1992, Op. Cit., p115.
- ⁹⁷ See Michael Towsey, (2009) “Water and Land Use in Australia”, *Understanding Prout*, Volume 1, 2009.
- ⁹⁸ Sarkar, P. R. (1982b) *Farmers’ Cooperatives*. In Sarkar, 1992, Op. Cit., p125.
- ⁹⁹ Sarkar, 1992, Op. Cit., p271.
- ¹⁰⁰ Sarkar, 1998, Op. Cit., p141.
- ¹⁰¹ Towsey, 2003, Op. Cit., p6.
- ¹⁰² Sarkar, 1998, Op. Cit., p142.
- ¹⁰³ <<http://www.planetfinancegroup.org/EN/>>, link valid 17th December 2009.
- ¹⁰⁴ <<http://www.jak.se/>>, link valid 12 December 2009.
- ¹⁰⁵ The ASX was formed from the merger of the Australian Stock Exchange and the Sydney Futures Exchange in December 2006.
- ¹⁰⁶ Ferguson, Adele, (2008) *Traders Plunder Super*, The Australian, February16-17, 2008, page 1. In 2009, the Australian Labor Government of the day changed the legislation to remove the conflict of interest in ASX’s operaitons.