Part 2

Communication
CHAPTER 21

Co-operative Living

Life in society differs from jungle life. Life is co-operatively in society. There is a pooling of knowledge in human society at all levels, through all and across all space. A human being is never dependent on his own experience for his in-sight, intellecution or inspiration.

211 Co-operative Life at all Levels

Co-operative life pervades all levels—vital, mental, spiritual. Even some beasts have learnt to act with advantage at the vital level. Even man had learnt to co-operate with animals at the mental level. The Vedic tradition has literary evidence of ancient poems like the yama yana refer to co-operation at the unspeakable of mysticism and spiritual experience.

2111 Vital Level

The vital level of attending to bodily needs, advantage in living co-operatively. The ordinary food, clothing and shelter are procured easily and in greater abundance if we seek them in operation. We have found by experience that people working for the supply of vital needs, in isolation of one another, achieve much less what they do if they work in co-operation. Need not live on man or at the cost of other.

It is true that the distribution of the fruits of co-operative living is not always equitable. It is true that there are springs in human personality from which terrible selfishness flows. When selfishness
and cleverness go together science is travestied to justify failure to be equitable. Analogy is drawn from jungle life and it is posed "In nature one lives on another. There is more of it than of co-operation. The law of the survival of the fittest rules. And so on." No doubt beasts have had to live on other beasts. But they were mostly beasts of other species. This analogy cannot therefore hold among humans who all belong to the same species. Apart from the fallacy of invoking pseudo-science to justify unnatural acts, there is a trace in man of the urge to live the opposite of co-operative life. One projection of this urge into our present age is what is politely called "Competitive life." In this the extent of co-operation is restricted in varying degrees—to nations, groups, families, and even individuals. In some cases, fear inhibits co-operation and promotes conflicts, strike and war. Despite all this, there is no denying that there is a huge substratum of co-operation which keeps the world going. The satisfaction of certain emotional urges set up by the glandular system is impossible if we do not co-operate.

2112 Mental Level

The desire to know is inherent in man. This desire too is satisfied to a greater extent if knowledge is sought by a team working in concert than by one working for ever in solitude. Even the most creative mind seeks co-operation of others, though at a lower mental level, to enable their own creative potentiality to fulfil itself. Indeed, the Vedic definition of education insists on four stages, the first and the fourth of which are by definition impossible in isolation. For they say that education is a process which begins in imitation by and learning from a teacher, and for its completion initiation of and teaching to a

2113 Spiritual Level

on a man's spiritual potentiality manifests as he gets into intimate, sympathetic at-one-ment everybody else and everything else in the unit. His co-operation extends over all space and time. Co-operation is indeed supreme. There is nothing in the universe of India called the Gita.

2114 Vedic Testimony

material happiness, mental joy and spiritual peace are each realised better by working in concert with others than in isolation. Well did the seers sing:

love together, talk together, understand aright. Deliberate together, achieve together, remember in common, think in co-operation.

The be your intentions, harmonious your feelings, and concerted your thoughts, that there may be complete co-operation among you.

2112 Mental Heritage

Humanity has now advanced well into the mental stage. It is long since it emerged from the age of instinct, when its existence, activity and mutual
relations were regulated solely by hormones and biochemical forces without the intervention of deliberate mental action. He is no longer a mere colony of aggregates of cells of protoplasm. The development of the brain and particularly its cortical region has made him in a sense master of biochemistry instead of biochemistry being his master. This has enabled him to live in co-operation even with his dead ancestors, The departed live in absentia, so to speak, with the living. The living and the dead work in a co-operative chain at the mental level. The result is that mental heritage is more lasting and cumulative than material heritage. Mental joy is less dependent on pragmatic realisation than spiritual delight. This makes mental heritage more easily cumulative and transmissive than spiritual heritage.

2121 Progress and Externalised Memory
So far as mental progress is concerned the living begin where the dead left. Human progress depends on this. It is made possible by the capacity of the human mind to externalise memory, so to speak, and leave it behind even when the body dies. Memory is so externalised that the succeeding generation can make it its own and by-pass the need to acquire all that by its own effort starting from scratch. This is not possible for beasts. This capacity to benefit by mental heritage leads to a perpetually swelling confluence of mental heritage.

2122 Intensive Co-operation
This confluence of mental heritage helps and intensifies co-operative living at all the levels—vital, mental and spiritual. It demands, leads to, and makes possible a more extensive co-operative life at the three levels. This perennial self-enrichment mental heritage has been repeatedly painted in and in some of the timeless poems like the Mahabharata and of Bhagavad-Gita.

2123 Mixedness of Mental Heritage
It must however be remembered that everything inherited is not of equal value. Mental heritage is like Pandora’s box. Co-operative living may to avoid its dangers. Deliberation, and judgment as to what part of mental heritage is outmoded and therefore poisonous, what endure eternally, and what part will be at present though not in future—to discard and judge all these—working in cooperation is essential.

213 Towards One World
We define a Territorial Unit as that extent of which can form the abode of a closed unitary living.

Co-operative living with ever-increasing mental heritage has been leading to a progressive extension of territorial unit. This extension is a part of the co-operative living practised by co-operative living with ever-increasing mental heritage has been leading to a progressive extension of territorial unit. This extension is a part of the co-operative living practised by co-operative living with ever-increasing mental heritage has been leading to a progressive extension of territorial unit. This extension is a part of the co-operative living practised by the people occupying a territory and its capacity to meet such needs. Population-pressure over-
reaches, as it is put. When this happens, pockets of people living in isolation as closed units are obliged to spread out until the boundary of one pocket touches that of another. Then the two communities eventually get coalesced and get integrated into a bigger pocket of co-operative living, occupying a larger area. The territorial unit becomes larger.

213: FORMATION OF NATION

Time was when the family determined the territorial unit of co-operative living. When the number of families in a given area multiplied beyond a certain limit, the orbits of several families intersected. In the first instance this often led to clash and strife. But soon the families learnt the wisdom of co-operative living. Village-life set in. The territory of the closed unit of co-operation was extended to cover a village. The spheres for the individuality of the family and the co-operative living of the community were soon demarcated and the conflict between the two spheres were progressively eliminated. Thus the area of the territorial unit of co-operative living was extended. This progression has been going on. Closed national units have been fused. The earth's surface has now been partitioned into territorial units of larger size for the extensive co-operative living of each of the nations. Occupation of unoccupied areas has been made possible by the technological progress that made possible very co-operative living within the nation. Family and the various sub-territorial and occupational and other groups are trying to reconcile their respective spheres of individuality with the life as a nation. Man has now learnt to allocate his loyalties to several groups, to live in them simultaneously in a co-operative manner, thereby to find happiness, joy and delight for himself and peace for the nation as a whole.

We shall next consider the effect of population within a nation and percolation across national boundaries. The result of the migration across national boundaries had depended on the relative numerousness and cultural stamina of local and the immigrant communities.

2131 ASSIMILATION

The evolution of India, till she went into deep prolonged sleep a few centuries ago, demonstrates possible happening. So long as the local immigrant communities are equally virile and possess sufficient confidence in the possibility and power of co-operative living, they get assimilated in a happy way. The individuality of the culture of either is
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not totally obliterated. The spheres of the constituent communities and that of national co-operative living are easily marked out. The living together of different cultural groups adds not only to their vital well-being and their mental development but also to the enrichment of spiritual life. When spiritual awareness reaches a sufficiently high pitch, even language is seen to be no necessary individualising factor in a cultural or national group. Even religion—in the sense of creeds and rituals—is seen to be no necessary individualising factor. The hey-days of India in the past had demonstrated the possibility of fullness of co-operative living even by different linguistic and religious groups. That is the message of India's assimilation in succession of Syrians, Arabs and Persians. In a similar way, in India's hey-days Indians also got integrated with the communities in Asia Minor in the West like those of Palestine and with the communities in South Asia like those of Ceylon, Indonesia, Malaya, Siam and Indo-China. In the eighteenth and nineteenth centuries India's exhaustion on the one hand and the resistance to assimilation offered by the Anglo-Saxon community on the other prevented a fully profitable co-operative living.

2133 Colonisation

When the local community was too small in number or too weak in its cultural stamina, the pressure of the immigrant community led to its extinction. Witness the Red Indians and the Polynesians. When this happened, the area of migration was virtually equivalent to an unoccupied area. The result was

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Colonisation. 'Colonisation' is negation of co-operative living between the local and the immigrant communities. It is persistence of ruthless exclusion. For some time the spreading out of the life of one nation into non-contiguous areas and living therein did not prevent the different communities from hanging on together and maintaining their solidarity by frequent exchange of people, thus the British Colonial System. But eventually the sea had weakened sooner or later and resulted in the formation of new nations, as the countries in North and South America.

2134 Empire Building

...third thing happened when a virile community driven by population-pressure to migrate into areas whose local community was weaker in its stamina but was not extinguishable. In such exploitation was the result. Exploitation too is a form of co-operative living. It too is jungle-like species living on another. If the original unity is still tolerated and allowed to perpetuate itself and not extinguished, it is very much like the beasts of burden being domesticated and taxed. Empire is the result.

2135 An Index of the Future

...day the world is occupied almost fully. The colonies in Asia and Africa are recovering from exploitation. Freshness activates them. Exploiting nations are expiring. Exhaustion is overtaking them. Consequently Empires are breaking down into independent states. Colonies are also forming themselves into independent nations. Politically then the number of
independent national groups is increasing. But economically, their orbits are getting criss-crossed. It looks as if national economics should yield to world-economics. World-economics means co-operative living over the entire face of the earth. But political traditions resist this tendency towards one world. Wars and conflagration are recurring rather too frequently. The area covered by war has always been a distant index of the size of the enlarged territorial unit of co-operative living which would be formed next. The fact that we have had two World Wars—de jure so and de facto nearly so—is a distant index of the fact that we are struggling towards World-State or Near-World-State. The failure of the League of Nations and the ineffectiveness of the United Nations no doubt show how much more difficult, arduous and tardy is the dawning of the wisdom that the time has come when the territorial unit for a closed unit of co-operation should be extended beyond that of a nation and that the spheres for the individuality of a nation and the co-operative living of the entire humanity should be discovered and implemented without conflict.

2136 Large Scale Mergers

The first merger on a large scale, the wisdom of which is being seen today, took place more than a century ago when the federation of the U.S.A. was put on a firm foundation. The U.S.S.R. is the second example. The formation of the Republic of India and the merger of the states within it is the most recent occurrence of comparable magnitude. All these countries have written constitutions which de-
unless it is proved that there is a critical upper-limit for the area within which co-operative living is possible. Past history does not throw any light on this question. We have therefore to be guided only by wish and faith. I for one wish and believe that there is no such upper-limit and that the entire face of the earth can eventually become a single territorial unit for co-operative living.

Some earlier resistances to the extension of the area of co-operative living have been totally or nearly eliminated. At first there was family strife. When it was eliminated, feudal strife set in. When this was eliminated, religious strife began its sway. It is true that in spite of religion (in the sense of creed and ritual) having outgrown the stage of being a true force either for co-operative living or for wars, its emotional capacity has been used by political forces to obstruct expansion and merger—alas, even to split up. This happened within living memory in Ireland and it happened the other day in India. Perhaps the world will use the slogan "Religion in danger" as a cover to protect political motives for some more time, but I believe not for ever. Resistance to merger is developing new roots in our own days. They call it ideological resistance. Resistance develops between different ideologies. "Democracy in danger" is one form which the slogan takes. "Down with capitalism" is another form. The world has yet to find some means of reconciling ideological differences with the economic need to extend the territorial unit to cover the whole earth. Influences of exceptional personalities are the only promoting

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which we can look up to at present. But these personalities cannot be produced to order.

2142 INSTITUTIONAL INERTIA

Institutional inertia, the other complex of resistance to the extension of the area of the territorial unit of co-operative living, may be described as the hardening done to concrete. It may be a very urge for co-operation as it is developed in some territorial unit or in any one group. Once people get accustomed to an institution they begin to feel that their institution resists the only right pattern of behaviour. It is we no longer say that it is of divine origin; to say and act as if we are convinced about the only proper one.

Institutions tend to stay long after the necessity for them has disappeared, and, often, even when their existence becomes a danger. All institutions have an equal period of usefulness. Some are of high value. Some become obsolete rapidly. But not and the encrustation harden equally in all. It is the hardened state in obsolete institutions which makes it difficult to co-operative living being carried out in groups and territories. The obstruction due to institutional inertia may be increased by short-sightedness, fear of change, and other psychological, social and ecological factors. Here the peaceful breaking of institutional inertia
can be brought about only by exceptional personalities.

2143 Spatial Obstruction

The very distance between nations and the physiological barriers such as oceans, deserts and mountains—factors relating to sheer space have been militating against the expansion of the area of co-operative living. Technology is minimising the potency of such spatial obstructions. Rapid means of transport by land, water and air are dissolving space, as it were. The cost of transport today is being progressively reduced to make it feasible for an increasing number of members of different territorial units being mixed with those of others. Agencies like the British Council, measures like the Fulbright Act and the Smith-Mundt Act and Foundations like Carnegie, Rockefeller and Watumull are promoting cultural contact by providing for travel and exchange of nationals into and with other countries. Most of the individuals who have had experience of these organisations are convinced of their capacity to melt the political and cultural prejudices, suspicions and resistances engendered by mere spatial separation. Statistics of the activities of such organisations should be consolidated and widely disseminated by Unesco. Air transport, printing press and radio-waves make transmission and exchange of ideas both expeditious, and widespread. All these factors will in the long run disable space from obstructing the expansion of the territorial unit for co-operative living so as to cover the entire face of the earth.

215 Favourable Factor

There is however one favourable factor. The role of an individual in modern times derives from his relationship to new social forms which may be Functional Groups. His personality and his intellectual interests which are more restrictive in his age are beginning to assert itself against biological and social interests which are more restrictive in his age. From the standpoint of ‘social engineering’ the latter may, with profit, be directed to the production of a homogeneous group of intellectual interests. The establishment of a social structure similar to that of an intellectual group for such a promotion. These intellectual co-operative living first got within a localised community like that of a nation or country. This accustomed people to intellectual living among those living in non-continental areas and having hardly any family or bloodship or even ethical similarity. The specifiers now got so intensified that many do not find peers in necessary abundance even within a single city. They have to seek persons with whom they can intellectually resonate far outside their country. Thus the territorial area for the intellectual co-operative living is undergoing extra-local extension. Confining ourselves to basic and applied
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coop-operative living on world-scale. Eventually!
distant? Measured in terms of an individual's
age span of life, infinitely distant!! But in terms
of life of humanity as such, measurably
!!! The human race is still in its infancy,
derived by explosive emotions and narrow
ness. When it matures, eludes ethnic grips,
control over emotions, becomes dominantly
intellectual, and enters the supra-mental stage de-
by Sri Aurobindo, it will get glimpses of the
of co-operative living in un-truncated, in-
context—the delight (= Ananda) which stray
alls have realised hitherto and denoted by the
term Pure Existence cum Pure Conscious-
Pure Delight, Saichidananda.

In spite of this, there is every hope that the in-
tellectual binding force, which transcends territorial
boundaries, will eventually gain in strength and lead
CHAPTER 22

Communication and Language

Even assuming that the centrifugal forces stemming from religious, political and economic motives of narrow egoism are either eliminated or subordinated by the centripetal force stemming from an intellectual motive of wide social value, the full exploitation of the situation will depend on the efficiency of communication. For, the building up of a unit of co-operative living will depend on the mutual understanding between its members. Understanding in its turn will depend on the process of communication. Indeed when we speak of an organised society, it is not a static structure defined by tradition that is meant. On the other hand, what is meant is a highly intricate network of mutual understanding. It may be understanding between individual members or groups of varying size and complexity in the territorial unit of co-operative living. It may be a pair of lovers or a family at one end of the scale and a nation or a family of nations at the other end. In between these two extremes, come the ever-increasing portion of humanity which can be reached through modern media like the printing press and radio broadcast. An organised society exists only as the flux of understanding maintained by communication between individuals and groups. In fact every single act of social behaviour involves communication of ideas and emotions in either an explicit or an implicit manner. Promotion of world-peace needs the extension of the territorial unit of closed co-operative living so as to

over the entire surface of the earth. These should be the objective of the sum-total of all the acts of social behaviour. These have to depend on communication. There should be persistent removal of elements which block it. We should set up means of communication which will transmit ideas without friction, refraction, false addition or vague absorption. Among the means of communication, we should distinguish between primary processes and secondary techniques.

221 Primary Processes

Social suggestion, gesture and language are three standing primary processes of communication.

221.1 Social Suggestion

Imitation is the dominant act which secures community and consolidates society. Imitation is the process of involuntary, of falling in with the ways of other members of society. In this process one takes up the ideas prevalent in society. It virtually invites overt communication from society to the individual. When the individual learns to go to the school or to the library, for instance, because others do, it is as if a communication has been received.

In I went to the Birmingham Railway Station in. I rushed to the booking window since I did find anybody standing in my line of approach. Having reached the window, I glanced round. I found a long queue standing in the form of a quadrant of a circle. Nobody spoke to me or even made a gesture. And yet I felt a social suggestion. I picked up as a communication and I retraced my steps and took my rightful place in the queue. Social sug-
gesture consists of unformulated, unsymbolised, unverbalised communications of society. It is very important. One who is not familiar with such communications may be baffled by the significance of certain kinds of behaviour even if one is aware of their external forms and the verbal symbols accompanying them.

2212 Gesture

Gesture includes manipulation of the visible and movable organs of one’s body—hands, head, lips, eyebrows, eyes, etc. Variation in intonation too may have to be classed with gestures. But it must be given a place in language also. The shrugging of shoulders, the wave of hand, the clenched fist, the biting of lips, the lifting of the eye-brows and the widening of the eyes are means of communication. The silent shadeplays of yore and the modern silent movies make communication depend solely on gestures. The Kathakali of Kerala uses gestures as a means for communicating a whole story. At an evening party at Kollengode, the artist communicated by gestures the substance of my speech on ‘Public library provision.’ His communication was even more effective than my verbal communication. Many secret societies have developed elaborate gesture-languages as they are called. Rama, the hero in Valmiki’s Ramayana, is often described as an adept in picking up communication from mere gestures. The poet praises the hero quite often for this adeptness of his. He is also described as an expert in communicating his own ideas by subtle gestures. The other characters in the poem often betray their obtuseness in their lack of awareness and

2214 Eclecticism

The most effective communication is eclectic. It unites all the above means in due proportion, with the unspoken social suggestion as background, words are uttered and their efficiency is enhanced by gestures. All the subtler effect of factors like local context, modulation of voice, change in facial expression, movement of the eyes, etc.—in short the entire interaction of the personalities of those who
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are communicating with one another are pressed into service. This is most effective when there are only two persons in the picture and they are intimate in their relation. In Sanskrit the term Sansada is reserved to denote communication par excellence in such a setting. The Sansada form of communication is usually invoked only for profound purposes like Initiations. Vedic literature emphasises this by saying that communication is a necessary link by which knowledge gets created. Indeed the teacher is called the pre-form of knowledge; the student is called its post-form; knowledge itself is said to emerge from their meeting; and communication is described as the means by which it is helped to emerge.

Secondary Techniques

No primary process of communication is possible when space and/or time separate the two parties of a communication. To meet this situation, several secondary techniques are being invented. Writing was the first of such techniques. It had been invented even in prehistoric times. Writing makes communication possible across space and time. It makes language-transfer possible. In reality, writing uses symbolism of a kind for the purpose. The telegraph codes are other forms of symbolism of similar kind. These symbolisms can effect language-transfer exactly and without any mutilation.

In certain classes of symbolism designed for communication a literal reproduction of the original may not be possible. Wigwagging, railroad signals and temple bells belong to this category. This class of symbolism is used only when simple responses like

...
223 Babel of Tongues

There is a difficulty in this matter. It is caused by the multiplicity of languages which got developed during the past when physiographical barriers could not be got over and intermingling of people, separated by such barriers or even by sheer distance, was not common. The babel of tongues which baffles the world today is an inheritance which cannot be easily liquidated. There are said to be nearly 5,000 languages in use. It is true that all these languages are not equally influential. But the number of influential languages has been steadily increasing in the present century. Till the First World War most of the creative thought of the world was communicated through less than half a dozen languages belonging to the Teutonic and Latin groups. It is the countries, whose people speak these languages, which were dominant in the political sphere. But after the First World War the Slavonic languages got revived. The present day,—i.e., the period after the Second World War, is witnessing the revival of many of the Asian languages. The simmering of Asian renaissance is unmistakable. It is true that during the last 500 years many of the Asian people had been lying in a state of exhaustion and stupor. Their languages had not been used for creative thinking or for the communication of creative thought. The result has been that these languages were paralysed. But it is not merely political motives but the irrepressible blossoming of the minds of these people who are awakening, which is going to swell the number of influential languages to beyond a dozen.

224 Attempts at Liquidation

During the last two centuries several attempts have been made to liquidate the babel of tongues. The semantic and comparative study of the attendant instances, agencies employed, resistances offered the degree of success attained in these attempts. The results of that study may be a formulation of the context in which the set of languages can be reduced with profit and without any harm to anybody.

2241 Reduction to One Language

Comparatively small-scale sociological experiments are in progress in the U. S. A. It Americanises term goes. One element of Americanisation is that every citizen use English—rather American the medium for thinking and communication. The U. S. A. is able to succeed in this process to change. Other areas colonised by the Euro-like Canada and South Africa, have not succeeded in this process. Having had a favourable start in the nineteenth century and having now begun to immigration, U. S. A. succeeds in the process. A situation has arisen when everybody who American citizenship has to accept the dictum that he must use American as his medium. It is nullness of the annual dribble of immigrants the quota system allows from any one linguistic group, which disarms them from asserting their own language. The immigrant family takes a few generations to throw off the mother-tongue and bring American to the same level as the original mother-tongue.
Possible Danger.

This should involve considerable loss of creative ability in thinking. No attempt has been made to assess this loss. In assessing it, we should remember that it happens that some of the best brains in the world have sought refuge in U. S. A. during the last fifteen years. These exceptional men can easily digest a foreign language and be at home in it without loss of creative power. My conjecture is that a change over in mother-tongue will inhibit creative thinking in ordinary folk for four or five centuries.

Ballard agrees with this view. For he writes in his *Thought and Language* (1934):

"How fares the child who is bilingual from the first? An investigation carried out in Wales a few years ago caused much perturbation because it seemed to indicate that to learn two languages concurrently in early childhood retards mental development.

"Thought and inner speech are so closely interwoven that they grow and decay together. Hence we cannot cultivate the one without cultivating the other. And training in the use of the mother-tongue—the tongue in which a child thinks and dreams—becomes the first essential of schooling and the first instrument of culture."

Impracticability

The success of the American experiment does not warrant that it will ever be practicable to reduce all the people of the world to one particular language. In the first place the peculiarly favourable conditions which obtained in the U. S. A. do not exist in the world as a whole. It is one thing to force a new tongue on immigrants who seek to enter a country in helpless and despair, but it is another thing to force a tongue on a settled people living in their own land. The British experiment in India of teaching English the medium of instruction, for government business and for trade, continued for more than a century, and has demonstrated the futility of attempting to force an alien tongue on settled people of considerable size. It is true that in about 150 years about 5 per cent. of the population have with adopted English as medium for thinking and articulation. But to penetrate into the intellectual life of the very top-most has proved almost impossible. The havoc of change over to an alien tongue has been far-reaching even among the top-ranking officials of India. It is commonly remarked that there has been very little creative work in India during the last 100 years, though it had not been lacking in many brains.

"As H. R. Huss says in *Illiteracy of the Mind*:

"Men who can speak a number of different languages are notorious for having little to say anything at all."

Resistance

There is evidence of forcing a foreign language on the colonies in Africa. A few Africans, whom I met, are not happy about this. They resent it. The African languages which are sought to be replaced in this manner are not rich in their past literatures. The conditions are, therefore, more favour
able to wipe out indigenous languages in these colonies than in India. I am told that the absence of a script is another factor which may prove favourable to this experiment. It is too early to say whether the experiment will succeed.

2245 IMPOVERISHMENT OF HUMANITY

In the "Winged destiny," Fiona Macleod protests against the suppression of the mother tongue with great feeling. She writes:

"The last tragedy for broken nations is not the loss of power and distinction, nor even the loss of that independence which is so vital to the commonwealth. It is not perhaps even the loss of the country, though there is no harder thing than to see the smoke of the stranger, or to hear upon the wind the forlorn business of the going of those who are dispossessed and the coming of those new in possession. The last tragedy, and the saddest, is when the treasured language dies slowly out . . . . The whole tendency in our modern days is for the stronger nations, such as Britain, France and the United States, to overwhelm the weaker, to annihilate their culture, to swamp their language. This makes not for the enrichment but for the impoverishment of humanity. Losing its native speech, a people loses its continuity with the past and sinks to intellectual helotry."

2246 HERITAGE

The babel of tongues should be examined from the angle of human heritage, in order to understand why its liquidation would be impracticable and what can be done in the circumstances. At first sight it looks as if a common language for international commu-
groups. This was possible because what had to be represented in the word was the minimum quality by which one would be able to recognize what it denoted. Just as in order to recognize a person we do not need to see the whole man, so in the world of languages it is often enough to get a bare hint. Often we need no more than the way in which a friend knocks at the door to recognize him. These factors made different groups develop their languages along diverse lines even if they had started together. Thus long before the population of the world increased and the distributions of the density of population on the one hand and the density of consumable commodities on the other ceased to register with each other on the face of the earth, several languages had established themselves and formed essential parts of the heritage of the respective groups. These languages have already become so immiscible and so deeply ingrained in the nature of those who speak them naturally that it is next to impossible to reduce them to a single language. Within the last 1,000 years at least a dozen of the current Indian languages had been formed by these factors, and they are now irremovable parts of the heritage of the respective people. The demand for the re-drawing of the boundaries of the constituent States of India on a linguistic basis is inexorable. At best it can be delayed. It can never be prevented.

225 Prevention of Dispersal

This does not mean that this process of adding to the babel of tongues will go on for ever or should be allowed to go on for ever. For several natural and social factors have come into the picture during the

100 or three centuries, which may prevent further
tection.

(2251 Natural Retardation

In the first place the pressure of population and

2252 Inter-penetrating Transport

The factor which arrests the further formation

dependent languages is due to the increasingly

mutual intercourse between different socio-

linguistic group living in different territories.

This factor is the result of the strides which tech-

nology is making in the development of communica-

tion in transport of persons. Even though the 150

100 who speak English are scattered in all the five

United States of America, there is little appreciable dispersal of

into independent languages. It has been

said that in 1820 when transport facilities were

there was only one family who spoke standard

English. All the other families spoke local dialects. But by 1896 there were only

1,000 people left to speak the local dialect. This is due to the intermingling of people brought about through transport facilities. As a contrast mention may be made of the fact that every single village on the Maclay in the north-east of New Guinea has its own

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understand each other. Even so tiny an islet as Thru Hills, which is but six miles long, has two distinct linguistic groups which do not understand each other. All this will disappear as soon as inter-penetration of transport mixes these people together.

2253 Political Unification

Another factor which usually thwarts the aspiration of dialects to the status of independent languages is political unification or alliance. The United Kingdom is a prominent example of this. The last five centuries have seen how the different dialects of English even those like Scotch and Welsh, which belonged to other subfamilies and had already attained near-independent status—have abstained from claiming separate existence. It is hoped that the political unification of India will prevent the further multiplication of languages in India. In particular it may be expected that the tendency of Hindi to break into two or three independent languages will be arrested.

2254 Literacy and Literature

During the last 100 years a new force is taking shape in the developed countries to counteract the tendency to dispersal. Literacy has become nearly universal. Reading materials are being produced in plenty to suit all intellectual levels and interests. A network of free libraries has been established. Popular periodicals and newspapers are produced in plenty and circulated everywhere. The same printed word impinges on the mind of everybody. This counteracts the spontaneous dispersal of a language in course of time.

2255 Standard Language

The emergence of 'Standard' language—Standard English, Standard French, etc.—is driving out the languages caused by physiographical factors. Standard language is of social determination. Many factors contribute to this formation—marriage, religion, com-society, literature and so on. Nowadays, the talk to which practically every home now gives a great influence in this matter. Schools and Universities contribute a good deal to the maintenance of standard language. The systematical transfer of officials helps the survival of the standard language. Of course, facilities are increasing the radius of reach of the standard language. People realise that the standard opens the door to understanding in wider circles than does a dialect, whether it is speech or writing.

The respect for standard English is likely to spread and perhaps make permanent the homogeneity among the 150 millions of people who speak English today, though they are scattered all over the world.

In India it is hoped that standard Hindi will spread much more quickly than it has been for the languages which established their hold in the earliest centuries. If it does, it will be a binding force which will prevent the breaking up of languages.

226 Preservation of Homogeneity

Apart from factors which prevent the breaking up of existing languages into several languages, there are also certain social techniques which are bound to preserve the homogeneity of a linguistic
group. The experiment in progress in the United States on a national scale has already been mentioned in Section 2241. There immigrants from other linguistic groups are by law and social pressure obliged to adopt the language of the nation. In a polyglot country which gets politically unified a similar technique may be adopted. It has to be assumed that common sense will prevail and that the constituent States will be made linguistically homogeneous. On this assumption it should be possible for a constituent State to make it obligatory for the residents of other linguistic states to learn the language of the State of adoption if they wish to change their residence. The Constitution of India needs to be examined from this point of view. Articles, 19, 29 and 30 in Part 3 Fundamental Rights may, on the surface, appear to be against such a step being taken by any constituent State. For section 29 (1) and (2) reads:

“(1) Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own, shall have the right to conserve the same.

(2) No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, language or any of them.”

Can these articles be construed to disable a constituent State from enforcing citizens coming from other linguistic areas to adopt the language of itself? It may not be necessary to enforce it by positive action but it will amount to enforcing if schools and libraries

only the language in the State as the medium.

19 (1) which reads:

“All citizens shall have the right—

d) to move freely throughout the territory of India;

(2) to reside and settle in any part of the territory of India.”

have the same effect as Article 29.

30 (2) might militate against the exercise of right by a constituent State. For it reads:

(1) All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.

The State shall not, in granting aid to educational institutions, discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language.”

Long run provision of Article 30 has the potential to break up the linguistic homogeneity of a constituent State in due course. Evidently this was framed in view of the present heteroglossic linguistic constituent States and particularly metropolitan cities like Bombay, Calcutta, Delhi, Madras. Whatever be the legal loophole, there is doubt that social pressure will preserve the linguistic homogeneity of each state.

227 Voluntary Bi-lingualism

To maintain a language it requires a certain minority of population. The minimum is high in modern
days where people depend so much on printed books and newspapers. Printing trade cannot flourish unless there is an adequate marker. It is so with the Daily Press also. Again the creative thinkers in a community will find it difficult to find a sufficient number of peers for mutual intercourse within the community itself unless it has a minimum population. No scientific study has been made to determine what the minimum should be for these two purposes. The history of the linguistic curriculum of the schools in Scandinavian countries throws some light on what I call ‘Voluntary bi-lingualism.’ Before they were developed, at some time the Scandinavian was spoken by one million people. Later it split into Danish spoken by three millions, Norwegian spoken by three millions and Swedish spoken by six millions and two other languages. However, during the last 50 years as these countries began to develop and became more aware of the conditions requisite for healthy progress, they found it unwise for small nations to insulate themselves within one language. First they attempted to take German as the second language. In recent years they have made English a compulsory second language in all educational institutions. The regulation provides for it and the people welcome it. While travelling through these countries, I found that there was no resistance whatever to this bi-lingualism. There was every evidence that it was voluntary. The Scandinavians even produce books in English language. In international meetings they do have an advantage over other nations which confine themselves to a single language.

228 Conclusion

have been reduced to a dilemma. Interna-

peace is possible only if the terrestrial unit of nativ living covers the whole earth, that is World-State becomes a reality. For this to

and to continue without reversion, under-

should be possible and easy among the

humanity, across the entire surface of the earth.

standing is possible only if communication is

Communication across the earth’s space is

easy only if the primary process of

ication is through the medium of a single

While forces have taken shape to prevent

ation of new languages, the immiscible

es are already too many in number and too

in their nature to allow of the liquidation of the

ngues or to reduce them even to two or

With the result, we must recognise the exist-

several unextinguishable languages and ex-

-best international understanding can be

One possible approach is to devise differ-

to communication in different spheres of

ional intercourse and co-operative living.

ally Commerce, Political relations, Literature, intelectual pursuit will be examined from the

view of communication. The opportunity

classificatory language will find to facilitate

ational communication will be explored in

ular.
CHAPTER 23

Commercial Contact

So far as commercial contact is concerned, the babel of tongues was not a serious handicap in the past. For in commerce, the physical presence of the commodity and the currency goes a long way in facilitating communication. A smattering of commercial terms and of tourist vocabulary will prove to be a sufficient medium for communication. Chinsmen do trade in India to-day without either their knowing Indian languages or our knowing Chinese. I had met Indian traders doing very well in England without any proficiency in English.

231 Early Period

This had been sufficient for centuries. The people of the Gujarat Coast of India had been trading with the people of the East Coast of Africa for several centuries with great success and without any need for reduction to a single language or for attaining scholarship in each other's language. Within India itself, we find Kabulis trading in South India and Tamils doing business in North India without either attaining any proficiency in the language of the locality or giving up their own mother tongue. Till the mariner's compass was brought into wide use in the fourteenth century, the quantity of trade was very small and it was only between adjoining countries. The number of persons employed in commerce was therefore very small and the number of languages encountered by them was seldom more than one or two. Trade was mostly by barter in those far-off days. No difficulty therefore, experienced in making communication serve the needs of commercial contact without necessity for a considerable knowledge of languages in the number of languages.

232 Period of Sailing Ships

When sailing ships guided by mariner's compass to cross high seas, trade began to connect distant countries. The languages of such countries were unfamiliar and unlike. The traders were to spend long periods amidst a foreign language. Even then, the difficulties of medium were reduced to a minimum by each group of traders speaking in one country, so that commercial contact was often bilateral. Interpreters grew up as a profession. In spite of a certain percentage of trouble out of intentional or unintentional wrongful act, communication went on all right. It was mostly oral and seldom written. The dangers of tongues did not take serious shape.

233 Modern Times

However, in modern times large scale world-wide active commerce has set in. It is being regulated and controlled at governmental level. It gets entangled in a maze of foreign exchange and commercial route. The personnel employed in commercial activities fall into three groups. The quality of communication and their course differs in these groups. The difficulties encountered are differently incident on these groups and different solutions may be possible.

234 Carriers

The first group consists only of carriers qua carriers. The region of ideas in which they have to com-
communicate with people speaking other languages is both definite and limited. The personnel of this group also is very specialised. It is not difficult for these personnel to acquire efficiency in the jargon of their calling, which prevails in different linguistic areas. In their case, therefore, the babel of tongues does not create any major problem in communication.

235 Clearance and Customs Staff

The second group involving international commerce consists of the staff in charge of clearance work and customs. Here there is greater complication. One reason for complication is the enormous increase, in modern times, in the range of commodities figuring in commerce. It is no longer merely raw materials or near-rare materials, which are comparatively limited in number. But the commodities of commerce include myriads of manufactured and semi-manufactured materials and even artificial materials. The increase in their number is further multiplied by the increase in the number of their grades and brands. The terminology used to denote this vast range of materials is not standardised even in the natural languages of the regions where they are produced or consumed. The difficulties faced in communication by the babel of tongues, therefore, get even more pronounced. To minimise these difficulties international organisations have attempted to make standard lists of commodities with names in several languages. The Draft customs nomenclature (1931) by the Sub-committee of Experts for the Unification of Customs Tariff Nomenclature of the Economic Committee of the League of Nations. (Series of League

Commercial Contact

ations publications, II Economic and
3, 1931, II B 25). (League of Nations,
1, M 486, 1931, II B) is an example
kind. The alphabetical arrangement which
tended to at present is not helpful to commu
it ruthlessly scatters commodities which
ly akin to one another or which generally
ether in commerce. Moreover the com
re thrown in different orders in the alphabet
of the different languages. The broad
given in the League of Nations publication
helpful as necessary.

235 Classificatory Languages

ists to me that classification may be able to a
relief in the difficulties of communication
atter. Probably it can also reduce the cost
aining such standard lists and keeping them
table to accommodate new commodities
manner. But there are difficulties. Com
are by definition the most concrete materials
think of. In other words, their extension is
ay are also many in number. They were
to exceed one million, even in 1927. The
natural languages give up attempting to
pressive or descriptive names. Most of
modities are given only pure extensional
is, mere denotive names with little des-
expressive elements in them. Classificatory
which by its very definition should be ex-
will therefore be put to great strain in consid-
class numbers for commodities. Here parsi-
in length of class number and expressiveness
Classification and Communication

will come into acute conflict. But it is my hope that
the foundations of expressive analytico-synthetic classi-
fication can be explored and properly laid so as to re-
solve this conflict and establish classificatory language
as a universal artificial auxiliary language fit to be a
helpful medium of communication in clearance and
customs work. As its use will be confined to a closed
circle of specialists, it will not get shattered and
mangled as the natural languages which have to
grow in the mouth of the man in the street.

236 Commercial Houses

The third group of personnel playing an essential
part in modern global commerce consists of those
who work behind desks in the commercial houses in
the different countries. They do not have the benefit
of the physical presence of the commodity to help in
their communication with one another. Nor do
they have the immediate presence of the other party.
Communication has therefore to be only by language-
transfer. Moreover they have to negotiate by corre-
respondence on diverse matters including the fixing
of price, assessing demand and supply, export and
import control, foreign exchange, entering into con-
tract and so on. Their work marks the transitioning
of commercial contact into political understanding.
The problems of communication among these groups
are not therefore different from those arising among
those who communicate with one another for political
understanding. The bad effect of having too many
languages and the possible methods of minimising
need not therefore be separately examined
here.
CHAPTER 24

Political Understanding

The greatest resistance to the extension of the moral limit of co-operative living to the entire of the earth is met with at the political level. Here that the devil in man has the greatest sway. devil manipulates the passion and the ego in a manner. It often takes the form of fear, seeks to perpetuate faults in commun. It thrives on equivocation and com- munication with mental reservation. It revels in the ce of a babel of tongues. Communication for all understanding has not got the chance to less nor the help of concreteness of context as arcial contact has. Humanity has been, how-endeavouring to escape from the ruinous hold devil by providing better modes of communi- 

In the past, it has been able to bring the passion and egotism under control among a trically homogeneous people. In this process, learnt that communication plays a great part. free communication of ideas, people in mono- tics have succeeded in demarcating the of loyalty to the nation and to smaller groups it. This has encouraged humanity to help communication at the international level and empt to demarcate the sphere of international native living and that of the constituent nations. heterogeneity of language is sought to be met for first time on a publicly organised basis. The ongogeneity is more pronounced when we take the
world as a whole than when we consider a polyglot
country like India or Russia. The languages in
India virtually belong to the same family. They are
near-cousins. Most of them got separated from their
common ancestor and assumed autonomy only during
the last 1,000 years or so. But the languages in the
world-forum belong to totally different families. They
had grown in totally different social atmospheres.
They have become immiscible. They differ as widely
as one can imagine in their alphabet, even in the
direction in which letters and words are written—
left to right, right to left, top to bottom and so on—in
their radicals, their morphological and syntactical
methods and their semantic characteristics. There is
little common ground. This creates a colossal problem
which faces international communication. In spite of it,
Herculean attempts are being made to aid the language
by bringing it towards the level of Sanskrit (vide section
2214) in which all the other primary processes of
communication mentioned in Chapter 2 can be pressed
into service. International conference is the resulting
forum. Here political differences are sought to be
ironed out with a view to establishing a World-
State. We shall examine how the difficulties due to
multiplicity of languages is being sought to be
overcome.

241 A Single Language

In the past attempts have been made to make
communication easy by the adoption of a single
language as the official language of a conference.
In Europe, Latin was so adopted for centuries. But
by the turn of the present century, Latin proved to be

242 Two Languages

It was unchallenged till the First World War.

242 Two Languages

at the Paris Peace Conference bracketed French
English as of equal status. The League of
Nations inherited this parity and Rule 16 of the
Procedure of its Assembly provided:

Speeches in French shall be summarised in
English, and vice versa, by an interpreter belonging to
Secretary.

A representative speaking in another langu-
age shall provide for the translation of his speech into
these two languages.

All documents, resolutions and reports cir-
culated by the President or the Secretariat shall be
in both French and English.

In a few years, English began to slip down, as
the following table of percentages of speeches in
French and English, made at the General Assembly,

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage in French</th>
<th>Percentage in English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>65</td>
<td>77</td>
</tr>
<tr>
<td>1927</td>
<td>35</td>
<td>22</td>
</tr>
</tbody>
</table>

Spanish, Portuguese, German and other languages
have been persistently endeavouring to get recognised
official languages. The International
Organisation was the first to accept Spanish
as a third official language. The addition of each
language means addition to the conference-
and the cost of communication. The addition to
conference-time is minimised by taking help from
technology for simultaneous translation. This was
first put to large scale use at the 17th International
Geological Congress in Moscow in 1937.

After the Second World War, English is becoming
dominant. In 1943, the United Nations Food and
Agricultural Conference adopted English as the
official language in spite of the protest of the French
representative. So it was with the United Nations
Relief and Rehabilitation Administration (1943) and
Monetary and Financial Conference (1944).

243 More Languages

The Rules of Procedure of the General Assembly
of the United Nations, as adopted on 17 November,
1947, at Flushing Meadows provide for five Official
Languages, three of which are single out as Working
Languages. The choice of the languages had
been conditioned by the then international situation.
It may have to be altered as the international situation
changes. Here are the relevant Rules of Procedure:

VIII Languages

Rule 44. Chinese, English, French, Russian and
Spanish shall be the official languages of the General
Assembly, its committees and sub-committees.
English, French and Spanish shall be the working
languages.

Rule 45. Speeches made in any of the working
languages shall be interpreted into the other two
working languages.

Rule 46. Speeches made in either of the other two
official languages shall be interpreted into the three
working languages.

47. Any representative may make a speech
language other than the official languages. In
which he shall himself provide for interpretation
of the working languages. Interpretation into
working languages by the interpreters of
another may be based on the interpretation
the first working language.

48. Verbatim records shall be drawn up in
languages. A translation of the whole or
any verbatim record into either of the two
languages shall be furnished if requested by
a nation.

49. Summary records shall be drawn up
as possible in the official languages.

50. The Journal of the General Assembly
shall be issued in the working languages.

51. All resolutions and other important do-
shall be made available in the official langu-
ces on the request of any representative, any
ument shall be made available in any or all
official languages.

52. Documents of the General Assembly,
mittee and sub-committees, shall, if the
sembly so decides, be published in any
other than the official languages.”

244 Grounds of Claim
claim of the different languages for a place
burel of Tongues is not always based on
convenience. It is often based on
ations of prestige and political importance.
ion of many official languages lands one in
waste of time in effecting communication.
Adoption of one language lands in failure of communication. There is also the dog-fight over the choice of the single official language. In fact the choice is best done by casting lots. One language will prove as good as any other. All languages grow by usage. Use as the official language for international communication will soon make it as good a medium as any other. There is nothing permanent in the attributes of languages painted in the following statement of the Russian author Lomonosov who wrote two centuries ago: "Charles V, King of Spain, and Roman Emperor, used to say that with God it is best to speak Spanish; French with friends; German to an enemy; and with women, Italian. Had he known the Russian language also, he might have concluded that it is propitious always to speak Russian with everyone. For in the Russian, he would have found the majesty of Spanish, the vivacity of French, the vigour of German, the tenderness of Italian, and beyond all this, the richness and strength of precise description of Greek and Latin." Every language can make this claim. Even the least developed language current among primitive people and certainly every one of the once-developed and recently paralysed Indian languages can say "Give me the opportunity and I shall rise to the occasion."

Language of the Smallest Group

A deliberate choice of the language of any one nation for the monopoly of being used for international communication would meet with insurmountable difficulties on account of international jealousies. Also it would put that nation at an advantage over

As jealousy becomes as explosive as a fire only between large and influential nations, it had proposed the languages of the smaller for the privilege of the monopoly, say—Armenian! In the first place, it require superhuman effort to make people all over the world take up the study of a language current among two or three millions. Secondly, it would be a boon to the nation thus promoted to the world's position; for it will have to see its tongue mutilated and trampled under foot.

246 Artificial Auxiliary Language

Political understanding be better promoted by an artificial language as official languages have thought that the adoption of such an auxiliary language equally foreign to everyone be a solution. It may be so on grounds of considerations or of equity. But it will, in amount to making all the nations have one language that we cannot make all of them equally common. On strictly practical grounds this is impossible. Is the artificial language to be used as a language of thinking by those who habitually attend annual conferences? If so, will not this language appear as varying over tones in the mouths of different people? Will it not very soon become not fully understood by all alike? At the other extreme, if it is to yield to be so charged by the speakers by giving them overtones, it may be too sterile to be used for intimate and heart-to-heart communication.
which international political conferences are expected to provide for. Moreover the history of the dozen artificial languages, which have been constructed during the last fifty years, shows that they are not altogether impartial to all the natural languages. They are often drawn far more from one natural language than from others. This means that they are subject to most of the objections which are raised against a natural language.

2461 Classificatory Language

It is doubtful if classificatory language can ever be carried to the stage of being fit for debate on political problems and relations. A dcbac needs all parts of speech. But a classificatory language contains only substantives and conjunctions. As its distinctive function is to arrange and mechanise arrangement, it cannot take up other parts of speech without ceasing to be classificatory language.

247 Conclusion

The difficulties of the promotion of international understanding by communication through a single language, natural or artificial, appear to be insoluble at present. It is at the political level that national passion and egotism are least amenable to control. Words have to be used with greater effect and precision for certain purposes. They have also to make the deepest emotional appeal for certain other purposes. Artificial languages may not lend themselves to this double purpose. It is not enough in the political arena if the general gist is picked up. Every word must be understood and every overtone should be detected and assessed. Even translations into another natural language proves inadequate for this double purpose. Overtones will totally flout artificial languages.

The only solution will be to recognise one of the only used natural languages as the only working language. India proposes to solve a similar difficulty by singling out Hindi as the official language on the ground that it is the language which is spoken by the largest group in India. Those whose mother-tongue is not Hindi are at a disadvantage. And yet it seems to be no other solution to preserve the whole as a territorial unit for co-living. So it is if a World-State is to be a reality and if the territorial unit for co-living is to cover the entire earth.
CHAPTER 25

Literary Exchange

The service of classificatory language to communication in the primary process of language is even more doubtful in the case of literary exchange than in the case of political understanding. It is doubtful not only in communication between different linguistic groups but also within one and the same linguistic group. For the over-tones are even more numerous in literary expressions than in political utterances. Richness of over-tone is indeed a measure of the profoundness of a piece of literature.

251 Suggestion

Mahamahopadhyaya Professor S. Kuppuswami Sastriar used to emphasize that a Sanskrit school of literary criticism was called the 'School of Over-tones.' According to this school, literature leans more upon suppression than on expression. This means that the actual endeavour of a literary artist should be no more than to throw forth suggestions. Goethe claims that it can be no more than a suggestion. He states this on the basis of his own experience as a poet. He says that when a poet dives into his own depths, picks out his poetic experience, and recedes from the depths towards the level of consciousness, he finds that only a divine language can express his experience. But no such language is available. Even if it were, it cannot communicate anything to the common men. He is therefore obliged to use the language current in his community. He irradiates it so profoundly that its glow is

mely rich in colour. Each member of the race picks up only that colour which the lens of experience permits to pass through. His eye perhaps allow the slipping through of only one of the other colour in the immediate proximity which is specific to himself. All the other will certainly be screened off. It is usually tinged in of this extra colour which stimulates gives him solace. He is blind to all the other.

This implies that the primary process of language fails to be a fully transparent medium of communication. The difference between what is said at the source and what is received at the end is considerable. The medium of language is really expressive.

252 Everlasting Quarry

Ever, to change the figure of speech, what the artist intended to communicate lies stratified imbedded at deeper levels as and when he fresh experience that can be used as sharper extract from the quarry. The experience of the premier poem Valmiki’s Ramayana is just the case of most readers. During the last 35 years, I have gone through 30 cycles of re-readings. Surely my stock of experience and myaptive mass had been necessarily enlarged to this long stretch of years. They have been to gradually year after year. The result is that in each cycle of reading, the same old of Valmiki communicated to me progressively

174
of all lower passions and to

to them. It is the unexpressed suggestions
communication which do this task.
ificatory language is designed to be
of all the facets and phases involved. It
therefore transmit emotional appeal.

255 Aroma of personality
er way in which a literary piece differs
writing is that it is fully charged with
ality of the author — the person who communi-
the authorial aroma which distinguishes
from ordinary communication. Even in
jects where usually thought-content alone
pen in a subject like Mathematics — it is
have books charged with the personality
or. I call them classics. The aroma of
as well as literary writing is too elusive for
ory language.

256 Futile Devices
ties such as those described above make com-
complete even within the same linguistic
effort have been made to help literary
ication complete its task by devices like para-
lesses and commentaries. It is notorious how
devices merely swell verbosity, achieve little,
ven misdirect and inhibit the native capa-
cence to pick up the original commu-
repeated attempts in the light of growing
ince over a long range of years.

257 Futility of Translations
o wonder then that literary exchange between
guistic groups is even more ineffective. The only
person who can help literary exchange between two linguistic groups is the poet who can use for communication either language with equal facility and flair. Such poets I would call Bridge Poets. Rabindra Nath Tagore is a supreme example of a Bridge Poet in our own times. His equal mastery of Bengali and English made possible the communication of the genius of Bengali literature to the English speaking world and vice versa. It is not by translation that he achieved this. Translation can only translate verbal carcasses. The soul often escapes away in the process. Translation will always stand transcended by the problem of literary exchange whatever be the possibility of mechanising translation by the use of modern computing devices of very high speed, capacity and logical flexibility. At best, translations can only stimulate the literary artists in a foreign language.

258 Forbidden Realm

Literary exchange is thus out of bounds for classificatory language. Whether it is communication of literary creation within a linguistic group or between different linguistic groups, classification cannot be of any use. Classificationists and classifiers should not arrogate to themselves capacity to achieve anything whatever in the realm of the communication of literary creation. Though I have devoted a large part of this life-time of mine to the building up and improvement of classificatory language, I am second to none in declaring that literary exchange is a forbidden realm which classification should never enter. It must stop with individualising authors and works and never presume to classify the thought-contents.
CHAPTER 26

Spiritual Communion

is still another level of communication far
der than even the literary one. It is mystical
Indeed literary communion is only an approximation to mystic communion.
experience is in fact "unspeakable."

261 An Anecdote

erance of a great mystic, who lived in the
century and the last of whose disciples
recently, illustrates this point. The mystic
is Sri Ramakrishna, in whose name a
been established for promotion of spiritual
and social service not only in India but in
her countries. One of his disciples has re-
the following anecdote. The sage looked un-
done day. One nearest to him asked him
so. He said that he felt sad because he
ble to communicate to humanity the most
end pre-potent part of his experience. It rela-
which means getting into the state of
the Absolute. He wished to communicate
mediate disciples and to humanity at large
of Samadhi. He wished to remember his
nto that state of delight as he entered
But it often happened that up to a point
be conscious of the various factors and
rying qualities of the delight but when it
beyond a certain degree of intensity he
oped with the sense of Identity so com-
that there was nothing to see or sense. There
thing structural. There was no pattern which

179
is the very essence of what calls for expression. Similarly when he receded from Samadhi until he got out of the threshold of supreme delight, the Identity continued to negative the structure and the pattern needed for expression. This is an experience of the same order as the one described by Goethe.

262 Intuition and Illumination

Persons of this order are self-centres of illumination. Their experience is unmediated by the primary senses or the intellect. It is direct experience of the thing-in-itself. The faculty by which they do so may be called intuition. The term used in Sanskrit tradition to denote this faculty is Divya chakshus which may be verbally translated as divine insight. The climax in the Bhagavad gita is Krishna endowing Arjuna with that faculty to see globally all things-in-themselves. The Ramayana also refers to this all comprehensive unmediated intuition and experience and uses the word Tapus to denote the means by which intuition is developed.

263 True Realism

If we accept mystic experience, we shall also have to accept two types of realism. Some distinguish them as the atomic and the organic. Vedic tradition distinguishes them as Kartar Tantra (action-dependent) and Vasta Tantra (thing-dependent). Kartar Tantra realism tends to view the universe as made of distinct, separate or separable entities, things or concepts. Arguments and communication have to rest on sharp alternatives. Their roots are in the soil of atomism. In Vasta Tantra realism there are no sharp antithesis and distinction. It has its roots in

264 Beyond Bounds

Spiritual Communion

which regards all Kartar Tantra reality as structure of truncated context and is therefore incomplete. According to it, it is only the universe which can be the real subject of communication. It tends to avoid super-sensibility and simplicity. It calls attention to the complexity of experience. It systematically values the importance of abstraction.

The Limiting Mode of Communication

pathetic inadequacy of the primary process usage, and still more that of classificatory
language, are symbolised by the following well-known picture of Indian tradition: "What a wonder? Look into the shade of the banian tree. There is a young Master sitting at the root. He is radiant. There is communication in silence. The disciples are all old. They are irradiated. Their doubts look dissolved." Surely communication at this level cannot lean upon either natural language or classificatory language. Communication has to be through direct unmediated communion.
CHAPTER 27

Cultural Concord

Chapter 23 we saw the material level in which classification through the primary process of language considerably helped by the physical presence of entities. The commodities are distinct entities, discreteness and structure appealing to the senses are at their best. These very features make classification thoroughly compatible with the level of commercial contact and profitably therein. In Chapters 25 and 26 on the other hand we saw the incompatibility between classification and the profound levels of existence in which unity with everything, with the Unity of itself. In those noumenal levels there is no identity with everything, with the Unification. In international relation, classification is a necessity in commercial contact but becomes possible in literary exchange and mystical union. In between these two extremes we have the which are neither totally noumenal nor nomised. These are the levels of cultural and political life. In these, classification has a definite place.

271 Cultural Polarity

Culture is a difficult word. Its dictionary definition is a state of civilisation is not very helpful. It is an abstract word. It stands for something intangible. It is indeed a quality. It is a quality not directly perceivable by the senses. A quality which characterises the method used
by man in his pursuit of happiness. Happiness is the ultimate sought by everybody. But there appears to be something slimy in this seeking. In the present state of human evolution, it is either the defensive or offensive modes of pursuit of happiness that is dominant. But the mode that will bring lasting happiness is the peaceful mode—peace with the elements, peace with the processes, peace with the things, peace with the plants, peace with the beasts, peace with the birds and particularly peace with the humans. But as D. H. Lawrence puts it in his *Psychoanalysis and the Unconscious*, woe betide us, the unspeakable agony we suffer from the failure to establish and maintain the vital circuits between ourselves and other human beings. The tortures which civilised people proceed to suffer, once they have solved for themselves the bread-and-butter problem of alimentation, will not bear thought. The whole of international life is one long, blind effort at a polarity, and the whole of modern life is a shrieking failure.

**272 Aetiology**

The polarity is between the status of offence and defence. Between any two groups of people and particularly between any two nations today, the mutual exchange of this status is as incessant as the physicists assume to exist between protons and neutrons. It is almost impossible to catch any one nation staying totally at one pole. This offensive *cum* defensive existence produces all kinds of tension charged with low emotions like envy and hatred. At bottom this polarity and all its ugly concomitants stem from fear of each other. The fear between two human

- Cultural Concord

is not of the same order as the one between different natural groups. A good deal of human groups is avoidable. A understanding of each other will avoid much war. Communication can bring about proper understanding. When communication is cut out or a refractory medium through a medium not understood or which is misunderstood—understanding sets in and fear follows.

**273 Diagnosis**

The differences differ at the phenomenal level. But the thins out as we dive deep towards the nou

- Cultural conflict is often due to a partial view of cultural outlook and ways of life of one another. Partial view is often the result of the nebulosity with one lands when one is not helped by an eco-synthetic approach which a good scheme classification can provide. Cultural conflict arises from inability to overlook what is common in activities and views of different cultural groups
and to dwell on the differences alone. The differences induce alienation, intolerance, hatred and strife. It is often the case that differences in the total setting of a cultural group had led to differences in social beliefs and practices. Failure to sense the differences in the setting deprives one of a sympathetic understanding of the differences in practice and so reconciling them to one another as to prevent development of tension.

**275 Preventive Steps**

It is through public education that cultural conflicts have to be prevented. It should be a long term programme. The schools and the children's libraries will have to work it out. They should give up the methods of indoctrination—i.e., thrusting ready-made decisions formulated to support a particular view, political, economic, etc., —and for this purpose suppressing altogether or ridiculing and explaining away all other prevailing views. The authors of an indoctrination programme often justify it, with perhaps some foundation, on the ground that the prevailing views are merely the surviving elements of the indoctrination in the past by some interested social or cultural groups. This is really an argument of retaliation. Retaliation prolongs conflict. It is never known to bring about concord. If our educational programme can accustom children to the understanding and use of an analytico-synthetic scheme of classification which is totally exhaustive, it will put in their hands a powerful and impartial tool to detect all the suppressio veri and suggestio falsi involved in methods of indoctrination. It will
credulousness to minimum. It will help cultural gulf instead of widening it as indoctrination
does. The idea is not that formal teaching analytico-synthetic classification should be done
in schools and colleges. It is enough if the children come to it. One of the methods of accustoming is to have the reading materials of libraries and displayed in the stack-room to an analytico-synthetic classification. They should be reinforced by an elaborate guide—tier guides, gangway guides, bay shelf guides which mention not merely numbers which mechanise arrangement their meanings in natural language, which produce an impression on the minds of the library profession. Similarly the too should consist of a classified part in entries are arranged according to the same synthetic classification and plenty of guides mentioning in the proper filiative order specific subjects, not merely in class but also in words in natural language.

*Resolution of cultural conflicts and classification* published in the *African Association* (Volume 2, pages 9 to 18), George Eakins of Baltimore goes even further. He says the use of a Master classification in organ- ised courses of studies in educational institutions. As that a designation and display of the syllabus according to a good analytico-synthetic classification will enable teachers to know where their courses are headed and to set them right. Further,
Classification and Communication

co-ordination of the different courses, which a student is obliged to take will be more easy. It will be easier to build up a properly balanced course.

276 Cure

While any educational or cultural work can give only deferred return and has, therefore, to be largely preventive in its nature, a good classification may also be used for immediate resolution of cultural conflicts, though this can be done only to a very limited extent. Display and explanation of classification-charts which bring out the nearness of cultures at deeper invisible levels in spite of their apparent conflict at the superficial level. As Rusk puts it “Whenever any one were even vaguely aware of a cross-relationship between items which at the past had never been worked out, he might study the terminal items and whatever mapped territory lay between them. And whenever one felt like taking an irresponsible jaunt into distant fields, he might do that, returning to his familiar pastures much refreshed for his responsible work for the society, a good analytico-synthetic classification.”

277 Conclusion

The fact is that cultural conflict feeds emotional disturbance and perversion of emotions caused by distorted or incomplete knowledge. Cultural concord has to be built on correct understanding through the intellect. Classification is totally bereft of anything emotional and is a dry-as-dust intellectual discipline. The diffusion of classificatory thinking, the presentation of facts and views according to an analytico-synthetic classification and classified display of all reading specimens of arts and crafts and the physical of the culture of the past, in museums and will generate capacity to understand the different groups as not antagonistic with er but as complimentary and harmonising. is great potentiality in classification to be used in the intellectual life and development so as to promote cultural concord.
CHAPTER 28

Intellectual Team Work

Classification reaches its greatest value in communication in the sphere of intellectual team work. Intellect is an atomising faculty. It analyses and analyses. It narrows extension progressively. It seeks isolating every ultimate constituent part in any pattern. Its contribution to final understanding consists in discovering structural discontinuity ad infinitum, arranging the ultimate structural units in a hierarchical order, and thus reconstructing the original in such a way that the structural order is not hidden away. In a sense most discoveries and inventions have had to depend upon this atomising and classifying activity of the intellect. A master-mind does these things even without being formally disciplined in it. Flair in reality consists in sensing likeness and unlikeness even of the finest order and classifying in the second sense described in Chapter 12. Those who are poor in flair and those who are not innately creative in their intellectual work can be helped to achieve more than they would otherwise, with the aid of classification in the third sense explained in Chapter 13. A person who is stepped up to a higher level of intellectual work by classificatory aids cannot, of course, achieve much by himself as the range he can cover will be smaller than what is necessary or what is easy for those who can do work in that higher level unaided by classificatory technique. This is not however an irremovable handicap; for compensation can be had by team work.

281 Vital Existence

Indeed team-work has now become a necessity. Centuries ago many an extension of the field of knowledge was done by stray individuals working in isolation. But in the twentieth century individual discoveries are becoming increasingly rare and difficult to achieve. Perhaps the total background—the total information and knowledge to be carried as apperceptive mass—has now become too vast for most individuals. The number of persons, who have mastery over it, is becoming smaller day by day as a result of the apperceptive load becoming greater day by day. At the same time the work of the world is making an ever-increasing demand on humanity’s capacity to discover and to invent. This is because the balance between population pressure and natural resources has been tilted unfavourably to the vital needs of humanity. The raw materials which are directly consumable are proving to be insufficient for the present population. So also is the case with the raw materials that are needed to make consumable commodities. Thus the very vital existence of humanity calls for intellectual team work.

2811 Food

The present population of the world cannot find enough food among the fruits, roots and shoots which can be consumed raw. Even the cereals, fish and meat which can be cooked and eaten are not produced in sufficient quantity, if left to nature, without being cultivated. Each farmer ploughing his own field, irrigating it from surface-water or by well-water drawn in the old ways, or finding local manure,
alone, is no longer sufficient to produce food in the quantity which humanity needs. Farming has to be on a large scale. Water has to be found in new ways from great depths. The very manure has to be produced artificially on a vast scale. All these need considerable fundamental research in several regions of knowledge. Therefore team work is wanted not only in farming but also to feed the farming work with productive aids.

Moreover the spots on earth where food can be cultivated are unevenly distributed. The distribution of the habitation of men is also uneven. One cannot be made to tally with the other. There is need, therefore, to transport food across the ends of earth. Florida's mangoes have to be transported to the New England States. Danish milk and butter have to feed the British Isles. Australian apples have to reach the Northern Temperate Zone. African coconuts have to be brought to the East Coast of India. Wheat has to be carried half way round the world from places where it is in superfluity to places where there is famine. This world-wide interchange of food materials calls for the solution of many technical problems in transport. The solution of these problems can only be got by team work. The very transport itself has to depend upon team work.

Food has not only to be taken across space but has also to be preserved through time. All seasons are not equally favourable to all kinds of food materials. Nature is rich in food materials in certain seasons. It is fallow in other seasons. When nature gives, its gift has to be accepted and preserved through time.

Problem of storage of food in large quantities, preservation against bacterial, mycological, and other attacks requires again considerable fundamental research which can be achieved only by work. Man knows that the day will come when humanity longer depend upon the plant and animal synthesising food materials for it in sufficient. Man may have to synthesise food directly, using the elements found in their native condition. Synthetic food may have to be produced again call for research as well as processing and storage, into whose service many persons will be pressed. Team work on a scale hitherto unknown may become necessary.

2812 SHELTER

The present population of the world cannot find shelter among the natural caves and groves can be occupied without any preparation. The huts, mud houses and brick houses which built and pulled down at will cannot be provided in sufficient quantity as the raw materials therefor are not adequate. Technology has come to service to make building materials easier to handle and processes. The manufacture of building materials has to be on a large scale. This needs considerable fundamental research in several regions of climate. The large urban concentration of people further problems in providing shelter for all. New materials needed for processing into building edifices cannot be found on the spot in sufficient. And urban life does not tolerate leisurely
raising of buildings. Prefabricated houses have, therefore, come into vogue. Team work is, therefore, wanted to shelter humanity properly.

283 Clothing

The present population of the world cannot find enough skins and bark of trees to clothe themselves. Nor are they prepared to accept such primitive clothing. Clothes woven out of fibers found in nature—plant kingdom or animal kingdom—had come into vogue even in pre-historic times. Today the fibers found in nature have ceased to be sufficient in quantity to clothe all men, and to clothe everything else that man wants to cover with cloth. Artificial fibers have to be made to supplement nature's resources. Moreover the amount of clothing which a person wears has multiplied several times in recent years. This adds to the quantity of cloth needed. It is no longer possible for each one to spin the yarn and weave the cloth needed, by himself. All this has to be done on a large scale with the help of machinery. Large-scale production brings in its train a number of problems whose solution requires not only technological research but also research in fundamental sciences. This research is not something which a single man can spin out. It needs an army of people working as a team. The machinery used in manufacture also needs a team to tend it.

282 Business Management

The production of materials to meet the increasing vital needs of man have thus necessitated research work in team. This is not, however, the whole story. It is not only technology and the fundamental sciences forming its foundation that call for team work. The large-scale organization of industry and marketing has itself gone beyond the capacity of a single man whatever be his business acumen. The management of production-plants calls for new techniques. Industrial health, industrial psychology, industrial education, industrial planning and industrial accounts are all new features which call for team work. Commerce or exchange of goods is no longer confined to small areas. The whole world has now become a single unit for commercial purposes. Commerce is no longer on a petty scale. It is on a Himalayan scale. Balance of trade and foreign exchange are two exclusive subjects which the colossal international commerce of today has brought into existence. Both the limbs of business, production and commerce, call for a considerable amount of continuous research. Here again research by a few gifted persons done sporadically at intervals is no longer sufficient. Business research has to be done continuously by large teams of specialists.

283 Social Set-up

Industrialisation began at a time when coal was the chief source of power. This produced a violent disturbance in the distribution of population. Population got massed in certain centers. This produced new social problems both in the crowded cities and in the deserted villages. Rural civic conscience and civic conduct stabilised through centuries have begun to languish because the upper intellectual strata who kept them alive have been mostly withdrawn from villages. Moreover the traditions of rural life de-
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284 Intellectual Pursuits

It is not only the fundamental sciences, technology, economics and sociology that call for research work in concert by large teams. The purely intellectual discipline of metaphysics too is being put to severe strain by progress in all those subjects. In the past metaphysics thrived largely on the introspection and the intellectual acumen of gifted individuals, but a metaphysical pursuit was stimulated by what could be seen first hand. When personal experience was the chief feeder to metaphysical speculations, it could be individualistic. But today metaphysical pursuit has to reckon with happenings in diverse fields of the ever-expanding field of knowledge. The field of knowledge is expanding both in its extent and depth, as a result of centripetal co-ordinated team-work in every other discipline. The result is that metaphysical pursuit has had to enter the phase of team-work. Its in-work is even of a more extended kind. It is not only team-work among philosophers which it needs. It needs also team-work between philosophers on the one side and specialists in diverse subjects on the other. The findings of the latter have all to be gathered, cleaned and dressed, and then thrown into their own cadre by the philosophers. The metaphysical dispute which comes out of these has in turn to be tested and assessed by the specialists in different disciplines. The co-operation between philosophers and physicists, which has emerged from the physical theories of matter and fundamental particles, is a remarkable witness to the co-operative intellectual work which is now come into vogue. The process of cleaning, lancing and distilling has called for great changes in the auxiliary disciplines of logic and epistemology. Indeed the amount of new thought which is being urged by large teams of workers in the field of logic is amazing. General semantics and logical syntax are the result of team-work among Polish and American thinkers on the subject.
285 Quasi-Spiritual Level

Literature and Fine Arts which belong to the quasi-spiritual level have to be always individualistic. In creative work of this kind which draws its sustenance from the spiritual depths of man, team-work is un-thinkable. Intuition and organised team-work are perhaps incompatible. No doubt if intuition functions at its best, though each creative person is working by himself, the result will be as if they had worked as a team. But then this does not mean any organised team-work. However, work in such intuitive domains has created an auxiliary domain for intellectual work. Literary criticism, appreciation of music and aesthetics in general belong to this domain. These call for team-work. This is a case of the audience being thrown into a mood for intellectual team-work.

286 Age of Co-operative Research

Thus there is hardly any region in the field of knowledge which can escape the call for intellectual team-work. It can indeed be said that the world has now entered the age of co-operative research. This is more visible in developed countries like U.K., U.S.A and U.S.S.R. It has not yet become visible in undeveloped countries like India and other Asian countries. In India we speak of lack of man-power. By this we do not mean paucity of human beings. We mean only scarcity of men capable of throwing themselves into a co-operative research team. On the other hand when the developed countries speak of lack of man-power, they mean that co-operative research has assumed dimensions which require more men than the country has. For example, was recently reported that team-work in scientific research had absorbed the scientifically trained men in the U.K. so fully that teachers of science could not be found by the schools and that teaching of science was dangerously curtailed.

2861 Beginnings of Team-Work

The economy of team-work on a large scale was first put into practice by industrial magnates like Henry Ford. The marvellous achievement of team-work is witnessed by me when I was in one of the automobile manufacturing companies of U.S. A. The story is so carefully laid out. The rails and the wing ropes are all perfectly registered. The workmen are spaced out at right intervals. The parts to be done by each is accurately pre-determined. Acting at one end where raw materials are assembled and moving through to the other end where the test-driver tests the finished car, it takes but a few hours. This is team-work which I could never have imagined merely reading about it in books. The co-efficient efficiency which it yields and the profit it brings are indeed marvellous. Here what is visible is team-work in the physical plane.

2862 Extension to Interlocked Units

This experience within a single unit of production has naturally led to the spread-out of team-work among interlocked units. The General Electric Company, The Westing House and the Standard Oil Company have spread out the magic of team-work to a number of plants located at great distances. Utilisation of waste-products has been acting as an urge to link up several industrial concerns by the spirit of team-work.
2863 Interlocking of Research and Production

Prompted by the benefits which accrue from teamwork at the physical level, the big industrial bodies have begun to throw into their team squads of intellectual workers engaged in applied as well as fundamental research. This is a development of less than half a century. Hundreds of individual industrial concerns in the developed countries have now a research sub-team as part of their general team. This kind of interlocking of work at research and production levels is proving to be necessary as well as profitable. I was amazed at the reciprocal benefit which pure research and business interests derive by such inter-locking. Let me give an example. During war, quartz crystals occurring in nature were nearing exhaustion. The business of the Bell Telephone Company depended essentially on the use of quartz crystals. Its production wing had therefore to look to its research-wing to come to its rescue. Work went on for a few years. When I visited them, artificial growth of quartz crystals had become an accomplished fact. I could see, in the gleaming eyes of the members of this section of the research-wing, the satisfaction described by Valmiki in his Ramayana as evident in the gleaming eyes of Viswamitra when Sita's marriage with Rama was accomplished. In the same company as well as in the University of California at Los Angeles I saw how such a distant piece of work as that of designing of complicated calculating machines had been woven into a large piece of team-work leading to an enrichment of every element in the team.

2864 Extramural Team-Work

Political and profit motives do put barriers beyond which certain types of information should not be allowed to go. In case of this, several business bodies are able to find sets in which they can co-operate with profit. They feel that there is economy in such co-operation. This economy brings them mutual benefit. The Allied Ahmedabad Textile Industries Research Association is an example of such extramural team-work among textile business houses. There are many such central research institutes maintained by several industries in the developed countries. Here the products is all done by each business house in its own set and even in competition with the others. But set of the intellectual work in the fundamental fields provided for jointly by all of them. This enrichment of the sector of team-work is coming more and more into vogue.

2865 International Team-Work

Except during the national tension or war, co-operative researches several countries. During the last decade thirteen of war put the seal of secrecy on most intellectual work and prevented it from getting interlocked across national boundaries. The intellectual workers had to submit themselves to it though under protest. The moment war ended all the scientific organizations rebelled against the continuation of any national exclusiveness in intellectual pursuit. The scientists said that there was no national boundary in scientific work. They insisted on intellectual teamwork being spread over the whole earth.
Classification and Communication

287 Age of Communication

Intellectual team-work covering such a large range of subjects and interests and spread over vast geographical areas has to depend essentially on accurate and rapid communication between the workers in the several groups in the team. Every micro-unit of thought created in any spot within the team should be broadcast to every other spot in the team. Apart from occasional urgent communication being done through wire or wireless, routine communication among a group of intellectual workers is effected through print. International communication and communication within a country of nascent thought are effected through periodicals. The number of periodicals which was about 10,000 about a century ago has now mounted up to about 100,000. This is a measure of the dependence of intellectual team-work on communication. Our age may well be called the Age of Communication.

2871 International Communication

Apart from international and national extramural communication, many of the industrial houses have their own house-periodicals to effect communication among their own workers. These are of two kinds. First there are those which circulate local abstracts of the important articles occurring in the periodicals taken by the house, which have a bearing on the work in progress in the house. The second variety circulates confidentially within the house the nascent thought produced by the staff of the house. It is difficult to estimate the number of such house-periodicals current in the world today.

Intellectual Team-Work

2872 Project Reports

Another important material for communication which is being continuously built up and kept on file in most industrial houses consists of the reports of the search projects set up in the house. These reports are not only of contemporary value, i.e., when its contents are in a nascent state, but also of deferred value. Some of the houses have several running files of volumes of such reports of research projects. They are mostly unique typewritten copies. Their presence makes industrial houses a good deal of money which could have been wasted in repetitive work but for their being communicated across time.

2873 Translated Contents Periodical

Before the First World War most of the nascent micro-units of thought were expressed in two or three European languages. After that war several other European languages and particularly those of the Slavic family have come to be used as media. As the people who could read the foreign languages which have newly come into vogue is small and as the number of periodicals in any specific subject far exceeds the financial capacity of most of the libraries, there is a natural tendency to procure only particular articles which are of interest and get them translated.

To facilitate selection, a new practice is being adopted. It is to publish periodically translations of the contents-pages of periodicals in foreign languages. An example is Translated contents lists of Russian periodicals and list of translations available at the Science Museum Library published by the Department of Scientific and
Industrial Research of Great Britain. The issue for October 1950 of this periodical, for example, gives the contents of recent issues of each of 28 Russian periodicals in diverse subjects translated into English language. At the end of the contents of each periodical, the name of the personal or the corporate author responsible for the translation is given as a note. For example the Scott Polar Research Institute of Cambridge is stated to be responsible for the contents-page of the Russian Bulletin of the All-Union Geographical Society. Further co-ordination which leads to economy in carrying communication in intellectual team-work across linguistic boundaries is illustrated by the Union Card Index of Technical Translations being developed by the Science-Technology Group of Special Libraries Association in U. S. A. The index gives information on any technical translations from any language into English in the field of applied sciences. It is arranged alphabetically by the author and includes translations found in private industry as well as learned or public bodies and professional translation agencies.

2874 Communication of Individual Articles

The peculiar type of periodicals mentioned in Section 2873 enables workers to spot out the articles which are likely to fall within their field of interest. Technical processes have now been developed to procure copies of individual articles which are required. These processes are being improved and made cheaper day by day. Photostat copies, microfilm, microfilm-strips, micro cards, etc., are the forms of mechanical reproduction which have already be-
the main problem to be considered will be the correct
enunciation of what is required and the search for it
among the materials stacked in libraries. We shall
consider this problem in the next section.

Classification and Planned Search

A few days ago I was sitting in the sun in the open
lawn in front of my house and working on this book.
Suddenly sunlight was cut out. An extensive shadow
fell on the ground. It was obvious that it could not
have been caused by distant clouds. The feeling
came that it was due to smoke. If there could be
such thick smoke most of Delhi should have been on
fire. A shiver of fear went through me and I looked
up. It was not smoke. It was not clouds. It was a swarm of locusts flying within a hundred feet
of height. These tiny living insects began to
spread over Delhi so thickly and so extensively that
they could cut out sunlight. So it is with the swarm
of articles embodying nascent thought being created
to-day and spread over intellectual team-work.

Beginnings of Communication

Before the invention of printing the spoken word
was the supreme means of communication of scientific
knowledge. Manuscript books embodying only
micro-units of thought supplemented it. This supple-
ment was necessary because some needed to go
back to the same communication again and again
to get the full benefit of it or even to understand it.
The spoken word being evanescent, the help of the
manuscript had to be sought. Manuscript being a
laborious affair, there were not many manuscripts
available to stifle communication by their very num-
mer.
off as the first German periodical in 1752. Benjamin Franklin established the Transactions of the American Philosophical Society in 1773. Even provincial towns started their periodicals about the end of the eighteenth century. For example the Manchester Literary and Philosophical Society founded its Memoirs in 1789. Till the beginning of the nineteenth century the periodicals were encyclopaedic in scope. They contained fairly long monographs. Their number too was small.

2883 Emergence of Specialised Periodicals

The nineteenth century saw the emergence of periodicals specialising in specific subjects instead of covering the whole field of knowledge. The mathematical periodical was brought into vogue by Creteil's Journal in 1826. The flood of specialised chemical periodicals which is swamping us today was heralded by Leibig's Annalen der Pharmacie which was started in 1832. In Physics alone 80 periodicals were floated between 1810 and 1910.

2884 Present Position

Specialisation among periodicals has become much more pronounced today. In the nineteenth century periodicals covered at least the whole of what we are now accustomed to call a main class of knowledge. But today we have periodicals on even such narrow sub-divisions of main classes as Flavouring Icecream. Apart from this the swarm of articles has swollen like a swarm of locusts. It is estimated that about 2,000,000 articles are now produced every year by intellectual team-work. These are embodied in about 100,000 periodicals. This flood of micro-units of knowledge has brought a problem of its own in its train. We can understand the problem if we remember that an intellectual worker can give of his best in isolation. He has to live chiefly on the printed word. It is communication through periodicals that an intellectual worker has to be helped and inspired by a fellow-worker in his team whom he may never have seen and who lives thousands of miles away. Indeed it is the periodical literature that binds workers to the same specific subject into a team. But the space articles is now such that it is becoming extremely difficult to get abreast of the communication which pours forth even in the most limited sector of the narrowest specific subject. The space is such that research libraries almost double in number every ten years. It is not absence of nascent thought which we now suffer from. It is their plethora. Our method of search among them is an outmoded one. It is this which causes trouble today. Quick and effective application of the knowledge, both as a step from which further advances can be made and for efficient industrial and social development, depends largely on its being properly assembled and on the provision of efficient tools for search.

2885 Assembling for Search

When several articles are to be stored and to be drawn from time to time according to needs, it is common sense that we should assemble them in a way that will facilitate search. What will facilitate search naturally depends upon the purpose for which the articles will be used and the particular combination in which they are likely to be used. If we take
the articles in a household, for example, we put all food materials together in and near the kitchen, the clothes together in the wardrobe and the reading materials together in the study room. In the wardrobe again we subdivide the clothes into groups and assemble them in a helpful way. We put all the summer-wear together and the winter-wear separately together. This division and subdivision will have to be continued to the necessary degree. Probably the winter-wear will be sorted out either into coats, pants, shirts and so on if they are all of the same colour and pattern, or all the pieces of a suit may be clubbed together and the several suits may be arranged in some helpful order according to their make or pattern. This is classification in the second sense as described in Chapter 12. This much will be sufficient in dealing with physical articles, because their likeness and unlikeness, which determine the position of each article in the assemblage will be obvious to the primary senses. It is not so in the assemblage of the printed embodiments of micro-units of thought or even the assemblage of the catalogue entries describing them. What can be apprehended by the primary senses misses the soul or the thought-content which is the thing sought. It is, therefore, necessary to invoke the aid of ordinal numbers—classificatory language—to assemble the articles. Moreover the number of units to be assembled is ever-growing—potentially infinite. This necessitates that the scheme of classification should have infinite hospitality in array and chain and should be analytico-synthetic and expressive.

2886 What to Search
Apart from assembling articles so as to make search easy, we also want help in ascertaining what articles a consumer wishes to have. Here again in the case of physical articles their very presence and their being readily distinguishable by primary senses, form sufficient help. But in the case of articles embodying micro-units of thought the consumer is denied this kind of physical help. He needs help in the exact and expeditious enunciation of his requirements. Few readers are able to name their specific objects exactly. It is a broader or a narrower subject that is usually thought of. It is the duty of the library to start with whatever he brings up, however side of the mark it may be, and guide him to the exact specific subject and reading materials which will satisfy his vaguely expressed wants. Classification—particularly an analytico-synthetic expressive classification—is one of the well-tried aids in this matter. The expressiveness of the class number, the standing-in-relief of its facets and phases, and the sharpness of the foci in the different facets will form an excellent probe in the hands of the library to determine the exact requirements of the consumer.

2887 Secondary Aids for Search
Viewed this way, classification is an aid for search. But it has some limitations. Classification facilitates search merely by arranging the articles in helpful order with the aid of class numbers. But as class numbers have to be ordinal numbers, they are cyphers which convey no meaning to the reader and
fail by themselves to give the necessary aid for
search. These difficulties are mitigated (1) in the
stack-room, by putting up guides of various sorts—
tier guides, gangway guides, bay guides and shelf
guides—all bilingual guides mentioning the names of
subjects in both classificatory and natural langu-
ages; and (2) in the classified part of the catalogue,
by inserting bilingual guide-cards in a similar manner.
The names in the natural language are intelligible
to the reader. The names in the classificatory lan-
guage only act, if at all, as remembrancers that there is
an order aimed at in the arrangement; and they may
be even ignored by the reader. To know where to
land on the classified part of the catalogue or where to
begin in the stack-room without undue fumbling about
in starting his search, the reader should be helped by
translating the word he uses to express his subject—
be it specific or more extensive or less extensive than
what he really needs—into the class number. The
alphabetical part of the catalogue is needed to do this.

Conclusion

Thus we find that in alliance with a good alpha-
betical key which gives the meanings of terms be-
longing to natural language translated into the artifi-
cial classificatory language, classification can be
made an adequate tool in searching the embodi-
ments of micro-units of thought which any intellec-
tual worker may require at any time. By thus pro-
viding for planned search—planning beginning even
at the stage of assamblage and the same plan being
of use at all stages of service—classification can be of
immense help to communication and is necessary in

intellectual team-work. Last summer I was brought
into contact with a new industrial organisation which
had not yet gone beyond the stage of industrial re-
search. This being the first body to exploit a new
ment for industrial purposes, the entire team of
workers was concentrated practically under one roof.
The help which this team could get from anybody
else in the world was negligibly small. But already the
difficulties of communication within this closed team
of intellectual workers had assumed great dimensions.

The person in charge of the files of the findings of the
members of this industrial laboratory felt beyond
depth. The research-workers themselves felt similarly
and leaned more and more on the person in charge of
the files. Having tried the D. C., the U. D. C. and the
Congressional Classification and failing to find much
depth from them, that person turned to the Colon
classification. My presence in the United States
synchronised with this phase of the development of
communication in that industrial research organisa-
tion. I was therefore taken into consultation. It is
the experience which this brought to me which con-
vinced me beyond doubt of the great part that a good
expressive analytic-synthetic classification is going
to play in the maintenance of effective, expeditious
communication among those engaged in intellectual
team-work.
Ranganathan, Shiyali Ramamrita.
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University of Delhi, 1951.

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