

## Functional requisites of localized settlements

(3/2/86)

INTRO: Every social system must provide for the fulfillment of certain basic functions if the system and its members are to survive. These functions may be completed at the system level where they are needed or they may be obtained by exchange with other levels and systems. The fewer requirements fulfilled within any given system the greater is its dependance on external systems. Conventionally, "progress" is equated with greater exchange and interdependence among systems. From the Decentralist perspective, however, "progress" is equated with self-sufficiency at the lowest reasonable system level and the minimization of exchange and interdependence.

SYSTEM LEVELS: Social systems are organized on several different levels with different activities characteristically occurring at each. The lowest relevant level is the individual Household while the highest conceivable level is some form of world-wide community which does not yet really exist. For the purposes of this discussion, it is convenient to recognize nine levels of social organization. Those below the City level of organization are most important to decentralist theory but many of them are almost nonexistent in traditional western society. They seem likely to be important to a decentralist society, however. The nine levels are described in Table 1.

Table 1. Nine Social System Levels and their  
Approximate Population Sizes.

Level	System Name	Size	
		Average	Range
I	Household	4	1-10
II	Cluster	20	5-100
III	Neighborhood	100	20-200
IV	Village	500	50-1,000
V	Town	5,000	500-10,000
VI	City	50,000	5,000-200,000
VII	Region	0.5 mill.	0.1-1 mill.
VIII	State	5 mill.	2-100 mill.
IX	Super State	100 mill.	50-999 mill.

The "span of control", i.e., the number of units at a lower level which are linked together to form the next higher level of organization, has been taken to be about five for the lower levels of organization in order to optimize consensus decision making. At higher levels more formalized parliamentary procedures are likely to be employed and the span of control is expanded to ten or more.

BASIC FUNCTIONS: A number of theorists have defined requisites of systems which apply to all systems at all levels. All such lists are somewhat arbitrary and vary in detail according to individual preferences. The following list was begun in 1975 based on Amos Hawley's PACS requirements. It has evolved over successive Decentralism Seminars and currently recognizes 17 functional requisites. Suggestions for further modifications are welcomed. The 17 functions are described in Tables II and IV.

The organizational level at which each function can be fulfilled is indicated in Table II by the letters L, O, and W where L indicates the lowest reasonable level at which the function might possibly be performed; O indicates the optimum level at which it might be performed in a Decentralist Society; and W indicates the level at which the function is presently being performed in current Western society. They may occur in any sequence though L is usually at the lowest system level and W is usually at the highest system level. The assignments indicated are somewhat subjective and may require modifications to better fit individual interpretations.

Table III summarizes the information in Table II, indicating how many of the seventeen requisite functions are performed at each societal level under the three L-O-W conditions.

Assuming the assignments made are reasonably accurate, it is interesting to compare the relative distribution of the numbers of functions fulfilled at various levels given in Table III. Under current Western practice only a few functions are performed at the Household level with almost all other functions being fulfilled at the City level or higher. When the Lowest possible level of fulfillment is considered, it is conceivable that all functions could be performed at the Neighborhood level or below. When the Optimal level is considered however, a much more even distribution of functions among levels is attained with relatively few being performed at the Household level, a considerable number performed at the Cluster or Neighborhood level with substantially none requiring the City or higher levels for fulfillment.

Table II. Seventeen Requisite Functions and the System Level at Which they are Performed under the Three "L-O-W" Conditions.

L = Lowest Reasonable Level

O = Optimal Decentralist Level

W = Current Western Level

System Level of Operation

Functional Requisites	H	CL	NHD	VI	T	CI	REG	STAT	SS
	I	II	III	IV	V	VI	VII	VIII	IX

PRODUCTION: Producing basic commodities from available resources

1. FOOD - gardens, animals, hunting, gathering	L	O							W
2. SHELTER - buildings, rooms, heat, light, cooling	L		O						
3. CLOTHING - weaving, tanning, sewing, spinning		L	O						W
4. ENERGY - biomass, fossil fuels, alcohol, hydro, solar, wind, animal, human		L		O					W
5. FABRICATION - assembly, manufacturing, kits, shops			L		O				W

ALLOCATION: Distributing goods & services to members, trade outside the system

6. GOODS - food, clothing, shelter, storage, transportation	L	W	O						
7. SERVICES - jobs, personnel, repairs, cleaning		L	O				W		
8. INFORMATION - announcements, newsletters, libraries		L			O		W		
9. EVALUATION - criticism, rewards, feedback, sanctions	L	O				W			

CONTROL: Ensuring the continued smooth operation of the system.

10. GOVERNANCE - decision making, laws & rules, policies,	L			O			W		
11. ENFORCEMENT - supervising, administering, scheduling, sanctioning	L			O			W		
12. IDENTITY - legal, financial, political, boundaries, defense, size, PR			L		O				W
13. ECOBALANCE - water, soils, air, flora, fauna, wastes, recycling		L	O						W

STAFFING: Care of individuals - health, training & commitment.

14. HEALTH - medical, dental, mental, nutrition, sanitation		L	O				W		
15. TRAINING - schools, apprentices, socialization	L				O			W	
16. RECREATION - sports, self-expression, escape, arts	L/W		O						
17. IDEOLOGY - records, values, calendars, history	L				O				W

Table III. Number of Functions Fulfilled at Various Social System Levels.

LEVEL		Avg. Size	Number of Functions Fulfilled		
			Lowest	Optimal	Western
I	Household	4	9	0	1
II	Cluster	20	6	3	1
III	Neighborhood	100	2	6	0
IV	Village	500	0	4	0
V	Town	5,000	0	4	1
VI	City	50,000	0	0	6
VII	Region	500,000	0	0	1
VIII	State	5,000,000	0	0	3
IX	Super State	50,000,000.	0	0	4
TOTALS			17	17	17

Table 4 summarizes the arguments and judgements of the 1983 Seminar on what percentages of the total needs of a society could reasonably be fulfilled at each system level. In a few cases, parts of the arguments are entered to reflect the kinds of factors considered in assigning the percentages. Also included in Table 4 under each of the 17 functions is a crude estimate of the number of hours required each year to fulfill that function for a single person. The fact that all activities including recreation, training, ideology, and other "non-economic" pursuits adds to only 2725 hours - just slightly more than the 2000 hours required by a typical full time job - lends support to the Nearing's' argument that only four hours per day of "bread labor" is actually needed to support a reasonable low consumption life style.

The last line of Table 4 gives the weighted percentage allocation of effort over all 17 functions.

Table 4. Percentage Completion of the 17 Requisite Functions by System Level (Based on estimates, discussions, and evidence generated by the 1983 seminar)

Requisites (hrs/yr/person)	System Level of Operation								
	H I	CL II	NHD III	VI IV	T V	CI VI	REG VII	STAT VIII	SS IX
PRODUCTION:									
1. FOOD (300)	40%	50	-	-	-Reserved for exotic interregional foods		-10%		
2. SHELTER (70)	15%	55	10	20	-	20 (based on New Shelter 22% for owner bulider)			
3. CLOTHING (100)	10%	15	-	65 (Tailoring at lower levels)		10% - cloth mfgd at higher levels			
4. ENERGY (100)	30%	50	10			10% for imported exotic fuels, e.g. gasoline			

5.	FABRICAT. (100)	10% (some use of kits)	20	20	10	10	30 and upwards				
			H I	CL II	NHD III	VI IV	T V	CI VI	REG VII	STAT VIII	SS IX
ALLOCATION:											
6.	GOODS (250)	20%	70	5	-	5					
7.	SERVICES (100)	10%	30	50	5	5					
8.	INFORMATION (250)	25%	Proportional to activity at level i.			Deduced internally					
			30	15	15	5	5	2	2	1	
9.	EVALUATION ( 70)	25%	Direct short loop feedbacks from within two levels								
			30	15	15	5	5	2	2	1	
CONTROL:											
10.	GOVERNANCE (100)	25%	Proportional to activity at level i (or i-1?).								
			30	15	15	5	5	2	2	1	
11.	ENFORCEMENT (50)	25%	Proportional to activity at level i.								
			30	15	15	5	5	2	2	1	
12.	IDEOLOGY (50)	25%	Proportional to activity at level i.								
			30	15	15	5	5	2	2	1	
13.	ECOBALANCE (75)	25%	Proportional to activity at level i.								
			30	15	15	5	5	2	2	1	
			(Ration externalities to individual owners?)								
STAFFING:											
14.	HEALTH (250)	50%	20	20		5	5				
15.	TRAINING (500)	30%	20	10	20	10	10				
16.	RECREATION (200)	30%	20	20	20	10					
17.	IDEOLOGY (150)	10%	20	25	20	5	5	5	5	5	
TOTAL EFFORT			weighted percentage allocation								
2725 hours			27%	32%	13%	13%	6%	6%	1%	2%	1%
			H I	CL II	NHD III	VI IV	T V	CI VI	REG VII	STAT VIII	SS IX