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JOURNAL
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DECEMBER, 1940

NO. 2

**Some Recent Studies in the Kinetics of
Reactions in Solution.**

(A Review)

By

S. V. ANANTAKRISHNAN.

I

The first observation in the field of reaction kinetics in solution was made by Wilhelmy (1), who studied the rate of inversion of cane sugar. Systematic investigations in the field, however, are of comparatively recent origin. The earliest fundamental law was enunciated by Guldberg and Waage (2) and this law of Mass Action has been thoroughly tested by experiment.

Early in the numerous publications dealing with the velocities, it was noticed that temperature had a profound influence on the rate and the first important attempt to explain the high temperature coefficient was made by Svante Arrhenius (3). The much discussed radiation theory of Chemical Reactivity (4) followed twenty years later and, though it gave an impetus to the work, had to be ultimately abandoned in favour of a modified Arrhenius equation.

The basic idea in the Arrhenius postulate is the formation of an activated molecule, the energy of activation of which may be defined by the equation,

$$k = se^{-E/RT}$$

It is implicit here that the energy of activation is independent of temperature. For purposes of calculating this energy of activation two methods have been developed, the advances being essentially a post-war one.

Hinshelwood (5) and School have very successfully developed the idea of activation by collision. From the work of Clerk Maxwell, it is well known that in any system of molecules there is a definite distribution of velocities. Similarly, there can be a distribution of energies arising from continued impact. Obviously, this energy can be in different degrees of freedom, rotational and vibrational or translational. Since we do not know what to assume for internal phases of molecular motion, we assume the second alternative and the probability of two colliding molecules having an energy equal to the energy of activation will be the usual exponential term. Hinshelwood has shown that if n quadratic terms are involved in defining the energy, this is given by

$$\frac{e^{-E/RT} (E/RT)^{1/2n-1}}{(1/2n - 1)}$$

For collisional purposes, two "square terms" for the translational energy of each of the colliding molecules are used.

In the ideal system, every collision between two molecules having the energy E results in reaction, but in practice, it has been found from numerous gas reactions that the more general reaction velocity equation should be,

$$k = PZ e^{-E/RT}$$

where P is a "probability" or "steric" factor and Z the number of collisions. Allowing for $1/2n-1$ square terms for the degrees of freedom involved, this becomes,

$$k = PZ \frac{e^{-E/RT} (E/RT)^{1/2n-1}}{(1/2n - 1)}$$

Attempts to translate these expressions derived for gas reactions to reactions in solutions by Christiansen and by Norrish indicated considerable discrepancies that could only be explained by assuming a deactivation by collision with solvent molecules. Though several correction terms have been suggested, none of the alternatives are satisfactory and, as an approximation, only the gas expression is generally used.

Apart from the collision method with its approach from Kinetic theory, a new method has been developed in recent years by Wigner, La Mer, Rodebush, Eyring and Polanyi. This is the now familiar 'Transition state' method. Chemical reaction involves the breaking of bonds and the formation of new ones. During this transformation, it is not unreasonable to assume an intermediate stage which has neither the characteristics of the old nor those of the new. In the collision theory, this activated complex may either lead to the products or revert back to the original reactants, while the new concept allows of change only in one direction. In the formation of the products, the energy expended is a minimum and represents the activation energy. This energy may be calculated on the basis of the internal energy as a function of position, taking mutual interaction also into account. These calculations involve the solution of the Schrodinger wave equation with certain simplifications. Assuming the nuclei to be fixed, the electronic energy is approximately equal to the potential energy for various nuclear configurations, the earliest path from initial to final molecular configuration can be determined, the energy of activation being the minimum height in the path. The fundamental problem in these computations of electronic energy is the finding of the relation between the inter-atomic distance and the energy of the system. In the construction of these energy functions, an empirical equation due to Morse (6) has been of considerable help in the treatment of complex molecules. With simple diatomic molecules, the potential energy curves have been calculated from a full knowledge of the quantum numbers and infra-red frequencies but the complexity of spectra rules out this method for other molecules. Morse's equation, which is used in these semi-empirical calculations of activation energy is

$$E = D' [e^{-2a(r-r_0)} - 2e^{-a(r-r_0)}]$$

where E = energy, D' = a modified heat of dissociation,

a = a constant, r = interatomic distance and

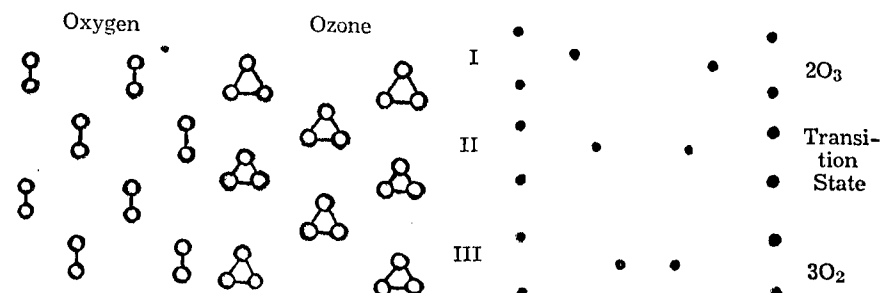
r_0 = normal distance.

The inter-atomic distance in the normal molecule r_0 may be obtained from X-ray data or from Infra-red absorption spectra. D' differs from the ordinary heat of dissociation D by the "zero point energy" $h\omega_0/2$, a value that may be determined from Raman spectra or from a complete analysis of the Band spectra. The constant a is defined by the equation

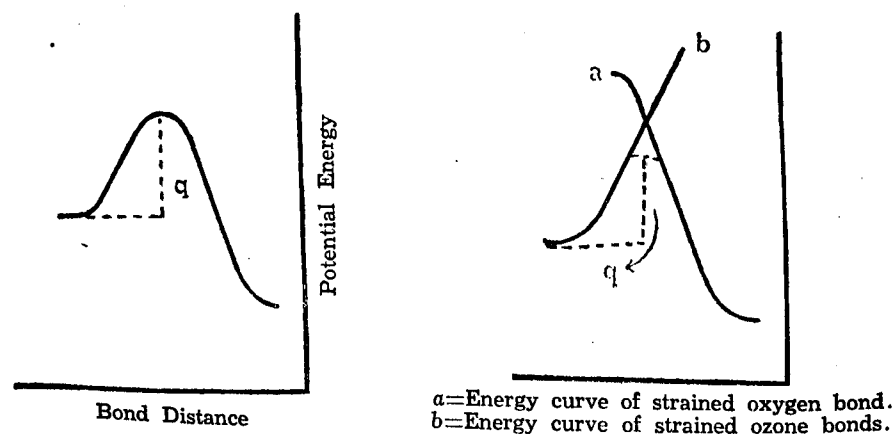
$$a = 0.1227\omega_0\sqrt{\mu/D'}$$

where 0.1227 is a general constant and μ is the reduced mass.

To illustrate this method, we may take up the decomposition of Ozone and the Ethylene-Bromine reaction.



A comparison between Ozone and Oxygen in the condensed state shows that the change consists only of a rearrangement in the pattern; instead of three bonds in each molecule and an intermolecular gap, we have pairs of oxygen molecules and a different gap. In the transformations from one to the other there is the transition state in which the distinction between gap distances and bond distances vanishes. Starting with two ozone molecules, consider the symmetrical horizontal displacement of two oxygen atoms, assuming no interaction between the two. Similarly, starting with three oxygen molecules, pull two oxygen atoms apart, again disregarding interaction between displaced atoms and the oxygen molecules flanking them. Plotting the potential energy against bond distance, we get two curves intersecting at a point, the energy and configuration of which represents the transition state. On account of the quantum mechanical degeneracy of the state, however, the crossing point is not sharp but is rounded off somewhat. Lower down, the maximum point representing a somewhat lower energy value.



The application of Morse curves for chemical reactions is well illustrated by the ethylene-bromine reaction (7)

For Bromine, $r_0 = 2.28\text{\AA}$

$$\omega_0 = 323.86\text{cm}^{-1}$$

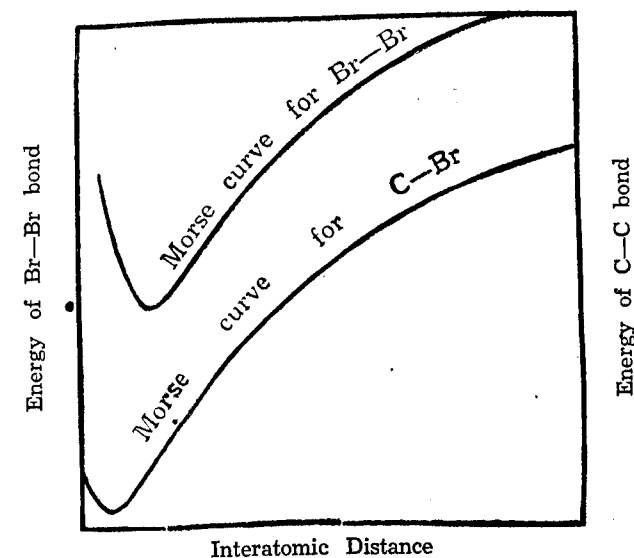
$$D = 45.23 \text{ kilocalories.}$$

$D' = D + \frac{1}{2} \frac{323.86}{352}$ where 352 represents a factor absorbing Planck's constant h and giving energies directly in kilocalories $= 45.23 + 0.46 = 45.69$ kilocalories.

$$a = 0.1227 \times 323.86 \sqrt{\frac{1}{2} \cdot 79.92 / 45.69} = 1.98$$

$$E = 45.69 [e^{-2 \times 1.98 (r - 2.28)} - 2e^{-1.98 (r - 2.28)}]$$

By substitution of various values for r the tables and the corresponding Morse curves are obtained for Bromine. Curves for other pairs can also be similarly derived.



Suppose the two bromine atoms, as a molecule, is at the bottom of a topographical map and they approach the two doubly linked carbon atoms of the olefin by moving "northwards." The stable position is represented by circular lines of radius $2.06\text{\AA}$ representing the normal C—Br distance. If $r_{\text{C-Br}}$ is plotted on the Y axis and $r_{\text{Br-Br}}$ on the X axis, the energy of the system may be plotted at right angles to the plane and contour lines of definite energy can be projected on to the plane of the map. For purposes of the semiempirical method, one of the bromine atoms and one of the carbon atoms alone need be considered. The bromine atom moves along the valleys of energy contours. The straight line approach obviously represents a minimum expenditure of energy.

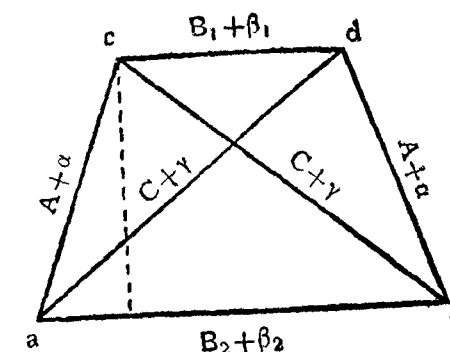
TABLE I.

r	$r-r_0$	E/D'	D
1.61	-0.47	1.286	58.7
2.05	-0.23	0.658	30.1
2.28	0.0	-1.000	-45.69
2.40	0.12	-0.958	-43.75
2.51	0.23	-0.864	-39.5
2.63	0.35	-0.751	-34.3
2.75	0.47	-0.638	-29.2
2.86	0.58	-0.532	-24.3
2.98	0.70	-0.439	-20.1
3.21	0.93	-0.292	-13.35
3.44	1.16	-0.190	-8.67
3.79	1.51	-0.0999	-4.57
4.14	1.86	-0.0496	-2.27
4.49	2.21	-0.0250	-1.14
5.07	2.79	-0.00796	-0.36
5.77	3.49	-0.00200	-0.091

TABLE II.

Atom Pair.	r_0 Normal interatomic distance. (A)	ω_0 Fundamental vibration frequency (cm.-1)	D Energy of dissociation (kilogram calories).
C-C	1.54	990	77
C=C	1.38	1,600	122
C $\equiv$ C	1.21	1,960	200
C-H	1.12	2,930	92
C-I	2.10	497	44
C-Br	2.06	560	58
C-Cl	1.85	660	79
H-H	0.74	4,375	102
H-I	1.62	2,233	66
H-Br	1.42	2,603	85
H-Cl	1.28	2,840	100

The bromine atom has to move from this into the valley that curves round the carbon atoms. The impelling force for this is derived from molecular collisions. For calculating the energy of activation for this reaction, only the binding electrons are involved, the solution being that of a four electron problem.



Consider a polygon abcd in which the lines are drawn at random except that ab and cd are parallel and symmetrical with respect to a central line. The electrostatic and exchange reactions between all possible arrangements of atoms taken two at a time are then calculated for various distances Br-Br and C-Br. The two independent variables are r_1 the distance of separation of Br-Br and C=C pairs and r_2 half the distance between the bromine atoms. Other distances may be calculated from these. It can be shown that the potential energy J which is the sum of the coulombic energy and the exchange energy is equal to

$$J = Q + k = 0.14[2(A + \alpha) + (B_1 + \beta_1) + (B_2 + \beta_2) + 2(C + \gamma)] \\ + \frac{0.86}{\sqrt{2}} \sqrt{2[(A + \alpha) - (B_1 + \beta_1) - (B_2 + \beta_2)]^2 - 2[(A + \alpha) - 2(C + \gamma)]^2} \\ + [B_1 + \beta_1 + (B_2 + \beta_2) - 2(C + \gamma)]^2$$

The energy of activation E is given by the difference between this potential energy and the sum of the dissociation energies of Br-Br and the C-C bonds.

$$E = D_{\text{Br-Br}} + D_{\text{C-C}} - J$$

The values of E thus obtained are plotted against r_1 and r_2 to give the contour map and the lowest pass between the valleys comes at $r_1=1.14$, $r_2=2.40$ and gives a value for the Energy of Activation of 23,200 calories for the addition reaction. The relation between structure and the value of E will be considered later.

There are thus two distinct methods of approach to the problem of reaction kinetics but as in all applications of quantum mechanics, the transition state theory is of limited application. As Hinshelwood (8) remarks, "the great value of the transition state method is in causing us to think more deeply about the inter-relationship of thermodynamic and kinetic magnitudes rather than in providing us with an essentially more accurate calculus." As yet the method cannot be applied to chain reactions or to reactions in which removal of energy from the products is the rate determining factor.

The reactions that will be considered now are all approached from the standpoint of the collision theory, since we shall be dealing with complex compounds. Further, I shall be confining my attention to just those reactions that have been extensively studied by the Ingold school during the last decade.

While the mass of qualitative work has been accumulating, the quantitative side of organic reactions has not been the subject of systematic study until recently. An impetus to work on these lines was given by the interpretation of the chemical bond by G. N. Lewis with his concept of a stable duplet and an octet as the basis of chemical linking in general and by the ideas on Polar Molecules that we owe to Debye.* An electronic theory of organic reactions necessitated a kinetic study of familiar and unfamiliar organic reactions. For obvious reasons, the majority of the reactions that have been studied were in solutions, aqueous and nonaqueous, and we may pass on to a consideration of the methods that have been adopted in following the kinetics of the reactions in question. Attention is confined to a few of them and what follows will be a description of studies in nitration, degradation of 'Onium compounds, halogen-olefin additions, ester hydrolysis, and molecular rearrangements.

For measurements of the velocity of a reaction it is obvious that two conditions must be satisfied: the system under investigation should be made unstable in a negligibly short time and the mode of recording the extent of the reaction should also involve a negligibly short period. If the reaction takes a sufficiently long time, the time of mixing will be negligible. The subsequent method of following the reaction will be decided by the nature of the reaction. Some reactions are, however, too rapid for study by following the course of the reaction. If a series of compounds with similar structure are being studied a competitive

* The concept of resonance in recent times has also influenced the development of investigations in this field.

method is found useful. Both these modes of study may be illustrated by taking up some of the reactions.

The reaction that has been studied most thoroughly is the decomposition of the 'Onium compounds. The nature of this reaction enables one to follow the course of the changes by the usual analytical processes, the only precaution being the use of resistance glass for containers.

The study of nitrations (9) has given rise to numerous experimental methods, each making use of different physical properties of the compounds studied. While earlier work on the relative orienting influences of groups in nitration of benzene derivatives made use of para substituted derivatives, it was obvious that mutual interaction of groups were neglected. A more accurate and reliable procedure is to have only one substituent and this has led to the use of competitive method. The nitrations are usually done either with acetyl nitrate in acetic acid or with anhydrous nitric acid in nitromethane solution, the temperature range being 0°–30°C. a limitation arising from reaction velocities and the stability of nitration solutions.

In determining the relative rates of nitrations of say, benzene and toluene, the experimental measurement is of the quantity ratio of the mono-nitration product from which with certain auxiliary data, the relative rates may be calculated. This quantity ratio may be determined by density measurements on mixed mononitration products or by a bromometric method.

If x molecules of benzene and y molecules of toluene are nitrated together in time t to form Y molecules of total nitration product containing 100P molecules of nitrobenzene, it can be shown that

$$k_y/k_x = \log y - \log y_t / \log x - \log x_t$$

where $x_t = x - PY$; $y_t = y - Y + PY$.

This equation holds good even if the reaction is incomplete. The nitration product of toluene is a mixture of the three isomerides and the quantitative estimation of this has been carried out by a modified thermal analysis method, making use of the dimorphism of orthonitrotoluene.

If γ represents the "first freezing point," in which the solid phase is paranitrotoluene, β the second freezing point in which the β form of orthonitrotoluene accompanies the para compound in the solid phase and α the "second freezing point" in which α form of the ortho compound accompanies the para in the solid phase, the following empirical equations may be constructed.

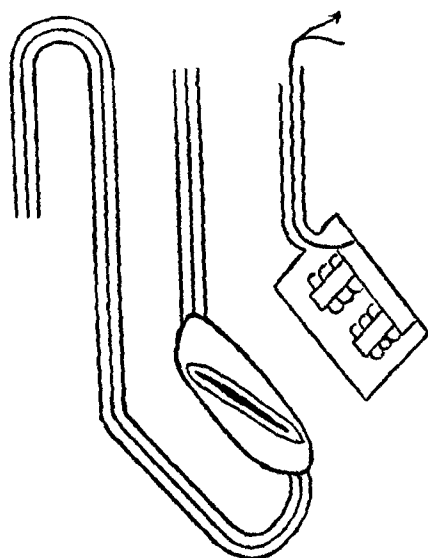
$$\begin{aligned}\gamma &= 71.55 - 112\omega - 115\mu \\ \beta &= -13.11 - 3.5\omega - 61\mu \\ \alpha &= -22.53 + 2.5\omega - 47.5\mu\end{aligned}$$

where 100ω and 100μ represent the percentages of the ortho and meta isomerides respectively.

If k_y/k_x is the reduced velocity of nitration of toluene the coefficients of activation of the various positions are given by

$$F_{\text{ortho}} = 3\omega k_y/k_x; \quad F_{\text{meta}} = 3\mu k_y/k_x; \quad F_{\text{para}} = 6\pi k_y/k_x$$

In later studies on the kinetics of nitration, a dilatometric method has proved successful (10). Several workers have noted that the distance travelled, l , by the meniscus in a dilatometer is proportional to the progress of the reaction. If D is the fractional volume change per unit length travelled by the meniscus, a constant for a dilatometer, and R the fractional volume change per gram molecule of the reaction, a constant for the reaction, then $(l-l_i) \times D/R$ measures the concentration of the reactants at time t . For nitration studies, the most suitable type of dilatometer for accurate work was found to be of the model illustrated.



More than with nitrations, the competitive method has been found necessary with bromine-olefin additions. The kinetics of other halogen additions has not yet been systematically studied. While there are a few reactions involving olefins with deactivating groups which take

measurable time for addition, there are several which are very fast. In the experimental studies, as light exerts a profound influence on the rate, the comparison of olefins has to be in the dark. Where the competing olefins are gases, a sufficiently low temperature has also to be used in order to have solutions of reasonable concentrations. As in the familiar thermochemical experiment of distributing a base between two acids to ascertain their relative "strengths," an amount of bromine insufficient to react completely with either of the olefins is added in solution.

If x_0 and y_0 be the initial concentration of the olefins and x and y the amount reacting in time t , the instantaneous speeds may be expressed with maximum generality that will be allowed by the equations,

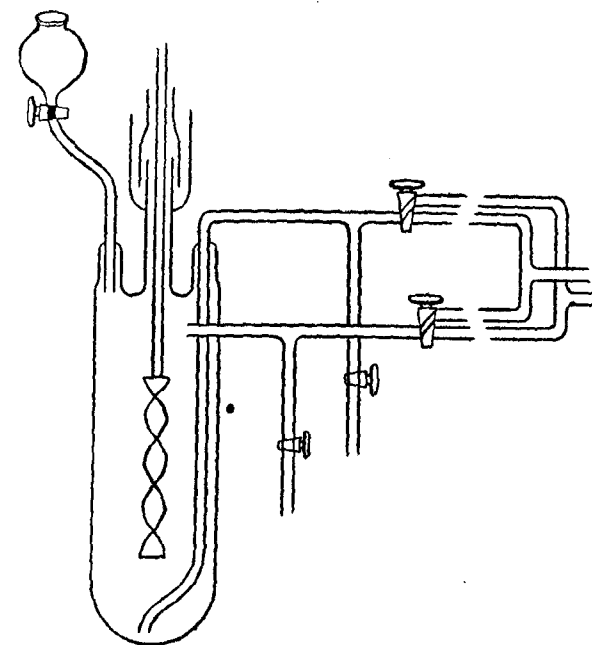
$$dx/dt = k'_x(x_0 - x) [Br]_t^m [k_{x1}(cat_1)_t^{n_1} + k_{x2}(cat_2)_t^{n_2} \dots]$$

$$dy/dt = k'_y(y_0 - y) [Br]_t^m [k_{y1}(cat_1)_t^{n_1} + k_{y2}(cat_2)_t^{n_2} \dots]$$

If the factors in square brackets cancel out on division except for a constant, the integrated form of the resultant equation will be

$$k_y/k_x = \log y_0 - \log (y_0 - y) / \log x_0 - \log (x_0 - x)$$

The reduced velocity for various olefins have been obtained by making use of this equation, the experiments being carried out in the apparatus illustrated (11).



The latest tool that has been used in the field of reaction kinetics is the now available isotopic tracers, radio-active as well as non-radio-active (12, 13). This has been applied especially in following the course of molecular rearrangements e.g., Walden inversion and Wagner-Meerwein transformations. The use of a radio-active halogen enables an experimental test of the hypothesis that stereochemical inversion occurs when and only when substitution takes place. The radio-active sodium iodide used in the experiments was derived by imbedding in paraffin a sealed tube containing the iodide very near a radon-beryllium-neutron source of 150 millicurie strength and the decay in radio-activity was measured with a Geiger counter. If N_s and N_i represent the total rates of substitution and inversion respectively, it has been shown that

$$N_s = \frac{1}{t} \cdot \frac{AB}{A+B} \log_e \frac{A}{A - x(A+B)/B\beta}$$

$$= \frac{1}{t} \cdot \frac{AB}{A+B} \log_e \frac{1 + \gamma \frac{A}{B}}{1 - \gamma}$$

$$\text{and } N_i = \frac{A}{2t} \log_e \frac{\alpha_0}{\alpha}$$

A = Total organic iodide; B = Total sodium iodide

β = Fraction of NaI in isotopic form at $t = 0$

x = Amount of RI in isotopic form; α = rotation $\gamma = \frac{x}{B\beta}$

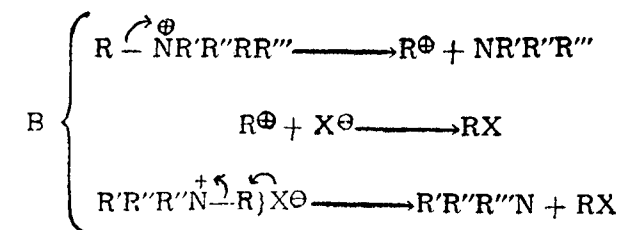
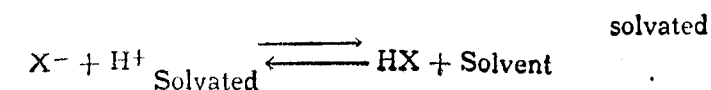
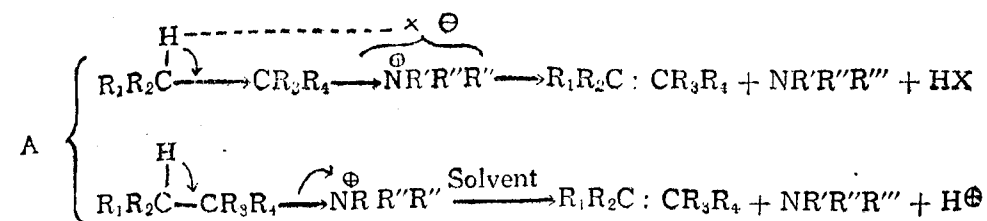
In the recent study of the Wagner-Meerwein change, Deuterium and radiochlorine have been used.

The methods adopted for ester hydrolysis do not call for any special mention. Here too, isotopic tracers have come in handy.

The decomposition of quaternary ammonium or sulphonium compounds may be considered to be special cases of the more general reaction, namely, aliphatic substitution. The mechanistic studies in both cases are closely related and the problem of 'Onium degradations and hydrolysis of alkyl halides may be taken up together.

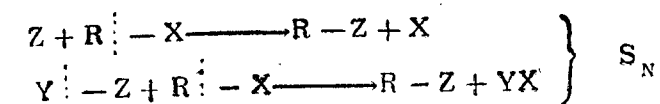
Exhaustive methylation is a familiar process in which very early two different reactions were noticed, one giving an unsaturated compound as a product and the other giving an alcohol. It is also found

that the presence of a hydrogen atom at the β carbon atom is essential for Olefin formation. Systematic investigations of the Kinetics of 'Onium degradation showed that the following mechanisms serve to explain all such reactions. (14)

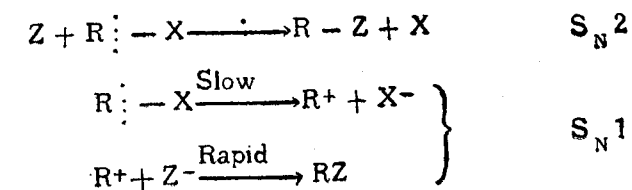


In a later paper (15) Ingold has generalised these reactions so as to include all aliphatic substitution reactions. The more general representation of the reactions is as follows:—

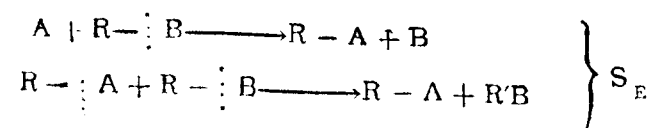
Nucleophilic substitutions



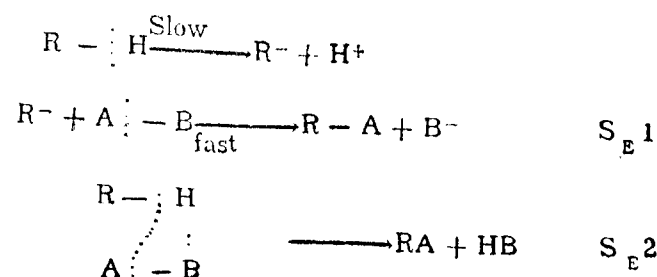
This can be further subdivided



Electrophilic substitutions

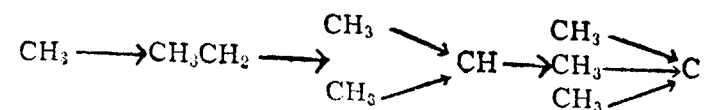


Subdivided

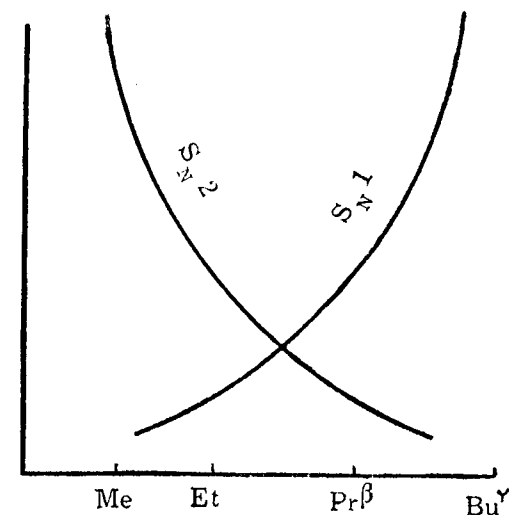


It will be noticed that S_{N2} and S_{E2} represent bimolecular mechanisms while S_{N1} and S_{E1} represent unimolecular mechanisms. Large electron release from R, strong electron affinity in X, low nucleophilic activity and concentration of the reagent Y favour S_{N1} .

An examination of a series of quaternary ammonium and of sulphonium compounds reveals certain interesting relationships between structure and mode of degradation. Accepting Sidgwick's rule of covalency maxima, an unionised quaternary ammonium hydroxide is not possible and their decompositions must necessarily be ionic in nature. Among the various substituent groups studied, it is found that Me and Me_3C groups are readily eliminated as alcohols while other primary and secondary alkyl groups are not. The alcohol elimination curve thus passes through a minimum. As one goes through the series,



the inductive effect of the alkyl components increases being a minimum with CH_3 and a maximum with tertiary butyl. This is consistent with a second order elimination of the methyl group. The increase in the number of alkyl groups suppresses this bimolecular mechanism and at some stage in the series the unimolecular mechanism becomes the more important one.

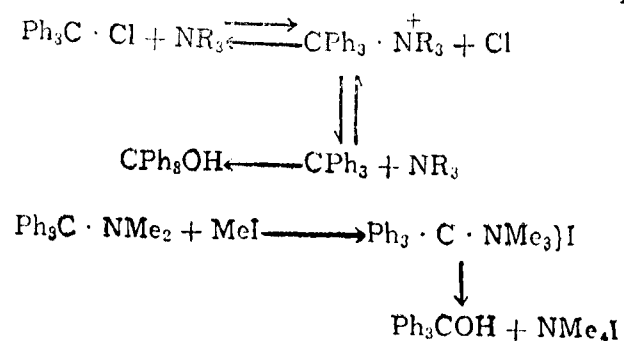


When one passes on to the aryl substituted compounds a variation has to be expected on account of the electromerism and the duplex polarity of the phenyl nucleus. The observations of Hughes (16) on the decompositions of the series of 'Onium compounds with CH_3 , CH_2Ph , $CHPh_2$ and CPh_3 substituents show that the change from a bimolecular to a unimolecular mechanism occurs at the benzhydryl group. Similar observations with alkaline hydrolysis or alcoholysis of the corresponding halides have been made by Ward (17).

Now the change from a bimolecular to a unimolecular mechanism can arise from two causes. In the compound $R R' R'' R''' N^+X^-$, either the cationic stability of R may be increased or the basicity of the anion (using Bronsted's definition of the base) may be decreased. As with alkyl and aryl series, an anionic series of decreasing basicity OEt , OH , OPh , OAc , Cl may be considered. When both series are taken along with a simultaneous reaction involving olefin elimination, the point of mechanistic change will appear as a region.

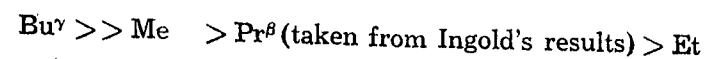
As a typical instance of cationic stability influencing the degradations, we can take up the case of phenyl ethyl trimethyl ammonium compounds. The unsubstituted compound decomposes with the formation of styrene and the process is essentially bimolecular. It was anticipated that the introduction of an "electron sink" in the para position by increasing cationic stability will bring about a mechanistic change. Experiments with p-nitro phenyl ethyl trimethyl ammonium compounds (18) showed the interesting result that the decomposition gave a unimolecular constant. Variation in the anionic component had no influ-

ence on the value of the constant which was also independent of the anionic concentration. The time for half change was also independent of the initial concentration of the quaternary ammonium base. Similarly an explanation of the failure of attempts to prepare quaternary ammonium compounds containing the Trityl group has to take into account the remarkable stability of the Trityl group as a cation and the greater basicity of the hydroxyl ion as compared with halide ion.



The decomposition of 'Onium compounds leading to alcohol may be taken to be the substitution of the NR_3 group by OH and as such the same ideas may be logically extended to Hydrolysis of alkyl halides. Kinetic studies on the hydrolysis of a series of alkyl halides in aqueous, alcoholic, acetone, and formic acid solutions have justified the extension of this analogy.

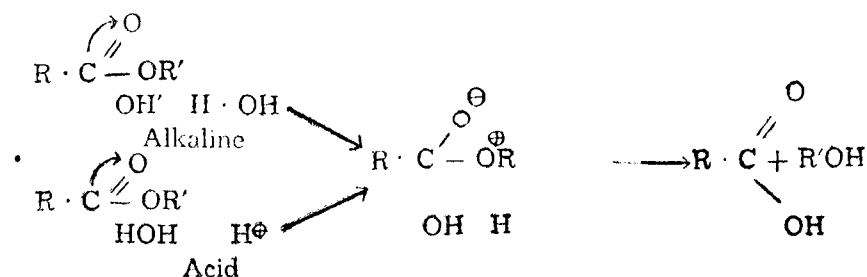
W. Taylor (19) has objected the mechanism suggested by Ingold on the ground that hydrolysis and alcoholysis of Me, Et, and tertiary Bu bromides in 60% and 80% alcohol gave first order constants, the sequence being



This result is however not conclusive since in the presence of a large excess of one of the reagents, a bimolecular reaction tends to be pseudomonomolecular. Taylor further contends that in the hydrolysis of tertiary butyl chloride, a bimolecular mechanism in which water takes part as a reagent should be used. This cannot, however, be maintained since this hydrolysis is known to be independent of hydrogen-ion concentration. In a series of papers Hughes, Ingold and co-workers (J.C.S., 1940, p. 899 et seq.) have conclusively shown that Taylor's observations are worthless and have adduced fresh and conclusive evidence for the ionic mechanism envisaged earlier.

From one set of hydrolysis, we can pass on to a different type of hydrolysis, namely, the hydrolysis of esters by acids and alkalis. The

mechanism of ester hydrolysis that is generally accepted is the one due to Lowry (20).



By the use of an isotopic tracer, namely O^{18} in the acid hydrolysis of amyl acetate, Polanyi (21) has shown that during hydrolysis it is the C-O bond in C-OR that is broken and not the O-R bond. Kinetic studies with esters have been essentially with para-substituted benzoic esters, but even amongst these critical increment studies are very few. These have led to the interesting result that the value of PZ in the Arrhenius equation is substantially the same in both acid and alkaline hydrolysis, (22) a clear evidence in favour of the Lowry mechanism that gives a common route. The solvent effects observed with these ester hydrolysis, however, are difficult to amount for. In acid hydrolysis, the value of E increases as we change from alcohol-water $\rightarrow$ acetone-water and in alkaline hydrolysis it is the reverse. Also the influence of substituents is greater in alcohol-water mixtures. A greater knowledge of the liquid state is necessary before an interpretation of this is possible. Our experiments in glycerol water mixtures indicate the necessity for viewing this as a two stage reaction. The studies on ester hydrolysis by Hinshelwood as well as by Ingold have clearly shown that the influence of substituents on this side chain reactivity is of the same order as may be expected from an application of the electronic theory of organic reactions. With the range in velocity constants of the order of 1:5000 or more, this series of reactions must be expected to give the results mentioned, namely, a constant PZ and a changing E, the values of which lie on a slope -2.303 RT , when E is plotted against $\log_{10} k$. All these experiments have been with para substituents and a few meta substituents alone. An examination of substituted aliphatic esters may be expected to show some difference and some peculiarities and experiments carried out in our laboratories do indicate these (23). It is relevant to mention here that the viscosity of the solvent seems to exert considerable influence on the reaction.

From the somewhat certain ground of 'Onium degradation and ester hydrolysis, we shall pass on to the uncertain regions of halogen addition and aromatic nitrations.

As already indicated, a competitive method has been found very useful in the comparison of the reactivities of substituted olefins. The success of the method depends on the following assumptions.

1. The reaction is of the *first order* with respect to the *olefin*.
2. The reaction is of the *same order* with respect to bromine for the two similar reactions.
3. The reaction is catalysed by one dominant catalyst the active mass of which may be either constant or vary in any erratic manner with time, provided, however, that in the latter case the *order*, *n*, is the same for the two reactions.

Under controlled catalytic conditions, these assumptions appear to be justifiable. Another factor setting a limit to the validity of the equation is that the experimentally determined values of *X* and *Y* must be small if errors are to be minimised. A factor that was unnoticed in the initial stages of the competitive method for this reaction was the existence of an induction period. This introduced a further limitation. A minimum amount of hydrogen bromide has to be added to eliminate this induction period; the amount added, however, has to be sufficiently small in order to avoid the necessity of too rapid an addition of bromine. The study of a series of substituted olefins give the results appended (24)

TABLE III.

Expts. No.	X	Y	K_y/K_x	Reduced rate for Y.	Mean.
17-19	CH ₂ :CH ₂	CHPh:CH ₂	3.24	3.24	3.35
22-25	CH ₂ :CH ₂	CHPh:CH ₂	3.43	3.43	
28	CHPh:CH ₂	CHMe:CH ₂	0.63	0.63 × 3.35 =	2.03
29	CMe ₂ :CH ₂	CHMe:CH ₂	0.35	0.35 × 5.32 =	
1-4	CH ₂ :CH ₂	CMe ₂ :CH ₂	5.5	5.5	5.53
20-21	CH ₂ :CH ₂	CMe ₂ :CH ₂	5.6	5.6	
26-27	CH ₂ :CH ₂	CMe ₂ :CHMe	10.4	10.4	10.4
5	CH ₂ :CH ₂	CMe:CHMe	13.6	13.6	14.0
6-8	CMe ₂ :CH ₂	CMe:CHMe	2.54	2.54 × 5.53 =	
14-15	CH ₂ :CH ₂	CHBr:CH ₂	small	small	small
9-10	CH ₂ :CH ₂	CO ₂ H:CH:CH	small	small	small
11-13	CHMe:CH ₂	CO ₂ H:CH:CHMe	0.13	0.13 × 2.0 =	0.26
30-32	CH ₂ :CH ₂	CHO:CH:CH ₂	1.5	1.5	1.5
33	CHMe ₂ :CH ₂	CHO:CH:CHMe	1.5	1.5 × 2.0 =	3.0

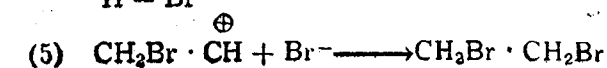
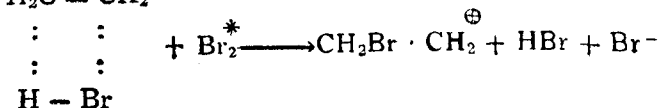
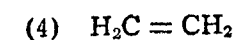
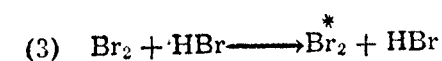
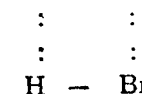
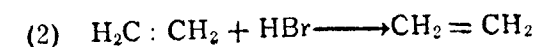
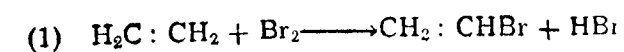
Since this additive reactivity depends on the polarizability of the double bond one might expect the influence of the substituents on other phenomena like the Raman effect directly connected with polarizability. This is seen from an examination of the table.

TABLE IV.

Compound.	C=C Raman line	Reduced velocity.
CH ₂ =CH ₂	1623	1
MeCH=CH ₂	1647	2
Me ₂ C=CH ₂	1650	5.5
Me ₂ C=CHMe	1679	10.2
Me ₂ C=CMe ₂	—	14.0
PhCH=CH ₂	1631	3.2
CH ₂ =CHCl	1608	Very low
CH ₂ =CHBr	1597	Very low
CH ₂ =CH·CHO	1618	1.5
CH ₃ ·CH=CH·CHO (trans)	—	3.0

While a comparison of the additive reactivity of olefins by a competitive method is possible by an adjustment of the experimental conditions, it is interesting to examine the reaction from the mechanistic point of view. In place of the old idea of a simple bimolecular mechanism, we have to consider other possibilities. (25) It is obvious that the reaction is very complex. There is invariably an evolution of hydrogen bromide during the reaction whether the slow additions or the fast additions are considered. The induction period is observed in all solvents, polar and nonpolar, hydroxylic and non-hydroxylic. The induction period is eliminated by the addition of hydrogen bromide or Iodine monochloride and the reaction is considerably slowed down by the addition of antimony tribromide. The existence of an induction period, an exponential type of reaction curve, and the existence of a negative catalyst are amongst the criteria for a chain reaction according to Semenov (26). The course of the reaction also suggests a chain mechanism such as the one tentatively suggested (27).

TABLE V.



An examination of the bimolecular velocity constant obtained with initially added hydrogen bromide clearly indicates that while an increased catalyst concentration increases the rate of addition there is no direct proportionality between catalyst concentration and rate constant (28).

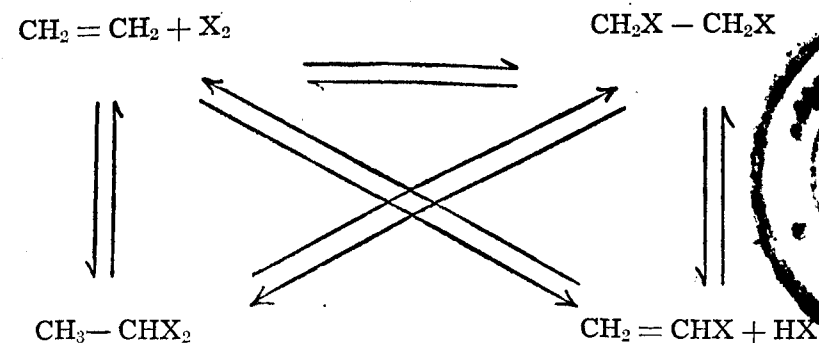
TABLE VI.

Concentration of Tiglic acid M/15.

Concentration of Br ₂ .	Concentration of HBr in gms. per 200 c.c. of solution.	Velocity constant k ₂ mols./litre.
(A) M/15	0.1188	0.00790
(B) M/15	0.0594	0.00627
(C)	2.00	1.32
(A) M/30	0.0594	0.000577
(B) M/30	0.0297	0.000428
(C)	2.00	1.34
(A) 2M/75	0.0594	0.000483
(B) 2M/75	0.0238	0.000317
(C)	2.50	1.52
(B) M/50	0.0178	0.000231
(A) M/50	0.0594	0.000405
(C)	3.3	1.76
(B) M/150	0.00594	0.000068
(A) M/150	0.0594	0.000224
(C)	10	3.29

C=Ratio A/B.

In applying the electronic theory of organic reactions, it is clearly recognised that the energy of activation in any type of reaction as the present series will vary with the substituent atoms or groups. As I have already indicated, from semi-empirical grounds, Sherman has arrived at a value of 23,000 calories for the reaction between Ethylene and bromine considering the following series of reactions (29).



It will be noticed that these calculations do not take into account the possibility of a chain mechanism for this reaction. As such one has to expect differences between calculated and observed values for the energy of activation. For ethylene itself experimental values are not yet available and where these are available, calculations have yet to be made. The following figures, however, may not be without interest.

E

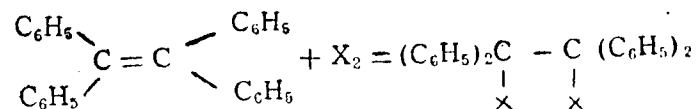
Crotonic Acid	10,100
Tiglic Acid	6,400
ββDimethyl Acrylic Acid	4,400

The dark reaction between olefins and bromine is found to be as much a chain reaction as the photochemical one, though there is no evidence of bromine atoms being formed in solution in the dark. All available evidence is against the atom chain mechanism for this reaction. Also, in the reactions in oxygenated solvents, there is some evidence that the solvent itself takes part in the reaction (30).

Before leaving the subject, it may not be out of place to mention the peculiarities of the phenyl substituted olefins. As anticipated, from theoretical grounds, styrene adds on bromine more rapidly than Ethylene. Tetraphenyl-ethylene is remarkable in that it does not add on bromine but rapidly yields substitution products. An interesting explanation for this has been given by Pauling (31).

He shows that as a result of conjugation of phenyl groups and double bonds, the extra resonance energy of tetraphenyl ethylene (1.08 v.e.) is more than enough to overcome the unsaturation of the double bond (90.74 v.e.) in consequence of which the properties of the substance differ, radically from those of an unsaturated compound. Using bond energy values given in earlier papers Pauling calculates ΔH values for the reaction:

JL
T4m 211A, N32
N40-10-231

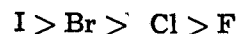


where X_2 is H_2 , Cl_2 or Br_2 and gets values of -0.30 v.e., -0.42 v.e. and $+0.24$ v.e. respectively. If ΔH does not differ very much from ΔF , these suggest that tetraphenyl ethylene will add on hydrogen and chlorine but not bromine. It may be remarked that as yet Pauling's conclusions are only qualitatively true.*

To conclude, we can take up the problem of nitrations. Kinetic studies are available only for aromatic nitrations. As with bromine additions, we may notice the competitive method first and then pass on to a consideration of the mechanism. The appended table gives an idea of the relative orienting effects as revealed by these competitions in nitration of mono-substituted compounds. (32)

Substance	Relative Rate
$\text{C}_6\text{H}_5 \cdot \text{H}$	1
$\text{C}_6\text{H}_5 \cdot \text{F}$	0.15
$\text{C}_6\text{H}_5 \cdot \text{Cl}$	0.033
$\text{C}_6\text{H}_5 \cdot \text{Br}$	0.030
$\text{C}_6\text{H}_5 \cdot \text{I}$	~ 0.18
$\text{C}_6\text{H}_5 \cdot \text{CooEt}$	0.0037

The results indicate that the rates of nuclear nitration passes through a minimum in the halogen benzenes contrasting with the absence of such intermediate maximum or minimum when one considers side chain reactivity. This difference is presumably due to the relatively greater importance of polarizability effects in nuclear than in side chain reactivity. The experiments indicate that the halogens are "electron releasing" in the order.



Nitration studies with various solvents have shown that they may be divided into three classes.

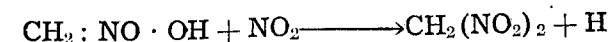
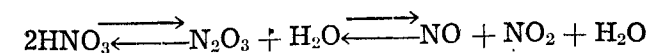
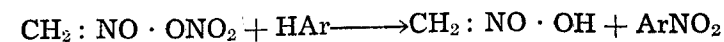
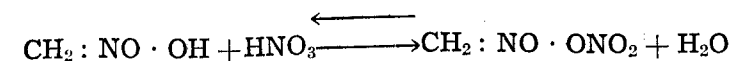
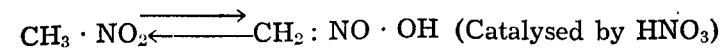
Slow: Acetic acid, Dioxan, Acetonitrile.

Intermediate: Nitromethane, Acetic Anhydride.

Fast: Sulphuric acid.

*The possibility of a bromine addition compound in the presence of a catalyst is being investigated.

For Kinetic studies by a dilatometric method, the intermediate solvents have been used and the nitration in nitromethane solution is found to necessitate a chain mechanism in which the solvent plays an important role. The suggested chain mechanism is as follows. (33)



The conclusion reached from the studies is that in Nitromethane solution, the aci form of the solvent forms a mixed anhydride with nitric acid which is a better nitrating agent, recalling the relative efficacy of brominating agents as influenced by the structure of such reagents. Another interesting observation in these experiments is the surprising fact that the rate of nitration of benzene, toluene, and ethyl benzene are independent of the hydrocarbon concentration. Unlike these however, the mono-halogen derivatives follow no simple order, and the results do not lend themselves to simple mathematical computations. There are clear indications that the rate of nitration is a function of the concentration of the halogeno-benzene being nitrated. The only qualitative similarities observed in the nitration of the hydrocarbons and the halogeno-benzenes were (i) the rapid increase in the rate of addition with increasing concentration of nitric acid and (ii) the decelerating influence of nitrous acid.

The brief survey attempted in the preceding pages might have indicated the extent to which Kinetic studies have enabled a somewhat better understanding of the fundamental reactions of compounds familiar to the organic chemist. It is also clear that the studies have only tended to make the problem apparently more difficult to solve and further work on the reactions may be expected to unravel what has so far eluded us.

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Studies in Sanskrit Texts on Temple Architecture with Special Reference to the Tantrasamuccaya

By

N. V. MALLAYYA

ADHIṢṬHĀNA, UPAPĪṬHA AND PADMA—WHAT ARE THEY?

Undoubtedly in our text, the Adhiṣṭhāna described as well as the Upapīṭha and the Padma, are members of the whole structure and not divisions of the column. This point is made clear by Śaṅkara in the following remarks :

- “ अथाधिष्ठानादिप्रासादावयवान् वदन्नाधिष्ठानादप्यधोदेशे पक्षान्तरेण कल्पनीयस्योप-
• पीठस्य क्लृप्तिमाह—मासूरोच्च इति ॥”³¹⁰

The stanza³¹¹

“ चित्त्वेत्यधिष्ठानमिहानुरूपं समं तलीकृत्य शिलाप्रतानैः ।
विभज्य गर्भान्तरबाह्यभित्तिन्मध्यनाडी रचयेद् यथार्हम् ॥”

on the other hand, gives internal support to the view that the ‘Adhiṣṭhāna’ referred to here is the basement of the temple, which is to be distinguished from the base of the column. For, basement is an indispensable and primary member of the whole structure, whereas base of the column forms only a division of the column which is itself a member that comes above the basement. Mayamata³¹² thus lays down that the Adhiṣṭhāna with or without an Upapīṭha below should be raised from the ground level that is obtained as a result of filling in and pavement of the foundation-pit. ‘Jaṅghāvarga’ (Jaṅghā meaning pillar) is required to be constructed above the Adhiṣṭhāna (जङ्घावर्ग तदूर्ध्वगम्—says Maya). The definition of Adhiṣṭhāna, viz. :—

“ प्रासादस्तु निजैरङ्गैरधितिष्ठति यं सदा ।
दृढं शिलादिघटितं तदधिष्ठानसंज्ञितम् ॥”³¹³

is itself suggestive of the fact that the Adhiṣṭhāna described is not confined to the base of the column, but related to the complete structure.

310. *Tantrasamuccaya* with Vimarśinī (T. S. S. Edition), Part I, p. 53.

311. *Tantrasamuccaya*, Paṭala I, stanza 17.

312. *Mayamata*, XIV, 10 (T. S. S. Ed.).

313. *Vide Gurudevapaddhati* (T. S. S. Edition), Part III, Ch. XXX, St. 67; also the *Śilparatna*.

This relationship of Adhiṣṭhāna to the whole structure is made clear by such statements as

“ प्रतिक्रमं तत् सुरमन्दिरोचितम् ”³¹⁴

(Pratikrama is best fitted for the temple of God). Thus in the texts we have noted above the reference is directed to the temple rather than to a part thereof.

Dr. P. K. Ācārya, in his Translation of the *Mānasāra*,³¹⁵ renders the terms ‘Upaṭṭha’ and ‘Adhiṣṭhāna’ as Pedestals and Bases of Columns. This interpretation is not warranted by the text concerned, for nowhere in the course of the chapters on Upaṭṭha and Adhiṣṭhāna do we find any reference to columns. In the usual wake of procedure, *Mānasāra* devotes a single chapter towards the treatment of each member of the structure. The main members, as we have noticed already, from bottom upwards are Adhiṣṭhāna, Stambha, Prastara, Gala, Śikhara, and Stūpikā. Each member differs from the other, and this difference is inevitable, for each is designed to express its particular function, which is different from that of the other. It is only when all these parts discharge their respective functions do they declare this affinity to the whole structural unit. Each part being different from the other in its differing function, it is dealt with separately. But in the very separateness of parts, there is conveyed something which indicates the paradox of unity. Difference here does not mean absolute separateness, but separateness essential for the expression of the law of proportions and the principle of relationship. Proportions have relativity, and each member of the structure keeps its proportions in a relative measure, which makes it one with the whole unit of the ultimate structure. Hindu builders, no doubt considered each part individually, but they considered it in its relation to the whole building. They strove to reveal through the varying functions of the parts the architectural unity that prevades a good building. The member Adhiṣṭhāna is naturally ordered to be so disposed that, while it appears to be joined on to its adjacent parts, such as the column (Pāda), it is completely organised and ultimately related to the structure as a whole. The treatment of Upaṭṭha, Adhiṣṭhāna, Stambha, etc., as members of the building is clear-cut, scientific and artistic. It is completely in conformity with the principle of proportions and relationship. The Upaṭṭha and Adhiṣṭhāna described in the *Mānasāra* have their reference not to columns, which form part of the structure, but to the whole structure.

314. *Mayamata*, Ch. XIV, St. 24.

315. *Mānasāra* translation, Chapter XIII and XIV.

Dr. Ācārya's interpretation of the terms ‘Upaṭṭha’ and ‘Adhiṣṭhāna’ as Pedestals and Bases of Columns has no ground for support. It deviates the *Mānasāra* from the general and scientific and artistic line of treatment.

In the chapter on columns³¹⁶ called ‘Stambhavidhāna’ or ‘Pādavidhāna’, which naturally and closely follows the chapter on ‘Adhiṣṭhāna,’ *Mānasāra* like other authors does not fail to take note of the divisions of a column. The height of the whole column is here said to consist of the portion from above the ‘Adhiṣṭhāna’ to below the ‘Uttara’:

“ अधिष्ठानोपरिष्ठातु चोत्तराधोऽवसानकम् ॥ ”³¹⁷

Adhiṣṭhāna, as implied in the statement of the *Mānasāra*, is a distinct member and its difference from the column is indicated by the fact that it is treated as a standard, with reference to which the height of the column is measured.³¹⁸ The column, in its turn, is also distinguished from the Adhiṣṭhāna below it and the Uttara that is above it. The term ‘Adhiṣṭhāna,’ further, is not found used in the course of the description of the divisions of the column. The three main divisions of a column, as generally understood, are the base, the shaft and the capital. The base is indicated by the expression ‘Mūla,’ the middle by ‘Madhya,’ and the top by ‘Agra.’³¹⁹ The term ‘Mūla,’ in this connection, is rendered as ‘base’ by Ācārya, and he further gives the root-meaning ‘root.’ When he renders the term ‘Adhiṣṭhāna’ also by the expression ‘Base,’ the idea intended by the author to be conveyed is blurred and confusion eventually results. Again, by way of bracketed expressions wrong sense appears to have been thrust into the translation. Thus the line ‘शुद्धमध्यममुख्यानां हर्म्याणां निर्गमं च तत्’ is thus rendered by Ācārya: “The projections of (the bases of columns for) buildings of the smallest, the intermediate, and the largest types should correspond to them (i.e. should be the smallest, the intermediate, and the largest respectively).”³²⁰ When the reference here is obviously to the whole structure, where is the necessity to relate it to a part thereof? To a wrong understanding of the terms seems due the presentation of curious types of pillars³²¹ in the

316. *Mānasāra* Ch. XV.

317. *Ibid.*, Ch. XV, line 7; also *vide* lines 8, 9, 10, 11.

318. *Ibid.*, lines 9, 10, 11; also *vide* *Mayamata* (T. S. S. Ed.), XV, st. 4; *Kāśyapa-silpa*, (Ānandāsrama Series), VIII, 3.

319. *Mānasāra*, XV, (P. K. Ācārya's Ed.) line 23, 24, and 25.

320. *Mānasāra* (Translation), Ch. XIV, line 392.

321. *Mānasāra* (Illustration), Sheets XLIV, XLV, XLVI, XLVII.

section on illustration. The height of the Adhiṣṭhāna which ought to belong to the structure at large is added to that of the pillar which is after all a structural part of as much structural importance as the parts above and below it. The pillars illustrated look completely disproportionate to the temple. Mānasāra clearly states that the height of the Māsura (basement) should be proportionate to the height of the building: 'हर्म्यतुल्यवशात्प्रोक्तं तस्य मासुरकोन्नतम्'.³²² It is certainly wrong to thrust any idea of part in the expression 'Harmyatunga' which evidently means 'the height of Harmya (i.e.) the height of the temple.' Again in such lines³²³ as 'देवमूर्तुसूत्रानां हर्म्याणां तत्प्रकल्पयेत्' the type of Adhiṣṭhāna that has been described has obvious reference to the whole temple and never to a pillar. The association or relationship of the basement with the structure as a whole is again evidenced in these lines³²⁴:—

“ समस्तहर्म्यादि च धातुसर्वं कृतं विमान (नं) ।
मसुरेण सह यदि (न) स्यात् ॥”
“ तस्मान्मसुरेण सहैव सर्वं कृतं विमानेषु च भूषणानि ।”

Are there actual pillars in existing structures which correspond to the illustrations of pillars presented to us by Ācārya in his Illustration Volume of the *Mānasāra*?

We shall now turn our attention towards Rām Rāz and examine his observations on this much misunderstood topic. Rām Rāz views Indian architecture through the spectacles of Western architectural literature. It deserves to be remembered in this connection that Western architectural terminology does not wholly fit in with or correspond to Hindu nomenclature and a faithful interpreter of our architectural literature should not avoid a thorough understanding of the peculiarities inherent in the systems of art Eastern as well as Western. Rām Rāz observes: "The Hindu orders may be said to consist of four principal parts, namely, the *upapīṭha* or pedestal, the *adhiṣṭhāna* or base, the *stambha* or pillar, and the *prastara* or entablature."³²⁵ The term "Order" figures prominently in Western architectural literature. What is its architectural meaning as understood in the West? It is a column or pilaster, with its base,

322. *Mānasāra* Text, Chapter XIV, line 8.

323. *Mānasāra* Text, Chapter XIV, line 43, vide also lines 63, 64, 80, 90, 108, 122, 143, 168, 169 etc.

324. *Ibid*, lines 405, 409, 410.

325. Rām Rāz, *Essay on the Architecture of the Hindus*, p. 22.

shaft and capital, and the entablature above it (sometimes called 'epi-style'), consisting of architrave, frieze, and cornice considered as a single architectural feature. And the main 'Orders' of the European classical architecture are systematised classifications of five different types, Tuscan, Doric, Ionic, Corinthian and Composite.³²⁶ The 'Order' determines the style of Western architecture and, as Stratton would put it, "the Classic Order is the Classic Style itself".³²⁷ In the terminology of Hindu architects, there is no term, so far as we know, which corresponds to what is technically understood as 'Order' in the West. Nor are the column and entablature treated as one architectural unit in India, determining the style of an Indian temple. In Hindu architectural literature, the distinguishing feature of style is what is known as 'Śikhara,' the portion above the neck (Gala) and entablature (Prastara). This Śikhara is admittedly the essential basis for the differentiation of style in Hindu architectural literature, and in its office and situation it differs from the members such as the Stambha and Prastara. The 'Nāgara' class of temple is determined by its square Śikhara, the 'Vesara' by its circular Śikhara and the 'Drāviḍa' by its faceted Śikhara. Entablature, column and basement below the Śikhara are not taken into any consideration of style when a temple is of mixed shape. The body of the temple which comprises these members is mostly, if not always, described as square, and the fundamental basis of differentiation is the shape of the Śikhara otherwise known as Śiras (the head) of the structure. Order, representing the column and entablature is therefore outside the province of the consideration of the Hindu style of architecture. Hence it is not proper to speak of Hindu Order in the determination of the Hindu style. There is no such thing as 'Hindu Order' in Hindu architecture in the sense in which 'Order' means in Western architectural literature. The Hindu temple, as we have observed, is a unit complete in itself, and the different constituent elements namely, the Adhiṣṭhāna, Pāda, Prastara, Gala, Śikhara and Stūpikā form one organic whole in the same way as the different limbs enter into the organic composition of the human body. Each part here is treated as bearing integral relationship with the whole.

Leaving the technical and architectural sense aside, one might mean by Order 'arrangement' in the general sense of the term, and thus speak of Hindu order as mere classification or arrangement of the parts of a building one above the other. In that case, Hindu order must be said to consist of not four, but six principal parts; for, all Hindu architec-

326. Vide *Encyclopaedia Britannica* under 'Order'.

327. Stratton's *Orders of Architecture* (p. 1).

tural authorities have enumerated Adhiṣṭhāna, Stambha, Prastara, Gala, Śikhara or Śirṣa, and Stūpikā as the main members of a temple. The statement of Rāz excludes the last two parts Śikhara and Stūpikā from the list of enumeration, as well as Gala, and includes Upaṭṭha, which is after all an optional element. The phrase 'consists of' which Rāz employs is delimiting in its connotation and is different from the comprehensive word 'comprise.' If Rāz had used the expression 'comprise' in the place of 'consist of', then his statement might have given some room for the inclusion of Śikhara and Stūpikā as understood in the list of enumeration, and the interpretation of the term 'Order' in the sense of 'arrangement' would have been plausible, though with some difficulty. We say 'with some difficulty' because, Śikhara is a part indispensable in the view of Hindu builders. Hindu architects, who conceive of architecture in terms of the human organism, give great prominence to the head part of the structure. In the human form, the head undoubtedly is the most distinguishing feature and a man is recognised only from the features of his face. Rightly did the Hindus hold the head as the prominent part of the organism and call it 'uttamāṅga,' a synonym often used to denote the head. The Śikhara, otherwise known in architectural literature by its synonyms such as 'śiras' and 'śirṣa,' forms the head portion of the structure and is naturally considered the distinguishing and prominent feature of a building. As such, it cannot go uncounted in the enumeration of the principal parts of a building. In fact, it occupies a supreme place in the arrangement of the members of the structure. In any case, whether we take the term 'order' in its technical and restricted sense or in its general and original sense, the statement of Rāz that "the Hindu orders may be said to consist of four principal parts etc.," is hardly acceptable, as it is far from the Hindu method of approach to the subject of architecture.

"Western architects consider the base, not as a distinct member, but as a constituent part of the column,"³²⁸ says Rām Rāz. A column, as it is generally understood in the East and the West, is broadly divisible into three parts, the base, the shaft and the capital. As such, the base mentioned by Rām Rāz in this sentence, refers to the basement of the structure situated beneath the pillar. If we are to understand by base the basement, then the following remarks: "and this is not altogether at variance with the practice of the Hindu architects"³²⁹ are at variance with the usual treatment of Adhiṣṭhāna by Hindu writers. The reason adduced by Rām Rāz in the words "for they likewise include the base

328. Rām Rāz, *Essay on the Architecture of the Hindus*, p. 22.
329. *Ibid.*

and capital in taking the height of the pillar"³³⁰ is not clear. If by 'base' is here meant the basement, then they do not include it in the height of the pillar. "However," he continues, "the latter (i.e. the Hindu architects) invariably treat of a pedestal and base as separate bodies, as they are sometimes employed without pillars."³³¹ True, base (in the sense of basement) is separately treated, but this treatment, it must be remarked here, is furnished with a different intention altogether, namely, with a view to asserting the differing functions of the members and expressing their integral and organic relationship with the structure. The individual treatment is perfectly in agreement with the order of enumeration of the main parts of the temple. The Adhiṣṭhāna described in Chapter XIV of the *Mānasāra* is a distinct member, the first main and bottom-most constituent part of the temple and not the base of a column. The Upaṭṭha, described in Chapter XIII is an optional member, built beneath the Adhiṣṭhāna, if desired, and not the pedestal of any pillar. Dr. Ācārya, while translating the chapters under observation, seems to have based his interpretations on the theorising of Rām Rāz on the so-called orders of Hindu architecture.

STANZA 17.

The Marking of the surface of Adhiṣṭhāna.

The author in this verse speaks of the final stage in the construction of the Adhiṣṭhāna. Here, he requires the architect to fill in the Adhiṣṭhāna with stones and then pave it and thus prepare its surface for the marking of the divisions into Garbhagrha, Antarabhitti, Bāhyabhitti, and Madhyanāḍī. Garbhagrha literally means the womb of the house. It is the innermost sanctuary, the Holy of Holies, in which is installed the image of the deity worshipped. This inner-chamber Garbhagrha, is enclosed immediately by Antarabhitti or inner wall. The external wall is called Bāhyabhitti and in the space between the two Bhittis (walls) runs all around the passage known as Madhyanāḍī or Antarāla. The proportions of these main divisions are related in the subsequent verse.

समन्तलीकृत्य —The levelling of the ground floor of the Adhiṣṭhāna may be carried to the extent of Jaṅghā, or Gala, or Prati according to a statement which says:—

“जङ्घान्ते वा गलान्ते वा प्रत्यन्ते प्रत्यरोचितम् ।”

330. *Ibid.*

331. *Ibid.*

In a vernacular text called *Silpiratna* K. Nilakanṭhan Āśārī³³² observes that in the course of the construction of the door or the Nāḍi, Pāduka should not be broken anywhere and if the basement comes under the Pratibandha class, any cutting of even Prati should be carefully avoided.

The words 'Iha' and 'Anurūpa' are significant. The commentator Śaṅkara remarks :—

“इह इति उक्तप्रकाराणामन्यतमेनापि विधिना ।”³³³

Here the commentator's statement implies that the Adhiṣṭhāna might be constructed in accordance with the details already furnished in the text or in the wake of what has been prescribed elsewhere in the writings of other authors. The author affords much room for variation in respect of proportions and ornament, and does not exhaust all the possible types that are described in the works of previous authorities. He accepts and lays down the most commonly treated varieties and with regard to the other possible types he lends his approval and leaves the choice to the option of the architect. The term *anurūpa* suggests the idea that the nature of the part should agree with the nature of the whole. The ornamentation and other features of the basement must correspond to the general and prominent character of the whole edifice. It is an organic principle, approved by all authorities on architecture, whether ancient or modern, Eastern or Western, that every part of a building should form an aliquot part of the whole, that it should bear the impress of the nature of the whole. Adhiṣṭhāna, which constitutes an organic part of the temple, should be so constructed that it should express the general aesthetic impression which the different parts produce in their achievement of harmonious relationship with the whole.

STANZA 18.

The breadth of the Garbhagrha.

In this stanza the author prescribes nine alternative measurements for the Garbhagrha. The proportions given are those which refer to Vitati (breadth). Since length is not specifically stated the same prescription applies also to the length, and the Garbhagrha described, it

332. *Silpiratna*, p. 18 (S. T. Reddiar and Sons, V. V. Press, Quilon).

333. *Tantrasamuccaya* with *Vimarśinī*, Part I, p. 57 (T. S. S. Edition).

may be noted, is necessarily a square structure. The nine proportions laid down are $\frac{2}{3}$, $\frac{3}{5}$, $\frac{4}{7}$, $\frac{5}{9}$, $\frac{6}{11}$, $\frac{7}{13}$, $\frac{8}{15}$, $\frac{1}{2}$ and $\frac{5}{8}$ of the breadth of the Prāsāda. These proportions are based upon the following lines from the *Saivāgama Nibandhana* :—

“व्याद्या पञ्चदशौजांशे व्यासे द्वाद्यैर्यथाक्रमम् ।

पञ्चाष्टांशेऽखिलार्धं वा गर्भं तु नवधा स्मृतम् ॥”³³⁴

The author of the *Mañjarī* also gives similar proportions in the stanza quoted below :—

“गर्भागारस्य वक्ष्यामि विभागं नवधा पुनः ।

उत्तमाधममध्यानां त्रिभिर्देयैर्यथाक्रमम् ॥

भागद्वयं त्रिभिर्जिते वसुभिश्च पञ्च भूतैश्च वह्निरथवा खरभेदतोऽपि ।

रुद्रैश्च षट्कनवपञ्चतिथिप्रभेदैरष्टत्रयोदशभिदा च मुनिगृहार्धम् ॥”³³⁵

($\frac{2}{3}$, $\frac{5}{8}$, $\frac{3}{5}$, $\frac{4}{7}$, $\frac{6}{11}$, $\frac{5}{9}$, $\frac{8}{15}$, $\frac{7}{13}$, and $\frac{1}{2}$).

The *Mayamata* prescribes nine proportions of which $\frac{3}{5}$, $\frac{4}{7}$, $\frac{5}{9}$, $\frac{6}{11}$, $\frac{7}{13}$, $\frac{8}{15}$, and $\frac{1}{2}$ are in agreement with those quoted above. The difference is in respect of two proportions $\frac{2}{3}$ and $\frac{5}{8}$. The proportions given instead are $\frac{1}{3}$ and $\frac{1}{17}$. Notice the statement of Maya³³⁶ :—

“हर्म्यतारत्रिभागैकं भूतांशेषु गुणांशकम् ।

धातुभागे युगांशः स्याद् बाणांशं नवभागिके ॥

रुद्रांशे रसभागं तु धातुत्रयोदशांशके ।

तिथ्यंशे वसुभागं तु सप्तदशा नवांशकम् ॥

विस्तारार्धं तु ते सर्वे नालीगृहविशालताः ।”

Kāśyapa³³⁷ also gives nine proportions, and he concludes his statement with the line :—

“गर्भगृहस्य विस्तारो नवधा परिकीर्तितः ॥”

334. *Saivāgama Nibandhana*, Paṭala XIII (A. Ms. from the Cochin State).

335. *Mañjarī*, Paṭala VI, (A Ms. from the Adyar Library).

336. *Mayamata*, Ch. XIX, 13, 14, 15 (Ekabhūmividhāna).

337. *Kāśyapaśilpa*, Paṭala XXVII, stanzas 10-12.

The *Silparatna*³³⁸ quotes this present stanza in Chapter XXI. The variant proportions stated by Kāśyapa are also noted by the author of the *Silparatna* in the same chapter :—

“ प्रासादस्य त्रिभागैकं सप्तभागानलंशकम् ।
विशेषाद् गर्भगृहस्य विस्तारं प्राह काश्यपः ॥”

Compare also the *Mānasāra*³³⁹ where $\frac{1}{8}$, $\frac{3}{8}$, $\frac{6}{11}$, $\frac{7}{13}$, and $\frac{9}{15}$ are stated as the proportions prescribed for the breadth of the Garbhagrha.

STANZA 19.

The thickness of the walls of the Sanctum.

The author in this stanza lays down the proportions relating to the other divisions of the Prāsāda, namely, the *Bāhya-Bhitti*, the *Āntarabhitti* and the *Madhyānāḍī*. The thickness of the outer wall is one-eighth of the breadth of the Prāsāda and the thickness of the inner wall is one-eighth of the breadth of the Garbhagrha. The passage that runs all around between the two walls is the *Nāḍī*. This passage is used generally for circumambulation. If the structure is too small, the two walls are combined into one thick wall. In this case the *Nāḍī* disappears. The proportions of the *Bhittis* and *Nāḍī* are based upon the authority of the *Mañjarī*, which observes :—

“ आरूढभित्तिर्विहिताष्टमांशैरेषां बहिः शिष्टमलिन्दमस्य ।
अष्टांशमानादथ बाह्यभित्तिर्भित्तिर्घना स्यादथवाल्पगेहे ॥”³⁴⁰

Compare also the following statement of the *Nibandhana* :—

“ आरूढभित्तिरष्टांशे बाह्याष्टांशेन वेश्मनः ।
परिशिष्टमलिन्दं स्याद् घना भित्तिर्गृहेऽल्पके ॥”³⁴¹

Note the *Silparatna*, as usual, adopts the stanza.³⁴²

338. *Silparatna*, Ch. XXI, Sts. 2, 5 (T. S. S. Ed.).

339. *Mānasāra*, Ch. XIX, lines 113 to 119.

340. *Mañjarī*, Pātala VI (Ms., Adyar Library).

341. *Saivāgama Nibandhana*, Pātala XIII (Ms. from the Cochin State).

342. *Silparatna* (T. S. S. Edition), XXI, 3.

STANZA 20.

An alternative disposition of Garbha etc.

Two further alternative dispositions based on the authority of Gurudeva are described in the present stanza. The direction is given as follows :—In the case of an *Alpaprāsāda* divide the length and breadth of the Prāsāda each into five equal parts. There will result twenty five Padas or quarters. Mark out the central quarter. It will form the disposition of the *Pīṭhikā* or pedestal of the seat of the image. The immediate eight quarters that surround the central Pada will make the Garbhagrha. The sixteen quarters that surround beyond the Garbhagrha will provide disposition for the thickness of the *Ghana-bhitti* or thick wall. In this disposition, there will be no room for the *Nāḍī* and there will be no two separate walls of varying thickness such as *Āntarabhitti* and *Bāhyabhitti*. There will be one wall enclosing the Garbhagrha and its thickness will be equal to the breadth of the external-most *Paṅkti* or row of divisions comprising the sixteen quarters.

In the second alternative mode of division, the length and breadth of the Prāsāda is to be divided into nine parts each. This will give 81 quarters. The inner-most quarter provides for the *Pīṭhikā*; the eight quarters surrounding will constitute the Garbhagrha. The third row consisting of 16 quarters will constitute the division for the inner wall, the wall of the Garbhagrha. The fifth and final row will provide for the external wall which is the wall of the Prāsāda. The fourth row which comes between the internal and the external wall will make for the *Vithikā* or *Nāḍī*. At the centre of the external row will be constructed a door-way.

It deserves to be remembered here that in the case of structures coming under three, four and five cubits measure type, *Nāḍī* is disposed of and thick wall is considered desirable. But in temples which have larger measure, the introduction of *Nāḍī* is dictated by the exigencies of interior planning.

The following stanzas from the *Gurudevapaddhati*³⁴³ afford basis for the authority of the two alternative dispositions described above :—

“ व्यासेऽभिकृतिकोष्ठे स्यात् पीठं कोष्ठेन मध्यतः ।
तद्वहिर्वसुकोष्ठानां पङ्क्त्या गर्भगृहं भवेत् ॥
कोष्ठपङ्क्त्या बहिर्भित्तिस्तत्र द्वारं तु कोष्ठतः ।

343. *Īśāna Gurudevapaddhati*, Kriyāpāda, Pātala XXX, 54-58 (T. S. S. Ed.).

एकमित्येकतलकं दैवं धामेदमीरितम् ॥
 तद्वत् प्रासादविस्तारस्यैकाशीतिपदस्य तु ।
 मध्यस्थनवकोष्ठे स्यात् सपीठं गर्भमन्दिरम् ॥
 तद्वाह्ये कोष्ठपङ्क्त्या तु भित्तिं द्वारं च कल्पयेत् ।
 तद्वाह्यपङ्क्त्या परितः कल्पयेन्मध्यनाडिकाम् ॥
 प्रासादभित्तिं तद्वाह्ये पङ्क्त्या द्वारं च योजयेत् ।”
 “त्रिहस्ते तु घना भित्तिः पञ्चहस्तेऽपि वा तथा ॥”³⁴⁴

STANZAS 21 AND 22.

The Watercourse (Ambumārga) and the Waterchute (Praṇāla)

The construction of the drain (Ambumārga) and its waterchute (Praṇāla) forms the subject-matter of these two stanzas. The subject is considered from the point of view of the disposition, measurement and ornamentation of the Praṇāla. Praṇāla, the waterchute, is to be distinguished from Ambumārga, the mere drain. Praṇāla is accompanied by the watercourse, Ambumārga. Thus the commentator Śaṅkara remarks ‘जलयात्रामार्गयुक्तं प्रणालं रचयतु’³⁴⁵. Ambumārga, the drain is the channel that is made inside the wall and it runs along the top-surface of the Adhiṣṭhāna at the end of its Prati or Gala. It may be open or closed. It terminates in the projecting member which is the waterchute, Praṇāla. The Praṇāla which projects outside starts from where the drain inside the wall ends. Half of it is fixed in the wall and the remaining half is kept projecting outside. It is a spout, open at the extremity and the shooting part serves to throw out water. Ambumārga and Praṇāla serve in carrying and throwing out the waste water that flows when the image and the interior parts of the structure are washed and cleaned.

The author first deals with the position of the water-drain within the enclosure. It is made at the end of Prati or Gala and its facing is directed northwards. Thus it is situated on the left side of the image which ordinarily faces the East. It runs along the Madhyasūtra i.e. near the middle of the north-south line. The right centre of this line is avoided and the Praṇāla is made to move slightly eastwards from the

centre of the north-south line. This small deviation from the centre of the line towards the East may cover up a distance which is $\frac{1}{8}$, $\frac{1}{9}$, $\frac{1}{10}$, or $\frac{1}{11}$ etc., of the length between Soma and Īśāna.

The length of the waterchute is relative to the height of the Adhiṣṭhāna. The length of the portion that projects outside the wall may be equal to, or three-fourth of, or half of the height of the Adhiṣṭhāna, while half of this length constitutes the portion that is kept inside the wall. Its breadth is then prescribed with reference to its base and its extremity. That at the base will be one-third, one-fourth, or one-fifth of its length, and that at the extremity will be one-third etc. of that at the base. Half of this breadth, or three-fourth of or equal to the same is its thickness. The shape of the waterchute is not expressly stated, but is implied and the whole description tends fittingly towards a rectangular waterchute tapering at its outer extremity. The consistent use of the terms ‘vitati,’ ‘vistāra,’ etc., which strictly and directly mean the ‘breadth,’ is in favour of this suggestion, and, here as in other contexts, the treatment appropriately refers to square or rectangular forms of construction. Other shapes such as the circular or the many-faceted, it might be presumed from this fundamental fact, are only developments and modifications from the original square or rectangular shape. Instances of round and faceted waterchutes are not, however, found lacking. Whatever might be the shape intended, rectangular or any other, the proportion concerning the length and breadth of the waterchute is relative, and it must, hence, be scrupulously maintained. The breadth of the passage for water is one-third that of the waterchute.

The ornamentation of the Praṇāla (waterchute) is next described. The spout must look springing from the open mouth of a ‘Vyāla’ (a ferocious fabulous animal) and its extremity must resemble the ‘Gomukha’ (the face of a cow). Thus the open mouth of a Vyāla decorates the base of the spout while its extremity is carved in the form of a cow’s head. Wreathes of pearls, creepers, bangles and other ornamental patterns must encircle it. Śuṇḍu or the trunk of an elephant is another ornamental motif that might adorn the spout. Thus from start to finish, the spout is characterised by rich decorative quality and the whole construction of it is integrally bound up with rhythmic flowing ornament, diverse in its modes of expression. It is the unique feature of Indian architecture that it is indistinguishable from sculpture. So synthetically is sculpture knit to structure, that ornament of every kind, though something added on to architecture, appears to grow inevitably out of it.

344. T. S. Vimarśinī, p. 59.

345. Tantrasamuccaya with Vimarśinī (Part I). See Vimarśinī, page 59. (T. S. S. Ed.).

The following quotations from authorities either confirm or amplify what has already been dealt with in our text on the subject of *Pranāla*. It is thus observed in a *Tantra*³⁴⁶ :—

“ धाम्नः प्रतिग्रीवगसोमसूत्रात् प्राग्दन्तभागं प्रविधाय तेषु ।
द्व्येकं शिवे द्वित्रि हरो त्रिपञ्चशेषेऽप्यतीत्योदकमार्गसूत्रम् ॥
प्रतेः पुरोऽर्धं वमुनन्ददिग्भिर्विभज्य भागेष्वखिलामराणाम् ।
एकैकभागं समतीत्य कुर्याद् विचक्षणो गोमुखमध्यमत्र ॥
स्यात् कुट्टिमं गोमुखदीर्घमानं पादोनितं वा तदर्थयुक्तम् ।
व्यालाननं स्यादिह शुण्डुभेदो मणिश्च वल्लीपरिशोभितं च ॥”

Kāśyapa speaks of the length of the spout with reference to the *Angula* measure. Accordingly, it may be 12, 15, 18, 21, or 24 *angulas*, while its breadth may be 8, 10, 12, 14, or 16 *angulas*. Ups and downs must be avoided and the watercourse must be even. At its extremity the spout will be slightly sloping downwards. On the base of the spout must be added the carving of the mouth of a lion. The following text of the *Kāśyapaśilpa*³⁴⁷ will amplify the topic :—

“ भान्वङ्गुलं समारभ्य गुणाङ्गुलविवर्धनात् ।
चतुर्विंशङ्गुलं यावत्तावत्पञ्चविधं तथा ॥
भित्तिबाह्यगतं ह्येव तस्यार्धं गर्भगेहके ।
वेशयित्वाऽथ वा भित्तेर्ह्यभ्यन्तरसमं तु वा ॥
वस्वङ्गुलं समारभ्य द्विद्व्यङ्गुलविवर्धनात् ।
कलाङ्गुलावसानं तु विस्तारं पञ्चधा क्रमम् ॥
तन्मूलं तारपञ्चांशं त्रयांशं त्वग्रविस्तृतम् ।
तद्विस्तारसमं पाया(दा)त्त्रिपादं वाऽथ तद्घनम् ॥
विस्तारस्य त्रिभागैकं च्छिद्रतारोन्नतं तथा ।
ना(लं)लमध्ये तु कर्तव्यं निम्नोन्नतविवर्जितम् ॥
[मूलादग्रं नतं किञ्चिन्मूलं सिंहास्यबन्धितम् ।]
मूलादग्रोन्नतं किञ्चिन्मूलं हंसस्य चान्वितम् ।

346. Quoted in the *Vimarśinī*, vide the *Tantrasamuccaya* with *Vimarśinī* (T. S. S. Ed.) Part I, pp. 59-60.

347. *Kāśyapaśilpa*, Paṭala VII, stanzas 3-9 (*Anandaśrama Series*).

गजोष्ठसदृशलम्बी यथा सुन्दरमाचरेत् ॥
व्यालो वा सिंहभूतो वा नालं धृत्वा तु संस्थितः ।
नालमेवं प्रकर्तव्यं सौम्यं प्रासादमध्यगम् ॥”

Compare also the following lines from the *Mayamata*³⁴⁸ :—

“ द्वादशाङ्गुलमारभ्य त्रिच्यङ्गुलविवर्धनात् ।
चतुर्विंशङ्गुलं यावदायामं पञ्चधा भवेत् ॥
अष्टाङ्गुलं समारभ्य द्विद्व्यङ्गुलविवर्धनात् ।
तारं षोडशमात्रान्तं पञ्चधा परिकीर्तितम् ॥
समं त्रिपादमर्धं वा घनं छिद्रं तु मध्यमे ।
त्रिचतुष्पञ्चषष्ठात्रं तारं तत्समनिम्नकम् ॥
मूलात् पञ्चत्रिभागं स्यादग्रं धारासमन्वितम् ।
घटितं सिंहवक्त्रेण किञ्चिन्मूलान्नताग्रकम् ॥
एवं नालं प्रकर्तव्यं वामे प्रासादमध्यमे ।
अन्तःपीठस्य नालस्य समं वा बहिरिष्यते ॥”

The statement of the *Gurudevapaddhati*³⁴⁹ given below may also be compared :—

“ जगत्यङ्गुलमारभ्य त्रिच्यङ्गुलविवर्धनात् ।
आसाङ्कृत्यङ्गुलं नालस्यायामः पञ्चधा स्मृतः ॥
मयोऽष्टाङ्गुलमारभ्य द्विद्व्यङ्गुलविवर्धनात् ।
नालं (तारं) षोडशमात्रान्तं पञ्चधेति जगाद् ह ॥
समं त्रिपादमर्धं वा खनच्छिद्रं तु मध्यमे ।
त्रिचतुष्पञ्चतन्मात्रं तारं तत्समनिम्नकम् ॥
मूलात् पञ्चत्रिभागं स्यादग्रं धाराभिरन्वितम् ।
सिंहवक्त्रेण घटितं द्वाङ्गुलान्नताग्रं तु मूलतः ॥

348. *Mayamata*, Ch. XIX, sts. 25-29 (T. S. S. Ed.).

349. *Isāna Gurudevapaddhati*, Kriyāpāda, Uttarārdha, Paṭala XXXII, stanzas 91-95 (T. S. S. Ed.).

प्रासादस्योत्तरे मध्ये नालमेवं प्रकल्पयेत् ।
अन्तःस्थपीठनालस्य समं वा बाह्यनालकम् ॥”

The *Mānasāra*³⁵⁰ devotes about 9 stanzas to this topic of *Praṇāla*.

This treatment brings us to the close of the section of *Adhiṣṭhāna*. The subject that is next dealt with upon is ‘*Stambhavidhi*.’

STANZAS 23 TO 25.

Pillars.

Now, we pass on to the theme of pillars, one of the most important of architectural subjects. Among the structural divisions of a temple, the columns come above the *Prati* (the top-most moulding of the basement) and below the *Uttara* (the lowest portion of the entablature). While the effect produced by the horizontal members *Adhiṣṭhāna* and *Prastara* is one of stratified stability, the impression created by the columns is one of height and of manifest ease in sustaining the pressure of the structural parts that are situated above such as the entablature, the rafters and the roof. The pillars are spaced at equal intervals apart so that the weight supported is equally distributed among them. By their vertical feature, they produce the impression of elevation and by their number and disposition at equi-distance and the consequent distribution of the weight sustained, they perform their structural function of carrying the beam and the load above with ease and lightness.

Stambha, *Pāda*, *Jaṅghā*, *Carāṇa*, *Aṅghri*, *Sthāṇu*, *Sthūṇa*, *Talipa*, *Kampa*, *Skambha*, *Bhāraka*, *Dhāraṇa*, *Araṇi*, (S) *talī* are all synonyms found mentioned in the various architectural treatises such as the *Mayamata*, *Gurudevapaddhati*, *Mānasāra*, etc. Thus the *Mayamata* states³⁵¹ :—

“ स्थाणुः स्थूणश्च पादश्च जङ्घा च चरणोऽङ्घ्रिकः
स्तम्भश्च तलिपः कम्पः पर्यायवचनानि हि ॥”

And the *Gurudevapaddhati* gives the following³⁵² :—

“ स्तम्भाः स्थूणास्तथा पादाः कुम्भाः कम्पाङ्घ्रयोऽपि च ।
स्तम्भपर्यायशब्दाः स्युरथ तल्लक्ष्म कथ्यते ॥”

350. *Mānasāra*, vide Chapter XIX, lines 162-180 (P. K. Ācārya's Ed.).

351. *Mayamata*, Ch. XV, St. 2.

352. *Īśāna Gurudevapaddhati*, *Kriyāpāda*, *Uttarārdha*, *Paṭala XXXI*, St. 19(2), 20(1) (T. S. S. Ed.).

The *Mānasāra*³⁵³ enumerates twelve synonyms :—

“ जङ्घा च चरणं चैव स्तली स्तम्भमङ्घ्रिकम् ॥
स्थाणु स्थूणं च पादं च क(स्)म्भमारणि भारकम् ।
धारणं द्वादशं नाम पर्यायोक्तं पुरातनैः ॥”

Here the adoption of such synonyms as *Pāda*, *Jaṅghā*, *Carāṇa*, and *Aṅghri*, which in ordinary writings denote the leg and in architectural treatises the pillar, echoes the human organism and confirms the theory of the basic conception of Hindu architecture in terms of the human organism. Weight, pressure and resistance form part of our habitual bodily experience and the same form of activity is also exhibited in the function of horizontal and vertical members of a building. Just as in the human body the weight of the head and the trunk is borne by the legs, so in a structure the crushing pressure of the entablature and the roof is upheld by the pillars. The synonyms *Bhāraka* and *Dhāraṇa* also tell us the same thing about the structural activity of the pillars. Of the various members of a structure, the main bearing ones (excluding the *Upapiṭha* which is an optional element) are the *Adhiṣṭhāna*, the *Stambha* and the *Prastara*. *Uttara* (the beam), which sits on the pillars, in its turn, functions as a resting place for the rafters and the whole roof. *Stambhas* which stand immediately below the *Uttara* and upon the basement, uphold the horizontal beam (*uttara*) together with the weight it bears. The pillars being many and erected at intervals, they resist this crushing weight with ease and without effort. This whole accumulated weight stands upon the basement (*Adhiṣṭhāna*), the most solidly constructed member of a building. Thus, in the science of Architecture, one might observe enormous operations and balancing of forces involved, and weight, pressure and resistance exhibited in the functions of structural parts.

Dr. Ācārya lends too much of importance to the function of pillars. In his thesis on “*Indian Architecture*” he makes the following remarks while dealing with the chapter on Similarity in Columns :—“This is a crucial point; because the column in a building is stated by authorities to be the regulator of the whole composition; and it is the one feature of the ancient architecture, which illustrates its rise and progress as well as its perfection and weakness”.³⁵⁴ It is true that this structural element functions in the regulation of the structure, but it is not the only governing factor in a building. Other parts we have observed

353. *Mānasāra*, Ch. XV, lines 4-6 (P. K. Ācārya's Ed.).

354. *Indian Architecture*, page 150.

such as the basement and the entablature serve equally in the regulation of the structure. Only when all these parts discharge their respective functions does the composition become complete. Each member, in the fulfilment of its allotted function, thus gains unmitigated importance and becomes as much the regulator of the composition as any other. Columns, as a feature, appear prominently and in increasing number where the structure is a large hall like the congregational church of the Western architecture. A Hindu temple in contradistinction to a western congregational structure, is an abode for the deity and not a hall for mass prayer. It is not intended to accommodate the large mass of devotees. The Pūjā that is conducted inside is both sacred and secret in character. As for those who assemble for prayer, there is a special hall constructed, known as Arcanāmaṇḍapa, and this is an accessory structure. It is open on all the sides. But the main shrine is enclosed by thick walls and corresponding to the limited and restricted usage of the structure, it is small in extent and short in the span of its roof. It is more closed and less spacious than a congregational structure. In a structure of this restricted kind the role of columns does not appear to acquire so prominent a feature as in a hall of considerable space and size. In all examples of existing sanctums regular pillars are conspicuous by their absence, and their structural function of bearing the beams and the load above is carried out by the element of walls that enter into the composition of the main shrine. In such cases, the wall performs the double function of enclosing the sanctum as well as of carrying the pressure of the beam and the roofing. Here, pillars lose their regular structural function and are reduced to either pilasters joined to the wall presenting a flattened appearance or to mere ornamental motifs decorating the surface of the wall. In such instances of structures the problem of the importance of pillars does not crop up. Pillars, however, retained their original and structural importance before walls stepped into their structural province. An investigation into the origin and development of pillars and walls of an Indian shrine unfolds this interesting feature of Indian temple architecture.

In very early times, when the structure was simple and worship open, the main elements of a religious edifice seem to have been a basement (containing probably an altar or seat of the object of worship), columns, beam and roofing. In such simple beginning, architecture, here as elsewhere, was influenced in its expression by the materials used. In a land of forests like India wood is the chief material readily available and easy of being worked out. So, in its inception, Indian architecture was essentially wooden in character. Tree trunks give to wooden

construction an upright and straight feature and as Prof. H. Kishida³⁵⁵ observes, 'straight line is the most rational when the material used is wood.' Vertical and horizontal elements such as the columns and the beam possess a necessarily straight character whose impact is discernible in the regular design of the structure. Straight elements always tend to fashion a building square or rectangular in shape. Thus in Indian architecture, influenced by the first chief material wood that entered into its composition, the original shape was rectangular or square. The tenor of the description of a regular shrine as shown by ancient Indian texts on architecture, also supports this view, namely, the square design of a regular shrine. The progress of architectural growth has always been towards greater stability of structure and greater durability of material. Wood is combustible and easily susceptible to decay. Stone, on the other hand, is more lasting than timber and incombustible as well. So, where greater permanence was required, stone took the place of wood. Though stone came to be substituted for wood, the wooden feature was maintained and was gradually translated in stone works. Some examples³⁵⁶ of stone work echo wooden character and indicate how wooden frameworks served as prototypes for later constructions in stone. In the case of temple architecture, this progress in the use of materials from wood to stone seems to have been occasioned by the development of the form of worship. The cult of worship, which was probably originally open and simple, in the course of time appears to have become sacred and secret. Rites and ceremonials connected with the conduct of Pūjā became more and more elaborate, more and more gorgeous. Images were carved of gold and other precious metals, and were decorated with rich ornaments studded with most precious jewels. Articles prepared out of the most valuable materials were set to the service of the deity. The whole paraphernalia of such a splendid cult of worship, the incalculable riches that accompanied the elaborate mode of service which under the Tāntric aspect gained a secret character necessitated protection and careful screening. In this stage of development of the manner of divine service stone, more stable than wood, appears to have taken the place of wood. Thus the introduction of stone walls in all probability was the outcome of a necessity to protect the riches that the sanctum contained and to screen the secret rites conducted inside. Since the walls were situated, like the pillars, from above the basement to below the *uttara* they gradually took to themselves the structural function of pillars. The placing of the wall above the *Prati* and below the *Uttara* as described by the stanza³⁵⁷ :—

355. *Japanese Architecture* by H. Kishida, p. 26.

356. For instance see the *Amarāvati* slab preserved in the Madras Museum.

357. *Tantrasamuccaya*, *Paṭala* II, Stanza 36.

‘प्रत्युत्तरान्तर्विरचय्य भित्तिम्’ is the same as the disposition of the pillars, which is also prescribed in the stanza ‘स्तम्भाः कोणचतुष्कमध्यविनिवेश्याः’ etc. (St. No. 23) as above the Prati and below the Uttara.

STANZA 23.

The Number and Disposition of Columns.

Though walls have the same disposition as pillars have, they do not seem originally to have been intended to carry the function of pillars. The tenor of our author's treatment on the subject of pillars and walls indicates this fact. The pillars are described next to Adhiṣṭhāna. The description of walls (Bhittis) follows the description of columns, and naturally the construction of pillars is implied to take place first before the building of the walls is undertaken. It is explicitly stated in the last quarter of the stanza: ‘स्तम्भाः कोणचतुष्कमध्यविनिवेश्याः स्युः प्रतेरुर्ध्वतः’ that upon the pillars should be placed the Uttara (एवंपर्पयेच्चोत्तरम्). In the view of our author, as indicated by the stanza ‘स्तम्भाः कोणचतुष्कमध्यविनिवेश्याः’ etc., walls do not appear to enter into the structural province of pillars. The pillars that are found described in the text are regular structural ones. Their description is applicable to columns of the main shrine and may be extended as well to those of the accessory structures, such as the Arcanāmaṇḍapa. Their disposition is first dealt with. They stand on the topmost moulding of the basement and carry the Uttara, the beam which is the lowest portion of the entablature. In the case of temples of ordinary measure they are stated to be twelve in number. Four stand at the four corners of the basement, and two on each of the four sides. Their inter-space is said to be equal. Their number rises up to twenty in structures which come under eleven and odd cubits type of measure. They admit of different shapes and ornamentations and on this basis they produce variety which is dealt with in the subsequent stanza. When these twelve or twenty pillars are constructed as described above and made to bear the Uttara, the intervening space that is left between them demands a covering sufficient to protect the riches that are kept in the sanctum and to keep the secret character of the Pūjā performed inside. Thick walls serve both these objects and hence they constitute the next subject of treatment. They are made to cover up the intervening space open between the pillars. In this manner of composition both the elements discharge their respective functions, pillars in bearing the Uttara and walls in enclosing the sanctum.

Walls do not appear here to interfere with the function of pillars, for, even if felled, they would not cause destruction of the structural frame of the temple. At a later stage, however, walls may be said to have entered also into the structural province of pillars and reduced them to the position of being added to the wall either to give it projection or to ornament its surface. Such walls are much in evidence to-day in existing sanctums.³⁵⁸ When walls came in and covered the inter-space between pillars, pillars produced the impression of pilasters. Thus the commentator Śaṅkara remarks at the opening commentary on this stanza:³⁵⁹—‘कुञ्जस्तम्भस्थापने नियममाह—स्तम्भा इति’. From the actual details furnished in the text, it is abundantly clear that in the view of the writer of the *Tantrasamuccaya* walls constituted an element that is added to columns. Embraced on either side by the wall, the pillars look for the most part buried in it, but they are regular and structural in their function as originally conceived. In their role as pilasters, they leave to the gaze of the observer abutments or projections at corners and key points of the wall. In this aspect they stabilise the wall and stand to receive the pressure that falls from above with an air of ease and lightness.

The term ‘सामान्येन’ is interpreted by the commentator to mean the general rule of measure as three cubits etc. ‘सामान्येन त्रिकरादिषु (सुरविमानेषु)’ says³⁶⁰ he. It is thus taken to qualify ‘सुरविमानेषु’. If it is taken to qualify ‘समान्तराः’ it would yield a different meaning. It would mean that the interspace between pillars need not always be exactly equal. The idea, however, is opposed to what other authorities have laid down. The *Nibandhana* thus warns us against the unequal interspace which, it is believed, would result in the destruction of the structure. The *Mānasāra*³⁶¹ also prescribes that pillars should be erected at a uniform distance from one another.

With regard to the arrangement of the twelve pillars the Vivaraṇakāra offers two suggestions. The first is that four pillars should be erected at the four corners and two on each face (between the two corners on each side). He thus observes: ‘चतुर्षु कोणेषु एकैकं, अन्तरा द्वौ इति द्वादश’. The second is that there should be four pillars at the four corners,

358. In the renovated temple at Tripunittura, it is said that the frame-work is original and built in accordance with the directions of the *Tantrasamuccaya*.

359. *Tantrasamuccaya*, Part I, page 61 (T.S.S. Ed.).

360. *Ibid.*

361. *Mānasāra*, Ch. XV, lines 363-365.

and on each side three. Here, the central pillar will be split up into two halves, and two such half-pillars would stand on each side of the Ghanadvāra. It is thus said in the *Vivarāṇa* :

“ यद्वा कोणे चतुष्कमन्तरा त्रयस्त्रयस्तम्भाः स्युः ।
तत्र पक्षे मध्यमस्तम्भं द्विधा कल्पयित्वा घन-
द्वारममितः द्वौ द्वौ अर्धस्तम्भौ भवतः ॥”³⁶²

It is not known from which source this idea is drawn. The former interpretation meets with general approval. Śaṅkara also tells us the same idea in the words :

“ कोणानां चतुष्के तन्मध्ये द्वौ द्वौ च निवेश्याः ॥”

The following stanzas from the *Nibandhana*³⁶³ deserves to be quoted in this connection, for with regard to number and disposition there is consensus of opinion:—

“ द्वादशैव चतुष्कोणमध्यस्थाः कुड्यपादकाः ।
एकादशकरे स्तम्भा विंशतिर्मण्डनान्विताः ॥
समाः स्तम्भान्तराः सर्वे प्रासादे सार्वदेशिके ।
विषमस्तम्भभागं तु वास्तु वस्तुविनाशनम् ॥”

The combination of pillars and walls has resulted in the pillars being described as Kuḍyapādas. Thus the *Mañjarī* observes³⁶⁴ :—

“ गेहो द्वादशकुड्यपादकलितो हस्तैस्त्रिभिर्निर्मितो etc. ॥”

STANZA 24.

The Shape and Ornamentation of Columns.

We have already observed the rules³⁶⁵ relating to the height and breadth, the number and disposition of Indian pillars. Now we shall take into account the topic of the shapes of pillars and their ornamen-

tations. The present stanza deals with the shapes of columns. Columns are of many kinds and their variety is based upon their difference in shape and ornamentation. They admit of shapes which are uniform or mixed. Our text prescribes four uniform shapes square, octagonal, sixteen-faced and circular; and two mixed shapes square combined with octagonal and square combined with circular. The column may be made completely four-faced, eight-faced, sixteen-faced or circular; or it may be made square in the lower portion which extends up to three times the *vistāra* of the pillar and octagonal in the portion above, which is equal to the portion below (i.e., three times the *vistāra*); or, it may be made square up to the portion in the height of the pillar which measures as much as the diagonal of the pillar, and in the above portion, circular. The mixed types refer to octagonal and circular super-impositions on a square base. The terms ‘*Vistāra*’ and ‘*Karṇasūtra*’, the former meaning ‘breadth’ and the latter ‘diagonal’ at the base of the pillar, are suggestive of the square base of the pillars of mixed shape. These terms are employed here in connection with the measurement of the height of the lower and upper portions of the pillar when the pillar is composed of mixed shapes. ‘*Vistāra*’ and ‘*Karṇasūtra*’ (breadth and diagonal), imply a square base as distinct from a circular one. If the base were circular, the author would have referred to the diameter, and not to the breadth and the diagonal. *Vistāra* and *Karṇasūtra*, here referred to in connection with the mixed shapes, suggest that, unless explicitly stated, the base of a column of mixed shape will always have a square shape. With respect to the first type of mixed shape, the height of the octagonal portion is said to measure three times the *vistāra* of the pillar. Nothing has been stated with reference to the portion from above this octagonal super-imposition up to the top, if any portion is so left. In such instances, where the shape is not defined, the shape implied must be taken as square. Concerning the question of ornamentations, the author simply states that the pillars should be adorned with such decorative patterns as the *śuṇḍodbheda*, *vr̥tta* etc. ‘*Śuṇḍodbheda*’ refers to the split bamboo or reed. ‘*Vicitravṛtta*’ probably refers to the different types of Valayas and such other round decorative motifs. *Śuṇḍodbheda*, split bamboo or reed, will be concave in form. The ornamental patterns which are concave and round in design, are characteristic ornaments of circular pillars, and, when applied to them, make the pillars exceedingly handsome to behold. Having thus dealt briefly, but plainly and pointedly, with the theme of shapes and ornamentations, the author in the last quarter of the stanza strikes a general note that reveals the fundamental principle of fine composition. The pillars constructed, says the author, should befit the structure under

362. *Tantrasamuccayavivarāṇa*, Ms. R. No. 1994, Government Oriental Mss. Library, Madras.

363. *Śaivāgama Nibandhana*, Paṭala XIII (Ms. from the Cochin State).

364. *Prayogamañjarī*, Paṭala VI (Ms. from the Adyar Library, Madras).

365. *Tantrasamuccaya*, Paṭala II, Stanzas 8, 9, 10, 23 (T. S. S. Ed.).

construction. When a variety of shapes and ornamentations is presented, it is the primary concern of the architect to select such of those types as would conform to the nature of the structure and express its character. Thus, if the structure is highly ornate in its character, the ornamentations chosen to adorn the pillar must be of a high quality consistent with the nature of the Prāsāda. More important than ornament is the shape, which constitutes the fundamental basis of classification of the styles of Indian architecture. In the three styles of Indian temple architecture known as Nāgara, Drāviḍa, and Vesara, differentiation is made from the point of view of shapes and their mixture. Square characterises the Nāgara style, circular the Vesara, and octagonal or hexagonal or many-faceted the Drāviḍa. Of these the Nāgara is purely square throughout from the basement to the top; but with regard to Drāviḍa and Vesara, the shapes may be both pure and mixed. Where it is mixed, the basement is always square. The shape of the Drāviḍa shrine may thus be either purely octagonal or octagonal mixed with square, and the shape of the Vesara temple may be either wholly circular or combined with square. Since in the pure square type and in all mixed types square is uniformly present at the basement, it is generally laid down that the basis of differentiation of a style of temple is the shape of the Śikhara. In conformity with the principle of composition that all parts must agree with the whole, we here observe that the shapes of parts, as implied by the expression 'ārabdhagehōcitāḥ', must agree with the shape of the whole. The presence of square pillars in a Nāgara shrine, of circular or those having a square base and circular superimposition in a Vesara shrine, of octagonal or hexagonal ones or those having a mixed shape of square with octagonal in a Drāviḍa temple is consistent with the principle of harmony which the qualifying word 'आरब्धगेहोचिताः' embodies. Variety with respect to shapes of columns was not introduced without any end in view. Its legitimate source lies in the fundamental principle of harmony whose note has been struck by the author in more than one context. Variety unfolds, here as elsewhere, types best fitted to emphasise the character of the structure and to mark its particular style of composition.

The treatment by our author of the subject of shapes and ornamentations of columns, when compared with that found in other texts of other writers, is brief, but pointed. Works like the *Nibandhana*, *Mañjarī*, *Kāśyapaśilpa*, *Mayamata*, *Gurudevapaddhati*, *Mānasāra* etc., furnish fuller details and contain the names of the various kinds of pillars. Our author has taken into account a few of the varieties which are more elaborately treated in other works. The types dealt with, though few comparatively, are logically considered and they constitute

the fundamental ones. The names of columns as given in the various treatises, with the exception of a few, are found to vary. The silence of Nārāyaṇa with regard to the nomenclature of the types of columns is particularly significant in view of the latitude enjoyed by all authors. His silence has avoided divergence between him and other writers and on the point of principles on the other hand is found an essential consensus of views. Our author is thus seen in agreement with other authorities in the matter of fundamentals and in the criteria of classification. He has never failed to take into account what is important from the point of view of the structure. The varieties of columns described in the text, when compared with those described and named in others, bear the following names. That pillar which is wholly square is called 'Brahmakānta' in the *Mayamata*, *Kāśyapaśilpa*, *Gurudevapaddhati* and *Mānasāra*, while it is called 'Turyaśra' in the *Nibandhana* and *Mañjarī*. That which is uniformly octagonal is termed 'Viṣṇukānta' in the *Mayamata*, *Kāśyapaśilpa*, *Gurudevapaddhati* and *Mānasāra*, whereas in the *Nibandhana* and *Mañjarī* it is called 'Sarvāṣṭāśra'. The uniformly sixteen-faced one is called 'Saumya' in the *Mayamata*, 'Candrakānta' in the *Kāśyapaśilpa* and *Gurudevapaddhati*, 'Rudrakānta' in the *Mānasāra* and 'Ṣoḍaśāśra' in the *Nibandhana* and *Mañjarī*. The uniformly circular pillar is known as 'Rudrakānta' in the *Mayamata*, *Kāśyapaśilpa* and *Mānasāra*, 'Īśakānta' in the *Gurudevapaddhati*, and 'Vṛttapāda' in the *Nibandhana* and *Mañjarī*. With regard to the proportions of mixed shapes, the author is found to closely agree with the authors of the *Nibandhana* and *Mañjarī*, and hence the details given in the latter, when quoted, will serve to amplify the statement of our author. In these two works, the column composed of the two shapes square and octagonal is called 'Madhyaśra' and square and circular 'mūlāśra'.

The *Mayamata*³⁶⁶ states :—

“ कर्णमात्रेण तन्मूले चतुरश्रमितोर्ध्वतः ॥
अष्टाश्रं वा द्विरष्टाश्रवृत्तं पूर्वाश्रमोरितम् ।
कुम्भमण्डियुतं वापि रुद्रकान्तं सुवृत्तकम् ॥
विस्तारद्विगुणं मध्येऽष्टाश्रयुक्तं युगाश्रकम् ।
वियुक्तं कुम्भमण्डिभ्यां मध्येऽष्टाश्रं तदुच्यते ॥
चतुरष्टाश्रवृत्ताभं रुद्रच्छन्दसमांशतः ।”

366. *Mayamata*, Ch. XV, stanzas 14(2), 15, 16, 17(1) (T. S. S. Ed.).

Gurudeva³⁶⁷ observes:—

“ मूले वेदाश्रकश्चोर्ध्वं षोडशाश्रयलङ्कृतः ।
स्यान्मूलचतुरश्रश्चतुः पद्मापद्मान्नतः स्मृतः ॥
मूलान्त्ययोस्तु वेदाश्रो मध्ये अष्टाश्रयलङ्कृतः ।
वज्रकान्तः स विज्ञेयो मुक्तास्तम्भः समौक्तिकः ॥”

Mānasāra is silent with regard to the nomenclature of pillars of mixed shape and he also does not state the proportions of the shaped portions of pillars of mixed shape. He, however, allows that in columns of any shape, pure or hybrid, the base may be square. The seventh variety of pillar described in our text is not purely circular, but round, associated with the broken reed. It is hence treated separately from the point of view of its distinctive decorative motif which enters into the composition of the circular pillar. It is called ‘*Śuṇḍupāda*’ in the *Nibandhana*, *Mañjarī*, *Mayamata*, *Kāśyapaśilpa* and *Gurudevapaddhati*. This type is not found mentioned in the *Mānasāra*.

From a comparative study of the different nomenclatures adopted by different authors, we observe that the names given in the *Mānasāra*, *Mayamata*, *Kāśyapaśilpa* and *Gurudevapaddhati* are all adoptions from the mythological literature. The various names thus adopted are indicative of the numerical significance associated with the various names of mythological deities. The names employed by the authors of the *Nibandhana* and *Mañjarī*, on the other hand, are literally descriptive and convey their primary significance, divorced completely from the whole mythological background. Our writer, in the wake of the authors of the *Nibandhana* and *Mañjarī*, is plain and pointed, and in the course of his treatment avoids clash of any kind with the other writers who furnish meticulous details and a host of names which vary often-times in the various treatises. The result of such a line of treatment is that the author becomes one with others in all essentials and fundamentals of the subject. There is clearer apprehension and more lucid definition of form displayed in the treatment of these three authors. In his thesis on ‘*Indian Architecture*’ Dr. Ācārya compares the Western system with the Indian, and observes that the Indians selected mythological names, because they were “more religious and sentimental than critical in temperament and imagination.”³⁶⁸ Truly the Indians were un-

367. *Īśāna Gurudevapaddhati*, Uttarārdha, Paṭala XXXI, stanzas 27, 28 (T. S. S. Ed.).

368. P. K. Ācārya's Thesis on *Indian Architecture*, page 151.

surpassed in their achievements in the field of religion and mythology. But in their critical and intellectual endowment they never were found lagging behind and suffering in comparison with any other gifted race. Their principles of architecture bear ample testimony to this fact, and in both the theory and practice of the science of architecture there is revealed conscious logical thought, a keen sense of structural propriety and an essential critical judgment. The characteristic mythological bent of the Hindus has not displaced or caused to dwindle the supreme intellectual endowment of the Hindu architects. The line of approach adopted towards the subject of columns by the authors of the *Nibandhana* and *Prayogamañjarī* and *Tantrasamuccaya* is perfectly logical and critical, and the other authorities for the mere reason of their having adopted the mythological names are not found less critical than the western writers in their elucidation of the principles of architecture, born as are these principles out of well-ordered thought.

Other authors like Maya, Kāśyapa, Gurudeva and Mānasāra are more varied and detailed in the classification of columns from the point of view of their different shapes and ornamentations. Thus the *Mayamata*³⁶⁹ prescribes the varieties called Brahmakānta, Viṣṇukānta, Indrakānta, Saumya, Rudrakānta, Pūrvāṣṭāśra, Madhyeṣṭāśra—all these from the standpoint of shape; and Padmāsana, Bhadraka, Śuṇḍupāda, Piṇḍipāda, Citrakhaṇḍa, Śrīkhaṇḍa, Śrī Vajrastambha and Kṣepaṇastambha—all these on the basis of the dominant ornamental designs which enter into their composition. The following general statement³⁷⁰ is also laid down in the course of the treatment:—

“ व्यालेभसिंहभूतादिमण्डितं यत्तु मूलतः ।
यद्येष्टाकृतिसंयुक्तं तत्तन्नाम्ना समीरितम् ॥”

Gurudeva³⁷¹ describes the types known there as Brahmakānta, Viṣṇukānta, Skandakānta or Indrakānta, Bhānukānta, Candrakānta, Īśakānta, Rudrakānta, Bhadrakānta, Śuṇḍupāda, Bhiṇḍipāda, Mūlacaturaśra, Padmāsana, Vajrakānta, Muktaśambha, Citrakhaṇḍa, Śrīkhaṇḍa, Śrīvajra, Paṭṭakṣepaṇa, Daṇḍapāda, Vajrapāda and Ulūkhala-pāda. Here also a general statement³⁷² is found:—

“ व्यालेभसिंहभूतैस्तु मूले यः परिमण्डितः ।
इष्टाकारस्तथैवोर्ध्वं तत्तत्कान्ताह्वयो भवेत् ॥
यद्वज्रश्चित्तितस्तम्भस्तत्तद्वज्राह्वयो भवेत् ॥”

369. *Mayamata*, Ch. XV, stanzas 13-27 (T. S. S. Ed.).

370. *Ibid.*, St. 20.

371. *Gurudevapaddhati*, Uttarārdha, Paṭala XXXI, stanzas 20-32.

372. *Ibid.*, 25, 29⁽¹⁾ (T. S. S. Ed.).

Kāśyapa³⁷³ in Paṭala VIII describes the varieties called there by the names Brahmakānta, Viṣṇukānta, Indrakānta, Candrakānta, Rudrakānta, Padmapāduka, Vyālapāduka, Gajapāda, Śuṇḍupāda, Piṇḍipāda, Chatrakhaṇḍa, Śrīvajrastambha, and Kṣepaṇastambha.

In the *Mānasāra*³⁷⁴ the columns mentioned according to their shapes are Brahmakānta, Viṣṇukānta, Rudrakānta, Śivakānta, Skandakānta, and according to their ornamentations Citrakhaṇḍa, Padmakānta, Citras-kambha, Pālikastambha and Kumbhastambha.

In the *Matsyapurāṇa*³⁷⁵ and in the *Bṛhatsamhitā*³⁷⁶ pillars classified according to their shapes are called by a different terminology altogether, the names mentioned being 'Rucaka' for square, 'Vaira' (in Matsya) and 'Vajra' (In BṛhatS) for octagonal, 'Dvivajra' for sixteen-faced, 'Pralinaka' for thirty-two sided, and 'Vṛtta' for circular.

Since it would be extremely tedious to quote here the technical description as supplied by the several authors above mentioned, of the various types in which the several sorts of columns are classified from the points of view of their shapes and adornments, we shall pass them over here, and quote for the purpose of amplification and comparison of details the following lines from the *Nibandhana* and *Mañjarī*; for the author's treatment is found closely to agree with the details contained in these two texts :—

The *Nibandhana*³⁷⁷ states :—

“ पञ्चाश्रिजास्त्रयो वृत्तास्तुर्यश्रः पोतिकान्वितः ।
स्तम्भः साधारणो धाम्नां कुम्भमण्ड्यादिमण्डितः ॥
विस्तारत्रिगुणादूर्ध्वमष्टाश्रस्तावता कृतः ।
स्तम्भः सपोतिकाकुम्भस्तथा मध्याश्रकः स्मृतः ॥
आमूलतः कृतोऽष्टाश्रः सर्वाष्टाश्रः सपोतिकः ।
षोडशाश्रितश्चैव वीरकाण्डसमुज्ज्वलः ॥
कुम्भतन्मण्डनैर्युक्तः षोडशाश्रः सपोतिकः ।

373. *Kāśyapaśilpa* (Ānandāśrama Series), Paṭala VIII.

374. *Mānasāra* Chapt. XV, 20-23 (P. K. Acārya's Ed.).

375. *Matsyapurāṇa*, Ch. 255, Vs. 1-6.

376. *Bṛhatsamhitā*, LIII, 27-30.

Vide *A Dictionary of Hindu Architecture*, pp. 648-649.

377. *Saivāgama Nibandhana*, Paṭala XII (Ms. from the Cochin State); vide quotation in the *Vimarsinī* under St. 24 (Paṭ. 2).

मूले कर्णस्थमानेन चतुरश्रोऽथ वर्तुलः ॥
कुम्भमण्डनसंयुक्तो मूलाश्रश्च सपोतिकः ।
सर्वत्र वर्तुलो युक्तः कलशेन च मण्डनैः ॥
पोतिकासहितो मूर्ध्नि वृत्तपादस्तु कीर्तितः ।
कुम्भमण्डनसंयुक्तो वीरकाण्डस्थपोतिकः ॥
शुण्डभेदसमो वृत्तः शुण्डपाद इति स्मृतः ।”

The *Prayogamañjarī*³⁷⁸ makes the following observations :—

“ पादाः पञ्चकलाश्रजास्तुविहिताः वृत्तास्त्रयः कीर्तिताः
वक्ष्ये लक्षणमादरेण विधिवत् प्रत्येकमेषामपि ।
तुर्यश्रस्त्वथ पोतिकाविनिहितः कुम्भेन मण्डीकृतः
स्तम्भो यत्नविनिर्मितोऽमृतभुजां साधारणन्धामसु ॥
विस्तारत्रिगुणेन मध्यनिहितं सङ्कल्प्य चाष्टाश्रकं
हीनो मूर्ध्नि च पोतिकाविनिहितः कुम्भेन मध्याश्रकः ।
सर्वाष्टाश्रविनिर्मितस्त्वथ परश्चामूलतः कोमलः
सर्वाष्टाश्रकपाद एष विहितस्तस्यात् पोतिकाप्रोज्ज्वलः ॥
आमूलादथ षोडशाश्रविहितः कुम्भेन तन्मण्डनैः
संयुक्तस्त्वथ वीरकाण्डकलितस्तस्यात् षोडशाश्रीकृतः ।
तुर्यश्रं विनिधाय मूलपिहितं कर्णस्थमानाद(न)तो
वृत्तः कुम्भसमन्वितश्च सकलम्मूलाश्रकः कीर्तितः ॥
सर्वत्र वृत्तः कलशेन युक्तः स्यात् पोतिकाव्यस्त्वथ वृत्तपादः ।
स्यात् वीरकाण्डेन च शुण्डभेदसंकाशवृत्तस्त्वथ शुण्डपादः ॥”

STANZA 25

The parts of the Column

The parts of the pillar and their characteristics constitute the subject-matter of this stanza. Five parts are mentioned and they are from the bottom upwards 'Oma,' 'Ghaṭa,' 'Maṇḍi,' 'Virakāṇḍa' and 'Potikā.' We shall state here the proportions and features of these parts as des-

378. *Mañjarī*, Paṭala VI, (Ms. from the Adyar Library, Madras).

cribed in the text. 'Oma' is the pedestal (pīṭha) of the pillar; its shape is that of the pillar. If the pillar is round, it will also be round; if the pillar is square, it will also be square. It is two Daṇḍas in vistāra and one-fourth of a Daṇḍa in height. The Daṇḍa here referred to is the top-measure of the pillar.³⁷⁹ The breadth of the pillar at the summit is employed here as the standard of measure, and this is laid down in a previous statement 'चरणप्रतानोऽत्र दण्डः'. The starting unit of measure that is employed in our text is with reference to the breadth of the Uttara.³⁸⁰ The height of the pillar is determined with reference to this breadth of the Uttara.³⁸¹ The breadth of the pillar at the base and at the top is determined with reference to the height of the pillar.³⁸² The top-measure is employed as a unit or standard of measure to measure the various parts that are described in the present stanza. The part known as 'Ghaṭa' (or Kumbha or Kalaśa) comes above the 'Oma', and it is made in the form of a pot. It is two Daṇḍas in vistāra and one Daṇḍa and a quarter in height. The height may also be one and a half or one and three-fourths Daṇḍas. 'Maṇḍi' is a square plank which is placed above the 'Ghaṭa.' It measures four Daṇḍas in vistāra and three-fourth of a Daṇḍa in thickness. This plank presents a situation for rich carvings such as the floral designs of Padma, wreaths (mālya), creature designs like the Nāgaphaṇa or serpent-hood. The part known as 'Virakāṇḍa' comes above the 'Maṇḍi' and is square in shape. It is one Daṇḍa in vistāra, and three-fourth of a Daṇḍa in thickness. It is rendered by Rāz by the term 'collerino.' In the Mānasāra it is termed 'Virakāṇḍa' and is called so because it is marked by the neck of a warrior. Above the 'Virakāṇḍa' and below the 'Uttara' is constructed the part known as 'Potikā.' It is three Daṇḍas or five and a half Daṇḍas or four Daṇḍas in length. Its vistāra will be equal to that of the base of the column; and half this vistāra will be its height or thickness. From its description it corresponds to what is termed the 'capital' or the crowning member of the column. Of these five parts that have been described above, the first and the last, which constitute the base and the capital, are important from the point of view of their structural function, while the remaining ones are primarily ornamental in their intention. In a Kerala commentary in Ms. form it is stated that the first and the last are indispensable, whereas the remaining ones are optional.

379. See notes under stanza on the breadth of columns:

'चरणप्रतानोऽत्र दण्डः'

380. Tantrasamuccaya, Paṭala II, Stanza I.

381. Tantrasamuccaya, Paṭala II, Stanza 8.

382. Ibid., Stanza 10.

A reference to the description of these parts, as contained in the Nibandhana, Kāśyapaśilpa, Mañjarī, Gurudevapaddhati and others, furnishes ample information on the topic, briefly dealt with in our text.

In the Nibandhana³⁸³ the following lines occur which state the proportions of the various parts of the pillar:—

“स्तम्भमूलघनाः शैला ओमा द्विगुणविस्तराः ।
तुर्यश्चा मध्यतोर्गता दण्डपादेन चोद्धता ॥
दण्डपादेन तीव्रा च तच्चतुर्गुणविस्तरा ।
मण्डिः पञ्चविचित्रा च माल्यनागफणाकृतिः ॥
पादोनतीव्रं तुर्यश्रं वीरकाण्डं च दण्डतः ।
पोतिकास्त्रायता दण्डैः सार्धपञ्चचतुस्त्रिभिः ॥
अर्धत्रिभागपादस्या तलिः स्याद् दण्डविस्तरा ।”

Three kinds of Potikā are found mentioned here known as Citrī, Patrī and Mahārṇavī:—

“पार्श्वयोश्चतुरंशस्थैः तरङ्गैः क्रमशो परैः ।
द्वादशाष्टचतुर्भिश्च समैर्मध्येन चोज्ज्वला ॥
महार्णवीयमाख्याता पत्री चित्रा च पोतिका ॥”

Srikara, Candrakānta, Manorama, Saumukhya, and Priyadarśana are names of the various types of Ghaṭa described, and these are associated with different shapes such as the circular, octagonal, sixteen-faced, square etc.

In the Mañjarī³⁸⁴ it is said:—

“स्तम्भास्तत्र चतुष्करास्तुविहिता ।
ओमां तद्विगुणां तदर्धबहलां विस्तारतः स्थापयेत् ।
.... प्रवदामि भूयो मण्डेश्च कुम्भस्य च लक्षणानि ॥
स्तम्भाग्रमेयो विपुलेन कुम्भस्तस्योच्छ्रयस्तद्वलखण्डवृद्धः ।

383. Śaivāgama Nibandhana, XIII (Ms. from the Cochin State); these stanzas are quoted in the Vimarsini of the Tantrasamuccaya, Part I, p. 63 (T. S. S. Ed.).

384. Prayōgamañjarī, Paṭala VI (Ms. from the Adyar Library).

स्याच्छीकराख्यस्त्वयमादरेण स्तम्भस्य वृत्तस्य विधीयते हि ॥

अध्यर्धोत्सेधघटश्चन्द्रकान्तो मनोरमः ।

पूर्वाश्रयोदशाश्राणां स्तम्भानां परिकीर्तितः ॥

स्तम्भाग्रविपुलः कुम्भः पादोनद्विगुणोच्छ्रितः ।

सौमुख्यश्चतुरश्राणामष्टाश्राणां प्रकीर्तितः ॥

द्विगुणोत्सेधकः कुम्भः शस्तोऽयं प्रियदर्शनः ।

योजयेदतिभागेषु स्तम्भेष्वेनं विचक्षणः ॥

रन्ध्रैर्विभज्य कलशोच्छ्रयमंशकेन

कुर्याद्द्वाराश्च कलशं विधिवच्चतुर्भिः ।

एकेन कण्ठमपरेण मुखं विदध्यात्

शिष्टद्वयेन कमलन्त्वथ हीरको च ॥

स्तम्भस्य नाहः द्विगुणस्तु नाहः कुम्भस्य पादोनकमस्य वक्त्रे ।

मुत्तवा त्रिभागं कमले तु नाहमष्टांशहीनावथ वृत्तहीरौ ॥

पादाग्रकर्णेन मितस्तु कन्दः कुम्भस्य विस्तारमितास्तु माल्याः ।

मण्डेस्तु तीव्रश्चतुरंशहीनश्चतुर्गुणं विस्तरतोऽग्रपादात् ॥

माल्याकृतिर्नागफणाकृतिर्वा पद्मे विचित्रा त्रिविधा प्रशस्ता ।

दण्डप्रमाणन्त्वथ वीरकाण्डं पादोनतीव्रं विदधीत सम्यक् ॥

पञ्चार्धदण्डैर्विहितोत्तमा स्याद् दण्डैश्चतुर्भिस्त्वथ मध्यमा स्यात् ।

दण्डैस्त्रिभिर्कन्यसपोतिका स्यात् पादाग्रविष्कम्भमुशन्ति दण्डम् ॥

पादं त्रिभागं च तले प्रमाणमर्धं च पादोपमविस्तृताः स्युः ।

चित्रो च पत्रो च महार्णवी च ज्ञेयाः त्रिधा श्रेष्ठविमानयुक्ताः ॥

भागे तृतीये रुचिराणि कुर्यात् पार्श्वद्वये स्युः क्रमशोवराणि ।

भूयस्तरङ्गाणि समानि सम्यक् मित्रान्तमम्भोधिजघन्यमेव ॥

विस्तारपादेन मितं विधाय पूर्वं तरङ्गे विधिवत्ततोऽपि ।

अष्टांशहीनानि यथाक्रमेण प्रत्येकमेवामवरत्वमेवम् ॥”

Kāśyapa³⁸⁵ devotes about 37 stanzas to the description of the different parts of the pillars, and the proportions stated there support the author's prescription. Kāśyapa deals with the parts from top down-

385. Kāśyapaśilpa, Paṭala IX (Ānandāśrama Series).

wards. The following lines may be noted which treat of *Bodhikā* or *Potikā*, the Capital :—

“विस्तारसदृशोत्सेधोः पञ्चदण्डायतान्विताः ॥

उत्तमाः पोतिकाः ख्यातास्तारद्वित्र्यंशमुन्नताः ।

चतुर्दण्डायतोपेता मध्यमा सा प्रकीर्तिता ॥

विस्तारस्यार्धतुङ्गा तु गुणदण्डायतान्विता ।

कन्यसा पोतिका ख्याता ॥

मूलपादसमव्यासा श्रेष्ठा मध्ये तु मध्यमा ।

अग्रपादविशालस्य समा कन्यसपोतिका ॥”³⁸⁶

Kāśyapa next furnishes ornamental and other details connected with the *Bodhikā*. About *Vīrakāṇḍa* the following lines are found stated :—

“बोधिकायास्तथाग्रं तु वीरकण्ठयुगाग्रकम् ।

अग्रपादसमं तच्च त्रिपादं तुङ्गमुच्यते ॥ १९ ॥

सर्वेषामपि पादानां वीरकण्ठयुगाग्रकम् ।

अधस्ताद्वीरकण्ठं स्यात्फलिकालक्षणं शृणु ॥ २० ॥”

Maṇḍiphalakā is described then :—

“अथ वक्ष्ये विशेषेण फलिकानां तु लक्षणम् ।

त्रिदण्डं फलिकाव्यासं कन्यासार्धाधिकं समम् ॥ २१ ॥

चतुर्दण्डविशालं तु उत्तमा लम्बका भवेत् ।

अथवा फलिकाव्यासं कुम्भकर्णं समं भवेत् ॥ २२ ॥

सर्वेषां फलिकानां तु तुङ्गं पादोनदण्डकम् ।

तदुत्सेधं त्रिधा भज्य ऊर्ध्वं सो(तत्सं)न्धिरुच्यते ॥ २३ ॥

तथाथो(ऽर्धो)पेतमेकांशं तस्याधस्त्वम्बुजांशकम् ।

नागपत्रसमाकारमपेतोपादरूपकम् ॥ २४ ॥”

About *Ghaṭa* it is observed :—

“फलकमेव कर्तव्यं तस्याधस्तात् घटं कुरु ॥ २५ ॥

द्विदण्डं पादहीनं वा सार्धदण्डमथापि वा ।

386. Quoted from the *Vimarsinī*; with slight differences in readings, this text occurs in the *Ānandāśrama* Edition of the *Kāśyapaśilpa*, IX, 2(2), 3, 4, 1(2), 2(1).

सपाददण्डतुङ्गं वा घटोच्चं तु चतुर्विधम् ॥ २६ ॥
 प्रियदर्शनं सौम्यं च चन्द्रकान्तं च श्रीकरम् ।
 यथाक्रमेण नामानि कलशानां क्रमादितः ॥ २७ ॥”

etc.

etc.

etc.³⁸⁷

The *Mayamata*³⁸⁸ mentions four types of Kumbha, called ‘*Śrī-kara*,’ ‘*Candrakānta*,’ ‘*Saumukhya*’ and ‘*Priyadarśana*.’ Thus says Maya :—

“सपादं सार्धपादोनद्विगुणं द्विगुणोन्नतम् ॥ २९ ॥
 श्रीकरं चन्द्रकान्तं च सौमुख्यं प्रियदर्शनम् ।
 यथाक्रमेण नामानि कलशानां भवन्ति हि ॥ ३० ॥”

The proportions of parts that compose the Kumbha are given in stanzas 32 and 33. *Virakāṇḍa*, it is stated there, is square in all pillars :—

“सर्वेषामपि पादानां वीरकाण्डं युगाश्रकम् ॥ ३७ ॥”

The part *Potikā* must be present in all pillars :—

“सर्वे पोटिकया युक्ता नानारूपैर्विचित्रिताः ॥”

From the topmost part downwards the author of the *Mayamata* enumerates the parts as follows :—

“पोतिका खण्डमध्यं च कुम्भं स्कन्धं च पद्मकम् ।
 मालास्थानं क्रमेणैव स्तम्भाग्रात् परिकल्पयेत् ॥ ३१ ॥”

According to its dimensions, the *Potikā* is classified into the best, middle and lowest type :—

“पञ्चदण्डसमायामा श्रेष्ठार्धोच्चा कनिष्ठिका ।
 आयता सा त्रिदण्डेन चतुर्दण्डेन (द्विर्द्विका ?) ॥ ४० ॥
 त्रिभागोना त्रिपादोच्चा मध्यमा पोटिका भवेत् ।”

387. *Kāśyapaśilpa* (Ānandāśrama Series), IX, 19-27.

388. *Mayamata*, Chapter XV, Sts. 29(2), 30 (T. S. S. Ed.).

The three varieties of *Potikā* according to their ornamental features are described as follows :—

“पार्श्वयोः पोटिकामध्ये पट्टं पादविशालवत् ।
 नानाचित्रैर्विचित्रा वा सा प्रोक्ता चित्रपोतिका ॥ ४८ ॥
 पत्रैर्विचित्रिता पत्रपोतिकेति प्रकीर्तिता ।
 महार्णवतरङ्गाभतरङ्गाभा तरङ्गिणी ॥ ४९ ॥”

Gurudeva³⁸⁹ also elaborately deals with the various parts of pillars and their ornamentations. With regard to *Kumbha* etc., he observes as follows :—

“कुम्भाः स्युः पादविष्कम्भाश्चतुर्थीशाधिकास्तु वा ।
 साध्यर्धाः पादहीना वा द्विगुणा वा भवन्ति हि ॥ ४९ ॥
 श्रीकरश्चन्द्रकान्तश्च सौमुख्यः प्रियदर्शनः ।
 इति कुम्भाश्चतुर्धा स्युर्वृत्तानां श्रीकरो भवेत् ॥ ५० ॥
 अष्टाश्राणां चन्द्रकान्तः श्रीकरः स्यात् कलाश्रके ।
 स्तम्भानां चतुरश्राणां सौमुख्यः कुम्भ इष्यते ॥ ५१ ॥
 शेषाणां चातिभाराणां कुम्भः स्यात् प्रियदर्शनः ।
 कुम्भभागे नवांशे तु धृगेकेन विधीयते ॥ ५२ ॥
 चतुर्भिः कुम्भ एव स्यात् कण्ठोऽशेनांशतो मुखम् ।
 शिष्टभागद्वयं त्र्यंशं कृत्वैकेनाम्बुजं भवेत् ॥ ५३ ॥
 भागेन वृत्तं शिष्टांशादूर्ध्वं कण्ठे तु भिन्नकौ ।
 स्तम्भाग्रकर्णमार्गेण स्कन्धः स्यात् समविस्तृतः ॥ ५४ ॥
 ऊर्ध्वं तद्वीरकाण्डस्य पोटिकां तु निवेशयेत् ।
 स्तम्भव्यासात् त्रिगुणितं चतुर्गुणमथापि वा ॥ ५५ ॥
 मण्ड्यायामः स्मृतोऽङ्गघ्नसमो वेष्टव्यभागतः ।
 मण्ड्युत्सेधो भवेत् तावान् वीरकाण्डस्य चोच्छ्रयः ॥ ५६ ॥
 विस्तारो दण्डमात्रः स्यादथ मण्ड्याः शरांशतः ।
 सार्धेन फलकास्थौल्यं तत्समो वेष्टनिर्गमः ॥ ५७ ॥
 मण्ड्युत्सलदलाकारा पाल्याकाराब्जपत्रवत् ।

389. *Īśāna Gurudevapaddhati*, Kriyāpāda, Stambhālankāra, Paṭala XXXI, Sts. 37-74 (T. S. S. Ed.).

ताम्बूलसमसौन्दर्यं यजमानमुखावहम् ॥ ५८ ॥
 विपरीतं विरूपं च वर्ज्यं तदशुभं यतः ।
 अथवा स्यात् प्रकारोऽन्यो धृक्कण्ठापादविस्तृतिः ॥ ५९ ॥
 पोतिकाखण्डमण्डोनि कुम्भं लशुनमूलकम् ।
 अम्भोजमालास्थानानि स्तम्भाग्रे योजयेत् क्रमात् ॥ ६० ॥
 अग्रहीनं तु लशुनं मूलोच्चं विपुलं भवेत् ।
 साष्टांशाधिकमर्धं वा त्रिपादोदयमम्बुजम् ॥ ६१ ॥
 मालास्थानविशालोच्चं दण्डमात्रं नियोजयेत् ।
 मण्ड्यायामो भवेत् पादात् त्रिगुणो वा चतुर्गुणः ॥ ६२ ॥
 स्तम्भाग्रतुल्यं मण्डगुच्चं पञ्चभागोनमेव वा ।
 त्रिभिरंशैस्त्रिपादैर्वा वीरकाण्डश्च तत्समः ॥ ६३ ॥
 मण्डगुत्सेधशरांशेन सार्धांशः फलकोच्छ्रयः ।
 वेत्रं च तत्समं ज्ञेयं मण्डगुत्सेधोपपादकम् ॥ ६४ ॥
 पाल्याकारं तु पद्माभं त्रिधा नागदलोपमम् ।
 तदूर्ध्वं पोतिका स्थाप्या तस्या लक्षणमुच्यते ॥ ६५ ॥”

The nīca (lowest), madhya (middling) and uttama (best) types of Potikā are then described :—

“ सा च स्यात् स्तम्भविस्तारात् त्रिगुणं वा चतुर्गुणम् ।
 दीर्घा पञ्चगुणं वापि नीचमध्योत्तमा स्मृता ॥ ६६ ॥
 नागवृत्ता पत्रचित्रा समुद्रोर्मिश्च पोतिका ।
 त्रिविधा नामभिर्ज्ञेयास्तासां लक्षणमुच्यते ॥ ६७ ॥
 स्तम्भव्याससमोत्सेधविस्तारा श्रेष्ठपोतिका ।
 शरांशोना मध्यमा स्यादूनद्वयंशा कनिष्ठिका ॥ ६८ ॥”

The Potikā, known as ‘Citrapotikā,’ is so called because it is decorated with figures of demons, crocodiles, fabulous animals such as the Vyāla, foliages, rows of gems and the like. The second decorative type of Potikā, known as ‘Patrapotikā,’ is ornamented by patterns of leaves and creepers, and the third type, called ‘Tarāṅgiṇī,’ is adorned with tarāṅgas or wave-like ornaments which terminate by a number of undulating lines.

The following stanzas from Gurudeva describe these three types in clear and distinct terms :—

“ भूतेभमकरव्यालरत्नबन्धविचित्रिता ।
 वल्लीचित्राग्रपट्टा च सा ख्याता चित्रपोतिका ॥ ६९ ॥
 केवलं पत्रवल्लीभिर्विचित्रा पत्रपोतिका ।
 तरङ्गमात्रचित्रा या पोतिका स्यात् तरङ्गिणी ॥ ७० ॥
 तरङ्गाश्चात्र वेदतुर्वस्वाशादित्यसंख्यया ।
 कार्यास्तूभयतस्तुल्याः पट्टिकाच्छन्नमध्यगाः ॥ ७१ ॥
 त्रिभागे पोतिकोत्सेधे सा(ध्यं? धौ)शेनाग्रपट्टकम् ।
 तदर्धार्धेन तदधः क्षेमच्छायान्वितं भवेत् ॥ ७२ ॥
 तदुच्चार्यात् त्रिभिर्वीशैरंशाभ्यां वात्र कल्पयेत् ।
 ख्यासाधार्त् त्रिपांदाद् वा कुर्यात् तास्वग्रमण्डनम् ॥ ७३ ॥”

A very elaborate and lengthy description of the parts of the pillar, the proportions of the ornaments that enter into the composition of the pillar, is given in the *Mānasāra*³⁹⁰ in the Chapter on ‘Pillars.’ The description is minute. The texts quoted above, when compared with the *Mānasāra*, appear more concise, clear and well marked and less tedious to follow. In the manner of treatment they agree more closely with our text than with the *Mānasāra*.

The five names Śrikara, Candrakānta, Saumukhya, Priyadarśana and Śubhaṅkari which Dr. Ācārya quotes in his *Dictionary*³⁹¹ of Hindu Architecture and in his *Essay on Indian Architecture*³⁹² are not names of whole pillars as Dr. Ācārya would have us believe, but names of the part known as Kumbha or Ghaṭa. Thus observe the statement of the *Suprabhedāgama*³⁹³ :—

“ श्रीकरं चन्द्रकान्तं च सौमुख्यं प्रियदर्शनम् ॥ ६५ ॥
 शुभङ्करो च नामानि कर्तव्यानि विशेषतः ।
 श्रीकरं वृत्तपादानां षोडशांशे तु कान्तकम् ॥ ६६ ॥
 सौमुख्यं हि तथाष्टांशो तुर्याग्रे प्रियदर्शनम् ॥”

390. *Mānasāra*, Chapter XV (P. K. Ācārya's Ed.).

391. *A Dictionary of Hindu Architecture*, vide under ‘Stambha.’

392. *Indian Architecture* by Ācārya, pages 125, 126, 150.

393. *Suprabhedāgama*, XXXI, 65, 66, 67 (quoted in *A Dictionary of Hindu Architecture*, pp. 646, 647).

From this description it is obvious that Śrīkara, etc., are prescribed for pillars of different shapes such as the circular etc. These names hence refer to the part of the pillar; they refer to the five different classes of 'Kumbha;' they do not stand to indicate the various classes of pillars. The texts we have quoted above also confirm the fact we have here observed.

STANZA 26.

The Disposition of the Doors.

In this stanza, the author describes the location of the main door and the false doors. By the main door we mean the door of the sanctum sanctorum, which, when opened, presents a full view of the deity seated in the Holy of Holies. Having divided the thickness of the wall into twelve parts, a line must be drawn leaving five parts outside and seven parts inside, and the door should be so situated that the middle of the door must coincide with the line drawn in the wall. There should be one front-door, and three doors on the three sides. These doors must come above the Prati, the topmost moulding of the basement. The doors placed must not exactly come in the middle of the facade; their centre must not coincide with the centre of the Garbhagrha. In their situation, they should be slightly shifted from the centre of the Garbhagrha, in order to avoid what is known as 'Marmavedha.' The amount of shifting, as given in some authority, is stated by the commentator Śaṅkara as follows:—The breadth of the front-door having been divided into twenty-one parts, one part thereof may be left to the left side from the middle, and the centre of the door should be brought here and thus the front door must be placed. The remaining three doors are situated in a circumambulatory direction and with regard to the amount of shifting prescribed, the proportion given is $\frac{1}{36}$, $\frac{1}{64}$ and $\frac{1}{81}$ of the breadth of the respective doors in order or in all the three cases, the proportion of shifting may be taken as $\frac{1}{36}$ or $\frac{1}{64}$ or $\frac{1}{81}$ of the breadth of the respective door. Of the four doors, the door proper which serves as the means of entrance is the front door and it is the real door. The other three are false doors, and are called 'Ghanadvāras.' They are described in a subsequent stanza. They do not serve the function which the main door serves and are smaller in their dimension than the main door. They are ornamental in their character, and besides possessing all the ornamental details of the main door, they are additionally decorated with Torṇas in their upper parts. Torṇas do not figure in the main door, and they thus form the special feature of the Ghanadvāras. The real door, it is stated, must be made of wood, and

this is natural, since it is required to be made and situated before the wall is made. In the traditional mode of construction, when wood was the chief material used, all the doors and walls were necessarily made of wood. But in later times, when stone came into vogue, the wall and the false doors also were constructed out of stone. Gurudeva states that Ghanadvāras are wrought on the wall, and that they are made of the same material stone. In their office and situation, they differ from the real door, which is made of wood and made first. They are reduced to decorative elements adorning the three sides of the wall. The author of the *Tantrasamuccaya*, however, does not state that the Ghanadvāras should be wrought on the wall. He describes them before he starts to describe the wall, and from this tenor of treatment, it would appear that the doors are to be constructed first, before the walls are constructed. In this case, the false doors too, it might be presumed, are required to be made of timber. This line of treatment is in the original and traditional way, but in actual practice this is not the case; for, when stone came to be employed in the construction of the wall, the false doors also came to be wrought in the wall, and their construction necessarily follows the construction of the wall. A Malayālam commentator on the *Tantrasamuccaya*³⁹⁴ thus remarks in the light of the modern practice, that the Ghanadvāras are to be distinguished from the real door in that they are wrought in the wall and made of the material employed in the construction of the wall, whereas the real door is made of timber and situated before the walls are constructed.

By way of comparison, the following lines, which support our author's statement, are found quoted in the commentary by Śaṅkara:—

“योगं तु स्थापयेद् विप्र ! शान्तिहोमपुरःसरम् ।
भित्तिव्यासे तु भान्वंशे बाह्यात् पञ्चावसानकम् ॥
अभ्यन्तरात् तु सप्तांशसमं योगस्य मध्यमम् ।”
“मुहूर्ते स्थापयेद् विद्वान् मध्यान्मध्यं विमुच्य च ।”³⁹⁵

Gurudeva³⁹⁶ says:—

“सर्वत्र प्रत्युपर्येव द्वारं कुर्याद् विचक्षणः ।”

394. Ms. R. No. 4, 128, The Government Oriental Mss. Library, Madras.

395. These lines with slight changes in reading are found in the *Kāśyapaśilpa* (Ānandāśrama Series), Paṭala XIV, Sts. 14, 15⁽¹⁾.

396. *Gurudevapaddhati*, Uttarārdha, XXXI, 138, 139 (T. S. S. Ed.).

“ उत्थाय तल्पं संस्थाप्य भित्तेर्व्यासार्कभागतः ॥
बहिरन्तः शरांशान्तं रामांशान्तं क्रमेण तु ।
कवाटयोगमध्यं स्यात् तन्मध्यं भित्तिमध्यकम् ॥”

The *Mayamata*³⁹⁷ observes :—

“ भित्तिव्यासे द्वादशांशे तु बाह्ये
पञ्चांशान्तद्वारयोगस्य मध्यम् ।
तद्वचान्तः स्तम्भमध्यं तयोस्त-
न्मध्यं प्रोक्तं भित्तिमध्यं विधिज्ञैः ॥”

Śaṅkara also quotes the following lines :—

“ स्वव्यासमूर्च्छाधृतियुद्धन्द्वन्द्वेन्दुगजांशकैः ।
द्वारं प्रदक्षिणश्चाल्यां स्वेध्वेकेनैव वा घनाः (?)³⁹⁸ ॥”.

STANZA 27.

The Height and Breadth of the Bimbadvāra.

The author now proceeds to lay down the rules pertaining to the dimensions of the doorway. The height and breadth prescribed are those of the main door, which is the front door. Different dimensions are prescribed on the basis of difference in the conception of the object worshipped. In the present stanza the author deals with the height and breadth of the doorway of the Garbhagrha which contains a Bimba or image. The conception of Bimba is anthropomorphic in character and this is to be distinguished from the purely symbolic conception of a Liṅga. When the deity is worshipped in anthropomorphic form, it is called Bimba, and when worshipped in the purely symbolic form it is known as Liṅga. The height and breadth of the doorway is separately laid down with reference to this differentiation in the form of the object of worship. The height of the main door of a Liṅga shrine as stated here, is $\frac{7}{11}$, $\frac{5}{8}$, $\frac{7}{12}$, $\frac{4}{7}$, or $\frac{8}{15}$ of the vistāra (breadth) of the Garbhagrha

while its breadth is $\frac{1}{21}$, $\frac{1}{19}$, $\frac{7}{15}$, $\frac{1}{13}$ or $\frac{4}{9}$ of the height of the door. The breadth of the Garbhagrha referred to here is to be understood as the breadth of the sanctum sanctorum which is marked by the walls, by inner wall (*Āntarabhitti*) if such inner wall exists. The proportions given here are supported by the authoritative statements of Bhāskara, an architectural authority found quoted in the commentary of Śaṅkara. The statement runs thus :—

“ प्रतिमाद्वारमानं तु गर्भागारेण चोच्यते ।
एकादशात् सप्तोत्सेधमेकविंशाद् दशविस्तरम् ॥
अष्टांशे पञ्चभागोच्चं नवदशे नवविस्तरम् ।
द्वादशांशे सप्तोत्सेधं त्रिपञ्चे सप्तविस्तरम् ॥
सप्तभागे चतुष्कोच्चं त्रयोदशे षड्विस्तरम् ।
तिथिभक्तेऽष्टसंख्योच्चं नवभक्ते चतुर्विस्तरम्³⁹⁹ ॥”

STANZA 28.

The Height and Breadth of the Liṅgadvāra.

If a Liṅga is to be installed, the height and breadth of the front door will have different proportions altogether. The present stanza deals with such proportions. The height of the front door of a Liṅga shrine may be $\frac{2}{3}$, $\frac{3}{5}$, $\frac{5}{9}$ or $\frac{1}{2}$ of the breadth of the Garbhagrha, while its vistāra (breadth) will be $\frac{1}{2}$, $\frac{8}{17}$, $\frac{5}{11}$ or $\frac{3}{7}$ of its height. These proportions are in the line of Bhāskara's statement which is quoted by Śaṅkara as follows :—

“ अथ तद् द्वारमानं तु गर्भागारेण चोच्यते ।
त्रिभागद्वयमुत्सेधमुत्सेधार्धं तु विस्तरम् ॥
पञ्चभागत्रिभागोच्चं सप्तदशाष्टविस्तरम् ।
नवांशात् पञ्चोत्सेधं दशैकांशात् पञ्चविस्तरम् ॥
विस्तारार्धं कनिष्ठोच्चं सप्तभागं त्रिविस्तरम् ।
गर्भागारप्रमाणेन लिङ्गद्वारस्य मानकम्⁴⁰⁰ ॥”

397. *Mayamata*, Chapter XIX, st. 22 (T. S. S. Ed.).

398. *Tantrasamuccaya* with Vimarśinī, Part I, page 64 (T. S. S. Ed.).

399. Vide the *Tantrasamuccaya* with Vimarśinī, Part I, page 65 (T. S. S. Ed.).

400. *Ibid.*

Since the alternatives given in both the cases of height and breadth agree in number and order, it might be presumed that the first alternative in height goes together with the first alternative in breadth. The tenor of Bhāskara's statement lends support to this suggestion, for his first alternative in breadth is found stated along with the first alternative in height, the second alternative in breadth with the second alternative in height and so on in order. The proportions given in the *Mañjarī* and *Nibandhana* for the height of the Dvāra are $\frac{2}{3}$, $\frac{3}{4}$, and $\frac{5}{6}$ of the breadth of the Garbhagrha, and those prescribed in the *Gurudevapaddhati* are $\frac{1}{2}$, $\frac{5}{6}$, and $\frac{3}{4}$. With regard to the breadth of the door-way, all the three authors prescribe only one proportion and that is half the height of the door-way. This is a very reasonable and a common proportion. *Mānasāra* does not fail to notice and state this widely and commonly accepted proportion, for says he⁴⁰¹:—

“ सर्वेषां द्वारतुल्यार्धं शुद्धद्वारविशालकम् ।”
“ विस्तारोद् द्विगुणोत्सेधं सामान्यमिति कथ्यते ॥”

In the variety of proportions laid down in the *Tantrasamuccaya*, *Gurudevapaddhati*, *Mañjarī*, *Bhāskariya* and *Mānasāra* with respect to the measure of the door, especially with regard to the breadth thereof, there is noticeable a general consensus of opinion.

Compare for instance the *Mañjarī*⁴⁰² which states as follows:—

“ भागद्वयं त्रिभजिते पृथग्भर्गहे
भूतैश्च वहिरथवा नवभिश्च पञ्च ।
द्वारोच्छ्रयश्च विदधीत यथाक्रमेण
विस्तारमर्धपरिमेयमतो विदध्यात् ॥”

The *Nibandhana* similarly observes:—

“ त्रिपञ्चनवभिर्गर्भं भङ्क्त्वा यैर्द्वित्रिपञ्चभिः ।
कुर्यात्तदर्थेन तु विस्तर 403 ॥”

401. *Mānasāra*, Text, Ch. XXXIX, lines 13, 35 (P. K. Acārya's Edition).

402. *Prayōgamañjarī*, Pāṭala VI (Ms. from the Adyar Library).

403. *Śaivāgama Nibandhana* (Ms. from Tripunittura, Cochin State), Pāṭala XIII.

Gurudeva also states similar proportions in the following statement:—

“ तद्वन्नालीगृहव्यासरामभागैकभागतः ।
अर्धं नवांशे पञ्चांशैः पञ्चांशेवांशकैस्त्रिभिः ॥
द्वारोत्सेधो भवेत् तस्मादर्थं विस्तृतिरिष्यते ॥” etc.⁴⁰⁴

The rules that the *Mānasāra* states with regard to the door-measure are first laid down with reference to the Hasta measure and then with reference to the pillar-measure, and lastly in relation to the measure of the structure.

STANZA 29.

An alternative measure of the door and the characteristics of the Jambs, etc.

In the former half of this verse, the author lays down the measure of the door from the point of view of the pillar, and this measure prescribed refers to the door of the shrine of all gods. The height of the door which is stated here is $\frac{1}{4}$, $\frac{7}{8}$, $\frac{3}{4}$, or $\frac{9}{10}$ of the height of the pillar, and its breadth prescribed is half that of its height. Gurudeva, Maya, Kāśyapa, *Mānasāra*, all these authorities prescribe the height of the door from the point of view of the height of the pillars. Thus Gurudeva observes:—

“ स्तम्भायामे तु दिङ्मन्दवसुसप्तंशके क्रमात् ॥
नन्दवस्त्रुषिषड्भागैर्द्वारोत्सेधं प्रकल्पयेत् ।
तदर्थं विस्तृतं च स्याद् द्वारं देवालयेषु वै 405 ॥”

These proportions agree with the text of the *Tantrasamuccaya*. The *Mayamata*⁴⁰⁶ likewise states:—

“ पादोत्सेधे पङ्क्तिनन्दाष्टभागे
द्वारोत्सेधं तत्तदेकांशहीनम् ।
विस्तारं स्यात् तत्तदुच्चार्यमानं
द्वारं कुर्याद्विर्भ्यमग्रे नृपाणाम् ॥

404. *Gurudeva Paddhati* (T. S. S. Ed.), Uttarārdha, Pāṭala XXXI, sts. 104, etc.

405. *Ibid.*, 102, 103.

406. *Mayamata*, (T. S. S. Ed.), Ch. XIX, St. 20; Ch. XXX, St. 10.

स्तम्भायामाष्टभागेन तुङ्गद्वारं सुरालये ।
नन्दपङ्क्त्यंशहीनं वा विस्तारं स्यात् तदर्थतः ॥”

The *Kāśyapaśilpa*⁴⁰⁷ states :—

“ पादोच्चं दशधा भज्य शुद्धद्वारं नवांशकम् ॥
चरणं नवधा भज्य अष्टांशं द्वारमानकम् ।
अथवाऽङ्घ्रिस्तु तुङ्गं तु वसुभागविभाजिते ॥
सप्तमं द्वारमानं तु ॥”

The *Mānasāra*⁴⁰⁸ states :—

“ अथवा द्वारमुख्यानां हर्म्यपादमिहो(वशाद्)च्यते ॥
तत्तत्पादोदये वाथ वसुनन्ददशांशकैः ।
तत्तदेकांशहीनं स्याद् द्वारतुङ्गमिति स्मृतम् ॥
तदर्थं विस्तृतं प्रोक्तम् ॥”

In the previous stanzas the dimensions, as we have noticed already, were prescribed in relation to the breadth of the Garbhagrha. The breadth of the Garbhagrha, as we have seen, is the same as the breadth of the Uttara, which forms the starting-point of measure. The height of the pillar is also determined with reference to the breadth of the Uttara. The dimensions which the author here lays down with reference to the height of the pillar, if further considered, reveal only another variation of the previous and original line of determining the measure with reference to the breadth of the Garbhagrha. A comparison of the proportions set forth in the text with those laid down elsewhere only unfolds the identical mode of treatment which the several authors followed and the consensus of opinion they arrived at with respect to the principles of dimensions.

In the latter half of the stanza the author describes the measure and characteristics of Yogas or door-posts, *Bhuvāṅgama* or the foot-rest (i.e., the lower horizontal part of the door-frame), and *Pataṅga* or the lintel (the upper part of the door-frame). *Bhuvāṅgama* and *Pataṅga* are fixed at the foot and at the top, between the two door-posts (jambs). ‘Yogas’ as described in the *Vivaraṇa* are two pieces of timber planted on the

407. *Kāśyapaśilpa* (Ānandāśrama Series), XIV, 1(2), 2, 3; Also *vide* XVII, 1, 2.

408. *Mānasāra*, Ch. XXXIX, lines 14-17. (P. K. Ācārya's Ed.).

two sides, and ‘*Bhuvāṅgama*’ is the piece placed at the base, between the two door-posts. Thus it is stated⁴⁰⁹ :—

“ योगो द्वारपार्श्वयोरध उपरि च स्थाप्यो दण्डो ह्यपूर्वमुक्तः । तत्र भुवङ्गमः कार्यः ।
अयमधस्ताद्योगयोर्मध्ये शाययितव्यः ॥”

The breadth of the door-posts is also laid down with reference to the pillar-measure. The *vistāra* of the Yogas (door-posts) according to the prescription of the author, is the same as, or one and a quarter or one and a half times that of the *vistāra* of the pillar, while its thickness will be half of its *vistāra*. The significance of the latter two alternatives, which give a larger proportion to the breadth of the door-post, is not clear. The proportion, however, is agreed upon by other authorities like Gurudeva, *Kāśyapa* and *Maya*.

Thus Gurudeva⁴¹⁰ says :—

“ सपादपादविस्तारस्तदर्थबहलो दृढः ॥
कवाटयोगस्तत्पार्श्वे वाजनं पूर्ववद् भवेत् ॥”

*Kāśyapa*⁴¹¹ observes :—

“ पादविष्कम्भमानं वा सपादं सार्धमेव वा ॥
द्वारयोगस्य विस्तारं तस्यार्धं घनमुच्यते ॥”

*Maya*⁴¹² states :—

“ योगव्यासं पादविष्कम्भमानं पादाधिक्यं वा तदर्थं त्रिपादम् ।
बाहुल्यं स्यादुच्छ्रये वेदभागे बाह्ये साब्जक्षेपणं तत्त्रिभागैः ॥
विपादपादविस्तारा सार्धो वा योगविस्तारा ॥
स्तम्भव्याससमो वापि तदर्थं [र्ध] वलय [द्वय] द्धनम् (?) ।
त्रिपादं चोत्तराधस्था न्तस्य वाजनम् ॥”

The proportions prescribed in the above stanzas evidently lay emphasis on the strength, stability and importance of the door in a temple,

409. *Tantrasamuccayavivaraṇa*, Ms. R. No. 1994, Government Oriental Mss. Library, Madras.

410. Quoted from the *Vimarśinī* (*Tantrasamuccaya*, Part I, T. S. S. Ed., p. 66).

411. *Kāśyapaśilpa* (Ānandāśrama Series), *vide* XVII, 6(2), 7(1); *Vimarśinī* (T. S. S. Ed.) Part I, p. 67.

412. *Mayamata* (T. S. S. Ed.), XIX, 21; XXX, 11, 12.

for the door plays an important and chief part in the protection of the riches contained inside the sanctum sanctorum. The front side of the door-posts are required to be adorned with such ornaments as the Vājana etc.

STANZA 30.

Bhuvāṅgama and Pataṅga.

In this stanza the author prescribes the dimensions of the lower plate called *Bhuvāṅgama* and the upper plate called *Pataṅga*, whose location has been described in the previous stanza as at the base and top respectively of the door-posts. The dimension of the *Bhuvāṅgama* is now first stated in this verse. It is directed as follows: Deduct the height of the door from the height of the pillar and divide the result into five parts. Two parts thereof will constitute the thickness of the *Bhuvāṅgama* (foot-plate). Or, if the result is divided into nine parts, two and a half parts may be allotted to the thickness of the *Bhuvāṅgama*. Its breadth will be as much as that of the door-post. This breadth is technical in proportion and it must be understood as exclusive of the projection which is essentially given to the upper and lower Paṭṭikā of the door with a view to providing situation for fixing up of the Nāla and Śikhā of the door-leaves. The parts that are left, namely $\frac{3}{8}$ in the first alternative and $6\frac{1}{2}/9$ in the second alternative, are devoted to the thickness of the upper piece *Pataṅga* together with the ornamental plank that is placed over it. *Bhuvāṅgama* will be devoid of the ornament *Vājana*. *Pataṅga* will be accompanied by the ornamental plank *Maṅgalaphalakā*. This plank is so-called because it bears auspicious figures like that of Gaja Lakṣmī. Gaja Lakṣmī is the Goddess sitting in a full-blown lotus and laved by two white elephants on either side. The sacred water that is poured over Her head is from a lotus-pond. This figure of Lakṣmī is depicted and carved on the external door of Indian temples and plays a very prominent part in the rich repertory of India's architectural ornament. This representation is believed to be extremely auspicious and supremely beautiful. The Vivaraṇakāra remarks that this plank *maṅgalaphalakā* is to be situated below the Uttara.

Says he :—

“ फलकेति उत्तरादधोऽयमलङ्कारः⁴¹³ ।”

413. *Tantrasamuccaya Vivaraṇa*, R. No. 1994, G.O.M.L., Madras.

Compare the statement of Gurudeva⁴¹⁴ :—

“ द्वारोच्चशेषे पञ्चांशे भवेदंशद्वयं त्वधः ॥

ऊर्ध्वं त्रयोऽशास्तत्र स्युः फलका चात्र चित्रिता ।”

STANZA 31.

The Panels.

In this verse, the author lays down the dimensions of *Kavāṭas* (the door-leaves). The thickness of the door-leaf will be one-fourth or one-sixth or one-eighth of the Daṇḍa (Daṇḍa = the breadth of the pillar at the top). Its breadth will be half of the breadth of the door plus this thickness. It must have two projections, one called Nāla at the base, and the other called Śikhā at the top. These projections are made to enter the cavity at the base and top of the *Bhuvāṅgama* and *Pataṅga* respectively. They thus serve to secure the door-plates into the lower and upper Paṭṭikās of the door-frame. Two leaves are to be made of timber which is firm and durable. On the outer side of the left panel should be fixed what is known as ‘*Sūtraphalakā*.’ The left leaf is to be determined with reference to the left side of the image. The proportions concerning the thickness and breadth and the ornamentation of the *Sūtraphalakā* are next described. The thickness of the *Sūtraphalakā* will be half of the thickness of the *Kavāṭa*, and its breadth will be twice the thickness (of the *Kavāṭa*). This *Sūtraphalakā* when fixed to the left panel, adds to the strength of the door and affords protection to the panel-joint. Hence it is termed the *Sandhiphalakā*. It is adorned with such ornamentations as the bulging breasts. Other ornamentations like the *Vājana* come in the interspace between the protruding breast-ornaments. The breast-motif is a common motif, a characteristic door-ornament. Kāśyapa calls *Sūtrapattikā* by the name *Dvārapattikā* and states its proportions, etc., as follows :—

“ दक्षिणे तु कवाटे तु योजयेद् द्वारपट्टिकाम् ।

त्रिचतुष्पञ्चमात्रं वा द्वारपट्टिकविस्तृतम् ॥

तत्त्रिभागैकभागं तु तस्य तोत्रमुदाहृतम् ।

तन्नीत्राद् द्विगुणं ख्यातं नीत्रं वैतकवाटयोः⁴¹⁵ ॥”

414. *Gurudeva Paddhati*, Uttarārdha, Paṭala XXXI, sts. 111(2), 112(1) (T. S. S. Ed.).

415. *Kāśyapaśilpa*. Paṭala XVII, sts. 16, 17 (Ānandāśrama Ed.).

With regard to the breadth and thickness of the Kavāṭa, Gurudeva⁴¹⁶ states :—

“ दण्डाच्चतुष्पदष्टांशं कवाटफलकाघनम् ।
श्रेष्ठमध्याघमं ज्ञेयं क्रमात् सर्वेषु धामसु ॥”

The Nibandhana⁴¹⁷ observes :—

“ स्तम्भाष्टांशघनो रम्यो कवाटौ विस्तरेऽधिकौ ।
तदर्धबहुलो दण्डो मध्ये द्विगुणविस्तरः ॥”

STANZA 32.

Ornamentations of the Door-panels.

In this verse the author gives a list of the different ornamentations of the door-panels (Kavāṭas). They are both functional as well as decorative elements. They are enumerated as follows: (1) Bhramarakas, (2) Argala, (3) Sandhipāla, (4) Prakṣepaṇīya, (5) Valayas, (6) Patrakas, (7) Pulakas, Artavas, and Kuḍmalas, (8) Śrīmukha, (9) Induśakala, etc. Of these, Bhramarakas are hinges which are fixed at the top and base of the panels. They are means employed for the turning of the door-plates. Argala is the bolt attached to the panel and it serves to close and fasten the door. The bolt which is fixed to the Kavāṭa on its outer face is known as Prakṣepaṇīya. Sandhipāla is the Sūtraphalakā which serves as the protector of the joint of Kavāṭas. Valayas are metallic chains round like armlets, fixed to the plates for the pulling of the Kavāṭas and thus opening the door. Patrakas are metallic bands, usually made of copper or brass or iron, in the form of creepers. These lend additional strength to the door-plates. Other ornamental elements which form a source of increasing beauty to the Kavāṭas are nails fixed to the plates lengthwise and breadthwise resembling flowers in their varied stages of bloom such as the Kuḍmalas or buds, Pulakas or semi-blossomed flowers and Artavas or full-blown flowers. The Kavāṭas are further adorned with the carvings of such figures like the bust of the Goddess Śrī, crescents and the like. All the ornaments and elements of the panels which have been described above with exception apart of Argala are wrought on the outer face of the Kavāṭas and are consequently open to the full gaze

416. Gurudevapaddhati, Uttarārdha, Pāṭala XXXI, st. 113 (T. S. S. Ed.).

417. Śaivāgama Nibandhana (Ms.); Pāṭala XIII (Tripunittura Ms.).

of the spectator who stands outside in front of the door facing it when it remains completely shut. The ornaments that the author has described are common and characteristic ornaments of the door. The authors of the Nibandhana and Mañjarī give some more, and a comparison of the list presented in our text with that furnished in the Nibandhana and Mañjarī, Mayamata and others, serves to amplify the list set forth above. The same text is found in both the Nibandhana and Mañjarī.

It runs as follows⁴¹⁸ :—

“ श्रीमुखं वामदण्डं च पिञ्जरी पुलकार्गलौ ।
क्षेपणं सन्धिपालं च दण्डकुण्डलकौ तथा ॥
अन्तर्गतविषाणौ च फल्गु(गुल्फ)भ्रमरकौ तथा ।
बलाहः परिघश्चैव भूषणानि कवाटयोः ॥”

Parāśara⁴¹⁹ enumerates the following :—

“ श्रीमुखसन्धिपालपत्रह्रस्वदण्डकुण्डलशृङ्गगुल्फान्तर्गलकविषाणवलाहकपिञ्जरीगुच्छ-
कवनकार्धचन्द्राद्यवयवानि मुख्यलोहैरयसा वा दृढतरं कुर्यात् ” इति ॥

The Mayamata⁴²⁰ takes note of the following :—

“ श्रीमुखैर्वामदण्डैश्च पिञ्जरीगलकार्गलैः ।
क्षेपणैः सर्वपत्रैश्च गुच्छगैर्वनकैस्तथा ॥
गुल्फैरन्तर्गतैर्ग्राम्यैर्वालाभैर्मध्यकुण्डलैः ।
विषाणपरिघाक्षुद्रदण्डैर्युक्तं कवाटकम् ॥
इन्द्रनीलसमोपेतं सर्वचित्रमनोहरम् ।
अधवासान्यलोहैश्च युक्तया तत्र दृढीकृतम् ॥
गुल्फैः सार्धैर्ललाटैश्च शृङ्गायोमयपत्रकैः ।
बन्धीयात् सर्वयत्नेन यथाशोभं यथाबलम् ॥”

418. Prayōgamañjarī, Paṭ. VI, (Adyar Mss. Library); Nibandhana, Paṭ. XIII (Ms. from Tripunittura).

419. Parāśara as referred to by Gurudeva, Gurudevapaddhati, Part IV, p. 317 (T. S. S. Ed.).

420. Mayamata (T. S. S. Ed.), Ch. XXX, sts. 26-29.

Kāśyapa⁴²¹ observes :—

“ नीत्रमायां च मध्ये तु द्वारपट्टिकपार्श्वयोः ।
लोहजं वलयोपेतं पतानिकोलबन्धनम् ॥
लोहजं दारुजं चाऽथ वाद्याभ्यन्तरं तथा ।
तासां त्रिमङ्गलं नीत्रं तारार्धवनसंयुतम् ॥
बद्ध्वा कवाटे योगौ द्वौ दारुलोहैर्द्वीकृतम् ।
अर्गलादिसमोपेतं घटनोद्घाटनक्षमम् ॥
परेषां घटयन्तत्रमध्यसत्त विमाचरेत् ।
प्रासादे मण्डपे चैव गोपुरे चैवमाचरेत् ॥”

STANZA 33.

Sopāna.

In this stanza the author prescribes the rules pertaining to the construction of the Sopānas or Steps which lead from the foot-rest of the door down to the ground-floor. Their disposition is first described. In their spread out, they start from the Bhuvāṅgama or foot-rest of the main door and descend gradually downwards till they reach the level of the tala or ground-floor. Since their extremity proceeds from either side of door, their length will be equal to the breadth of the doorway. Their breadth will be one and a half or two Daṇḍas (Daṇḍa = the breadth of the pillar at the top). They will be symmetrical, of equal dimensions and even in number. This number of steps will be determined with reference to the height of the Adhiṣṭhāna and the distance that these steps cover up. In the determination of their number, the governing condition that they should be even in number should be remembered. The height of steps is conditioned by the number of steps and all the steps should possess equal height. They should be made of hard stone like granite. Both the sides of the steps at the extremity are required to be flanked by granite slabs whose ornamental features are described in the last quarter of this stanza. On the two sides of slabs which in their situation start from the extremity of the two door-posts should be carved two ‘makaras.’ Their head is depicted as turning backwards. From the open mouth of each Makara on each side springs forth creeper-like carving that flows in a gentle curve and

421. Vide Kāśyapaśilpa, Paṭala XVII, sts. 18-22 (Ānandāśrama Series).

ends in a scroll at the base. Two slabs ornamented as described are to be made to flank the two sides of the steps at their extremity.

Gurudeva⁴²² states that the steps should be gradual and symmetrical, equal in dimensions and even in number and one and a half or two Daṇḍas in breadth. Thus says he :—

“ समखण्डानि कुर्वीत सोपानानि यथाक्रमम् ।
द्विदण्डं वाध्यर्धदण्डं भवेद्वस्तविलं ततः ॥”
(भवेत्तद्बहलं ततः ॥) [Śilparatna]

STANZA 34.

The Ghanadvāras.

After having dealt with the details connected with the construction of the real door in front of the sanctum, the author proceeds, in this stanza, to describe the Ghanadvāras. They are three, on the three sides. We call them false, because they are not intended to serve the function of door. Their breadth (i.e. the breadth between the posts) is smaller in proportion than the breadth of the real door. It is $\frac{5}{8}$ of the breadth of the front-door. Their height is twice or two and a half times their breadth. The thickness of the posts is not given and it should therefore be presumed that it is the same as the thickness of the posts of the real door. The thickness of the posts compared with the breadth of the false door being of considerably larger proportion, these three doors are called ‘Ghanadvāras’ or thick doors. From the trend of the author’s treatment it appears that these Ghanadvāras should be constructed before the walls are set up. From this it is possible to presume that they are to be made of wood according to the view of the author. The author seems to follow the old traditional method of construction in which wood plays a very prominent part. In later day structures, however, Ghanadvāras are found built on the wall in which case, they are wrought of the same material as that which entered into the composition of the wall. Torāṇas which adorn the portion above the Ghanadvāras and which are specially associated with the Ghanadvāras are thus required by Gurudeva to be made in the wall of the same material as that which makes the wall.⁴²³ This transformation of the ornamental doors in material of construction

422. Gurudevapaddhātī (T. S. S. Ed.), Paṭala XXXII, st. 80 (Uttarārdha).

423. Ibid., Uttarārdha, Paṭala XXXII.

as well as in method thereof seems to be the result of the gradual influence of the wall with which the Ghanadvāras are found closely associated.

The Ghanadvāras also will have the same decorative parts which the real door is said to possess. In support of the text, Śaṅkara⁴²⁴ cites the following lines from an authority whose name is not however found mentioned.

“ पुरोद्वारस्य विस्तारे त्वष्टभक्तेऽत्र पञ्चभिः ।
घनद्वारस्य विस्तारं ततो द्विगुणदैर्घ्यकम् ।
द्विगुणार्धं तु वा दैर्घ्यं घनद्वारगतं शुभम् ॥”

STANZA 35.

Toranas

Three kinds of Toranas or arches which adorn the Ghanadvāras are next described. The three are called *Patratoraṇa*, *Makaratoraṇa* and *Citratoraṇa*. These names are coined on the basis of the dominant ornamental features which characterise the composition of each of the Toranas. The upper element of the Torana is a curvature which should be made in the form of a fish. The size of the fish may have any one of the proportions $\frac{3}{10}$, $\frac{1}{2}$, $\frac{3}{8}$ of the height of the pillar. The rest, viz., $\frac{7}{10}$, $\frac{2}{3}$ or $\frac{5}{8}$ will constitute the height of the legs (i.e. pillars of the Toranas). The breadth of the Torana may be either half the height of the pillar or 4, 5, or 6 Daṇḍas (Daṇḍa=breadth of the pillar at the top). When it is given the shape of a crescent associated with the ornamentations of the leaf and creeper motifs, it is called *Patra Torana*. When it is marked by Makarāśyas (i.e. mouths of Makaras) and five bends, it is termed *Makara Torana*. When it is decked with varied motifs of sportive birds, crocodile heads etc., it is called *Citra-Torana*. Kāśyapa, in this connection, mentions in addition Bhūtas (goblins), Vidyādhara (semi-divine beings), lions, elephants, swans, vyālas, pearl-lace, jewellery, fishes and other decorative patterns among the ornaments of the Citra Torana. The following extract from the *Kāśyapaśilpa* will serve to confirm and amplify the author's description of the Toranas:—

“ अथ वक्ष्ये विशेषेण तोरणानां तु लक्षणम् ।
पादोदयदशांशेषु सप्तांशं चरणोदयम् ॥

424. *Tantrasamuccaya* with *Vimarśinī*, Part I, p. 70 (T. S. S. Ed.).

शेषांशं गुणमानं तु क्षपमानमुदाहृतम् ।
नवांशे पादतुङ्गे तु षडंशं चरणोदयम् ॥
शेषं क्षपोदयं ख्यातमष्टांशे चाङ्घ्रितुङ्गके ।
पञ्चांशं चरणोत्तुङ्गं क्षपोत्सेधं गुणांशकम् ॥
तुङ्गार्धविपुलो वाथ वेदभूतरसाङ्घ्रि वा ।
तोरणस्य तु तद्वाद्ये व्यासमेवं चतुर्विधम् ॥
प्रासादमण्डपादीनां मध्यभागे तु तोरणम् ।
अनेन विधिना विप्र ! कर्तव्यं कुड्यवाद्यके ॥
पत्राख्यतोरणं चादौ द्वितीयं मकरतोरणम् ।
तृतीयं चित्रसंज्ञं च त्रिविधं तोरणाकृति ॥
अर्धचन्द्रमिवाकारपत्रराजिविराजितम् ।
पत्रतोरणमाख्यातं ततो मकरमुच्यते ॥
पञ्चवक्रसमायुक्तं पार्श्वयोर्मकरान्वितम् ।
मध्ये पुरिसमायुक्तं नानाविधलतान्वितम् ॥
नानालङ्कारसंयुक्तं यत्तन्मकरतोरणम् ।
तदेव पार्श्वयोर्मध्ये पुरि मत्स्यद्वयोरपि ॥
नक्तुण्डं प्रकर्तव्यं भूतविद्याधराङ्गकम् ।
सिंहेभ्योऽलहंसाथैर्बालसङ्मुक्तदामकैः ॥
मत्स्यैश्च विविधैश्चित्रै रत्नबन्धैश्च भूषितम् ।
चित्रतोरणमेतत् स्यात् [सर्वेषु सुरसङ्गसु]⁴²⁵ ॥”

STANZA 36.

The Construction of the Wall.

After having described the pillars and doors, the author treats of the wall and its decorations. In this stanza, the writer Nārāyaṇa tells us that the wall should be constructed above the Prati (the topmost moulding of the basement) and below the Uttara (the beam). It should be made of firm and permanent material like stone, bricks etc. It must be embel-

425. *Ibid.*, pp. 70-71;

Also, Vide *Kāśyapaśilpa* (Ānandāśrama Series), Paṭ. XII, sts. 1-11.

lished with Vedikā, Pañjaras and other ornamentations which are described in the subsequent stanzas. An unnamed authority is cited by Śaṅkara in support of the disposition of the wall as stated in the text. It states:—

“प्रत्युत्तरान्तरे भित्तिजलेष्टकशिलामयी⁴²⁶ ॥”

With regard to the materials to be used, Śaṅkara cites Gurudeva, who enumerates different materials such as stone, bricks, wooden planks decked with lattice-work and clay.

Gurudeva observes as follows:—

“कुड्येषु तोरणानि स्युस्तत कुड्यं पञ्चधा स्मृतम् ।
शिलामयं चैष्टकं च जालकामयमित्यपि ॥
फलकामयमित्यन्यन्मृण्मयं चापरं क्रमात्⁴²⁷ ॥”

STANZA 37.

The Characteristics of the Vedikā.

The portion of the wall at its foot known as Vedikā is formed of several mouldings. The author, in the former half of this verse (37), states the alternatives regarding the height of the Vedikā and in the latter half describes the mouldings which constitute the Vedikā. Seven alternative proportions are given from the point of view of the height of the Prati, the height of the pillar and the breadth of the pillar. They are (1) as much as the height of the Prati; (2) $\frac{1}{8}$ of the pillar; (3) $\frac{1}{7}$ of the pillar; (4) $\frac{1}{6}$ of the pillar; (5) $1\frac{1}{2}$ times the breadth of the pillar; (6) 2 times the breadth of the pillar; (7) 3 times the breadth of the pillar. Any one of these heights having been fixed for the ‘Vedikā’, this height must then be divided into several parts. It may be divided into two equal parts, of which the upper must be given to the making of ‘Guṇa-raśanā’ (three-fold band), and the lower half to ‘Antari’. Or, the height of the Vedikā may be divided into parts eight, seven or six, in which case, one part, two parts and one part thereof will be given to the mouldings Kampa, Abja and Kampa respectively and the remain-

426. *Tantrasamuccaya* with Vimarśinī (T. S. S. Ed.), Part I, p. 71.

427. *Īśānagurudevapaddhati*, Uttarārdha XXXII, 9, 10; and *Tantrasamuccaya* with Vimarśinī, Part I, p. 72.

ing ones left to the Gala below. Statements from different authorities support the observation made in the text. With regard to the disposition of the Vedikā, the following line is found quoted by Śaṅkara:—

“प्रतेरुपरि वेदिः स्यात् प्रत्युत्सेधेन सम्मिता⁴²⁸ ।”

Maya says the following concerning the disposition and height of the Vedikā:—

“प्रतेरुपरि वेदिः स्यात् सार्धद्वित्र्यङ्घ्रिणोदिता⁴²⁹ ॥”

Kāśyapa gives three proportions, $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{8}$ the height of the pillar, and regards them as belonging to the best, the middling and the lowest types. The text of the *Kāśyapaśilpa*⁴³⁰ runs as follows:—

“स्तम्भोदये तु षट्सप्तवसुभागविभाजिते ।
एकांशं वेदिकामानं क्रमाच्छ्रेष्ठान्तराधमम् ॥”

With regard to the mouldings of the Vedikā, Kāśyapa⁴³¹ continuing observes:—

“अष्टांशे वेदिकोत्सेधे वेदाङ्गं गलमानकम् ।
गलोर्ध्वकम्पमेकांशं द्व्यंशेनाब्जं प्रकल्पयेत् ॥
तदूर्ध्वकम्पमेकांशं कर्तव्यं द्विजसत्तम ! ।
स्वर्षडंशे वेद्युच्चे त्रिद्व्यंशं च क्रमाद् गलम् ॥
कम्पं पद्मं च कम्पं च प्रागिवैवं प्रकल्पयेत् ॥”

According to the following line of Murāri, the Vedikā is to be ornamented with three-fold band and Antari:—

“मेखलान्नयसंयुक्ता वेदिकान्तरिभूषिता⁴³² ॥”

This authority is found quoted in the commentary of Śaṅkara.

428. *Tantrasamuccaya* with Vimarśinī (T. S. S. Ed.), Part I, p. 72.

429. *Mayamata*, XVI, 51 (T. S. S. Ed.).

430. *Kāśyapaśilpa*, X, 4 (Ānandāśrama Series); *Vimarśinī* (T. S. S. Ed.), p. 72. We have adopted Śaṅkara's reading of Kāśyapa.

431. *Kāśyapa* X, 8, 9, 10; also vide *Tantrasamuccaya* (T. S. S. Ed.); Part I, p. 73 [Śaṅkara's reading].

432. *Tantrasamuccaya* (T. S. S. Ed.), Part I, p. 72.

STANZA 38.

The Wall Ornamentations.

In this verse, the author refers to the wall-ornamentations. These ornamentations, depend upon the size of the structure. All Prāsādas, of whatever class, will have *Aṅghris* (pillars), *Toraṇas* (arches), and four *Dvāras* (doors). In the smallest type of structures that have a measure less than 5 cubits, these three elements will be found. But proportionate to the increase of measure additional items are enumerated. Thus in Prāsādas which have 5 cubits etc. of measure, pillars will be additionally ornamented, and between the ornate pillars there will be introduced ornamentation in the shape of *Pañjaras* adorned with *Jālas*. *Pañjara* is a nest and *Jāla* a perforated screen. *Pañjara* and *Jāla* are not found treated here as separate and individual motifs. They are considered as a composite ornamentation. The whole will mean window-motif accompanied by a perforated screen-motif. In larger measure type (such as the 7 cubits type etc.) there will be at the base of the wall and in its four corner positions *Kūṭas*, which are miniature structures employed as ornamental motifs. In still larger measure type (viz., 9, 11 cubits etc.) there will be included in addition to *Jālapañjaras* and *Kūṭas*, *Nāsikās* and *Śālās*. *Nāsikā* is an ornamentation designed after the shape of the nose. *Śālās* are elongated sacrificial halls and their replicas in small measure are used as ornamental patterns on the Prāsādas. In the course of the enumeration of ornamentations of the wall, it will be noted that the bigger the structure is the greater are the details of its decoration and this view of the builders is based on the sound aesthetic principles of proportion and harmony. A keen sense of decoration does not allow the presence of large blank space in the area of the various members of a building.

The following lines⁴³³ from the *Nibandhana* collected and put together confirm and amplify the author's enumeration of the various decorative patterns with reference to the size of the structure:—

“ त्रिहस्ते दण्डविस्तीर्णास्तदर्धबहलाः शुभाः ।
द्वादशैव चतुष्कोणमध्यस्थाः कुड्यपादकाः ॥
पार्श्वयोः पृष्ठतो युक्तास्तोरणैरुज्ज्वलैस्त्रिभिः ।
तोरणत्रयसंयुक्ते पञ्चहस्तेऽष्टपञ्जरे ॥

433. *Ibid.*, p. 74;

These stanzas are found in different places in Paṭala XIII of the *Saivāgamanibandhana* (Ms. from Tripunittura).

जालकानि त्रिभिर्दण्डैर्नन्धावर्तदिकानि च ।
तुर्याश्राणि गवाक्षाणि गजेन्द्रनयनानि च ॥
लताश्च विविधास्तत्र कारयेत् स्वस्तिकानि वा ।
कुड्यस्तम्भास्तथा कुर्यान्मूलाश्रान् कुम्भमण्डितान् ॥
सप्तहस्ते च चित्राढ्यं तोरणं मकरोज्ज्वलम् ।
पत्रैश्चित्रकृतं कुर्यान्मध्ये रत्नादिमण्डितम् ॥
मण्डितान् कुड्यपादांश्च द्वादशैवात्र पूर्ववत् ।
कर्णकूटांश्च परितः शालापञ्जरकोष्ठकम् ॥
पूर्ववन्मण्डितान् स्तम्भान्नवहस्ते तु मन्दिरे ।
कर्णकूटैश्च संयुक्ते शालापञ्जरतोरणैः ॥
एकादशकरे स्तम्भा विंशतिर्मण्डितान्विताः ।
दिक्षु चत्वारि चत्वारि पञ्जराणि शुभानि च ॥
नास्योऽत्र षोडशोर्ध्वं च शिखरे हारकास्तथा ।
त्रयोदशकरे स्तम्भा विंशतिर्मण्डितास्तथा ॥”

STANZA 39.

The Dimension and location of Śālās etc.

In this stanza, the author deals with the divisions known as *Kūṭas*, *Śālās* etc. The *vistāra* of the *Bhitti* being divided into parts 10, 9, or 8, with one part thereof for its *vistāra* and the same (i.e. one part) for its length, make *Kūṭas* at the four corners; with two parts for its length and one part for its *vistāra* make *Śālās* on the four main sides such as the East etc.; with three-fourth of a part for its length and the same for its *vistāra* make *Nāsikā* between the *Śālās* and *Kūṭas*. On either side of the *Nāsikās*, make *Pañjaras* with *Jālas* with three-fourth of a part for the length and *vistāra*. The disposition of these several decorative designs is based upon the statement of Gurudeva which runs as follows⁴³⁴:—

“ कर्णमध्येऽन्तरे भित्तेरथवा मानसूत्रतः ।
निर्गतैरुक्तमानेन कूटकोष्ठकपञ्जरैः ॥
गजपृष्ठादिभिश्चोक्तैः कुर्यादवयवैर्युतम् ॥”

434. *Gurudevapaddhati*, Uttarārdha, Paṭala XXVIII, 33(2), 34 (T. S. S. Ed.); Gurudeva as quoted in the *Vimarśinī*, page 75.

STANZA 40.

Kūṭas and Śālās.

The characteristic features of *Kūṭas* and *Śālās* are given in this verse. *Kūṭa* is a replica of the *Prāsāda*; it will have the same shape which the *Prāsāda* has, and it will possess all the essential parts which enter into the composition of the *Prāsāda* except the *Adhiṣṭhāna*. These parts which make a *Kūṭa* begin from above the 'Prati' the topmost element of *Adhiṣṭhāna* and end with *Stūpikā*, the finial, the final element of the *Prāsāda*. It has a beautiful *Nāsikā* adorning its centre. With regard to its proportion, it will be noted, that it is $\frac{1}{8}$ of the *Prāsāda* (i.e. the *Sanctum sanctorum*). The length and breadth are equal and hence it will be square in plan like the *Prāsāda* itself. The term 'Dhāman' employed here is a synonym of *Prāsāda*. Concerning 'Śālā,' as has been already observed in the previous verse, the length is double the breadth. In the latter half of this stanza, the author states the parts which adorn a *Śālā*. *Śālā* has the same projection as the *Kūṭa* has. Peculiar to itself, it has a *Mukhapatti* or band running round in front. Among other ornamentations of *Śālā*, mention must be made of 'Śakti,' 'Dhvaja' and 'Nāsa.' It will have, by virtue of its elongated shape, three *stūpikās* (or finials).

The following text of Gurudeva⁴³⁵ supports the author's description of the *Kūṭa* and *Śālā*:—

“कूटोऽष्टांशेन सन्ननः ।

शाला च तावती रम्या विस्तारद्विगुणायता ।

कर्णाश्रितं मध्यमैकनासिकं स्तूपिकान्वितम् ॥

प्रासादावयवं प्राज्ञाः कूटं नाम प्रचक्षते ।

सायतं समुखपट्टिकमर्धस्पर्ष्टकोटियुतमध्यमनासम् ।

शक्तिमदध्वजमपि त्रिशिखं तत् पार्श्वयोर्बहुशिखं खलु कोष्ठम् ॥

शिखाशब्देन स्तूपिकोच्यते कोष्ठमिति शाला च ॥”

435. Gurudevapaddhati, Uttarārdha, Paṭala XXVIII, Sts. 35(2), 36; Tantrasamuccaya (Vimarsini), (T. S. S. Ed.), Part I, p. 75.

STANZA 41.

Pañjara and Jālaka.

The *Pañjara* will have equal length and breadth, which may be 2, 3 or 4 *Daṇḍas*. It will be decorated with *Nāsa*. The ornamentation known as *Jālaka* will have a breadth which may be 2, 3, or 4 *Daṇḍas* and length which is 1 *Daṇḍa* more than the *vistāra*; or, increasing by one *Daṇḍa*, it may lead up to twice the *vistāra*. It will be ornamented by holes or perforation designed after the zig-zag fashion resembling the *Gomūtraka*. Its position is above the *Vedikā*. Parāśara⁴³⁶ observes:—

“ द्वाभ्यां त्रिमिश्रतुर्भिर्वा कुड्यस्तम्भेऽस्तु पञ्जरम् ।
मुखे शालामुखे चैकस्तूपिकं हस्तिष्ठवत् ॥
पञ्जरं नाम तत्प्रोक्तम् ॥”

Kāśyapa⁴³⁷ lays down the proportions in the following lines:—

“ द्विदण्डं कन्यसव्यासं त्रिदण्डं मध्यमं भवेत् ।
चतुर्दण्डविशालं तु उत्तमं परिकीर्तितम् ॥
विस्तारसदृशोत्सेधादेकदण्डविवर्धनात् ।
विस्तारद्विगुणं यावत् तावद् वै जालकोन्नतम् ॥”

STANZA 42.

Kumbhalatā: The Pot-and-Creeper ornament.

This ornamentation called *Kumbhalatā* or Pot-and-creeper ornament, which is specially prescribed in connection with the beautification of a *Mahāprāsāda* or temple of the Big Class of Structures, is described in the present stanza. It is wrought between the pillars. Its lower part is a *Padma* or *Lotus*. The height of the *Padma* in which the *Kumbha* or vase sits is as much as the *vistāra* of the pillar and its breadth is one

436. Quotation from the *Tantrasamuccaya* with *Vimarsini*, (T. S. S. Ed.), Part I, p. 75.

437. *Kāśyapaśilpa* (Ānandāśrama Series), XI, 4(2), 5, 6(1). Also vide the *Tantrasamuccaya* (T. S. S. Ed.), Part I, page 76. [We have adopted Śankara's reading].

and a quarter of the breadth. According to Kāśyapa, the height of the Padma should be divided into 8 parts and one part should be given to the moulding called Kampa, three parts to the lower Padma, one part to the Gala, two parts to the Ūrdhvapadma and one part to the Kampa above. The Kumbha which comes above will have the same height as the height of the Padma. The creeper springs forth from the mouth of the Kumbha. According to the *Mañjarī* the height of the Kumbhalatā may be equal to the measure between the Prati and the Uttara or even one and a quarter times this measure.

*Kāśyapa*⁴³⁸ states :—

“ स्तम्भमूले तु वेद्युर्ध्वे पद्मासनं प्रकल्पयेत् ।
पादव्याससमुत्तुङ्गं सपादं पद्मविस्तरम् ॥
पद्मोच्चं वसुधा भज्य कम्पमेकांशमुच्यते ।
अधः पद्मं गुणांशं तु एकांशं गलमुच्यते ॥
ऊर्ध्वपद्मं द्विभागं तु कम्पमेकेन कल्पयेत् ।
तदूर्ध्वे कुम्भतुङ्गं तु पद्मस्योच्चसमं भवेत् ॥”

The *Mañjarī*⁴³⁹ states as follows :—

“ प्रत्युत्तरान्तरसमां विदधीत सम्यक् पादाधिकामपि
च कुम्भलतामतोऽपि ॥”

STANZA 43.

The ornamental features of an Alpaprāsāda.

Ornamentation which is special to the Alpaprāsāda is described here. In stanza 38, it was observed that Alpageha, because of the small space that it admits, permits limited ornamentation. In the subsequent stanzas, those ornamentations which enter into the composition of the Māhā-prāsādas have been described. Now, in this stanza (No. 43), the author deals with the ornamentation that is peculiar to the Alpagehas. Divide

438. *Kāśyapaśilpa* (Ānandāśrama Series), XV, 1-3. For quotation, also vide the *Tantrasamuccaya*, Part I, p. 76 (T. S. S. Ed.).

439. *Prayogamañjarī*, Paṭala VI (Ms. Adyar Mss. Library, Madras); also vide the *Tantrasamuccaya Vimarśinī*, Part I, p. 77 (T. S. S. Ed.).

the height of the structure between the Prati and the Uttara into 8 parts and from bottom upwards construct mouldings as stated below :—

Vedi :—1 part.

Pādas (or miniature ornate pillars) :—4 parts.

Valabhyuttara :—1 part. (This is a composite moulding composed of Valabhi and Uttara).

Valabhi has half a part for its height and projection equal to the height. It comes above the Uttara. *Uttara* is made of half a part and it is the beam which runs on all the sides of the wall sitting above the ornate pillars (*Pādas*) situated beneath it.

Kapota :—1 part. It is made in the form of a pigeon's beak. It corresponds to what is known as 'Cornice'.

Gṛhapīṇḍi :—1 part. This is the finishing moulding of the wall. It is ornamented with its own pillar-ornamentations. Above this, there is no more ornamentation. *Uttara*, the beam of the structure, is situated above it.

This brings us to the end of the section on the wall, and the parts that are dealt with hereafter relate to the beam (*Uttara*), ceiling (*Prastara*), roofing (*Śikhara*) etc.

STANZA 44.

The Characteristics of the Uttara.

In the six-fold division of an Indian temple, *Prastara* is the third from bottom upwards and it is situated above the *Stambha* and below the *Gala*. The various mouldings major and minor which enter into its composition are referred to by the author in stanza 53. Among the divisions of *Prastara*, *Uttara* the beam constitutes the most important structural member. It is a horizontal structural division, rectangular in shape. It sits on the walls if walls are present, or on columns, and in the latter instance it extends from column to column. It is treated as a bearing member upholding the load of the roof and the synonyms found mentioned in the *Mānasāra* point towards this essential function of beam ('*Uttara*'). Says the *Mānasāra*⁴⁴⁰ :—

440. *Mānasāra* Text (P. K. Ācārya's Ed.), Ch. XVI, lines 56-58.

“ उत्तरं वाजनमाधारमाधेयं शयनं तथा ॥
उद्धृतं च मूर्धकं चैव महातौलि खवंशकम् ।
प्रच्छादनस्य चाधारमेतत्पर्यायमीरितम् ॥”

In the view of the author of the *Tantrasamuccaya* which is set forth in the opening stanza of this Paṭala, Uttara is the starting point of measure with reference to which the general measure of the structure is spoken of. Hence it forms one of the most important of architectural divisions.

The present stanza deals with the three types of Uttara, differentiated on the basis of their relative breadth and thickness. The classes are called *Khaṇḍottara*, *Patrottara* and *Rūpottara* and they are characterised in order as the best, the middling and the lowest types. The first, known as *Khaṇḍottara*, which belongs to the best variety, has thickness and breadth equal to the *vistāra* of the pillar at the base. It has thickness which is as much as its breadth and this breadth is the same as the breadth of the pillar. *Patrottara* which comes under the middling type has thickness which is three-fourths of this breadth of the *Khaṇḍottara*. The last class of Uttara, namely, the *Rūpottara* possesses as much breadth as has been prescribed for the *Khaṇḍottara*. Its difference lies in its thickness which is half of the breadth. From what has been stated above, it is clear that the breadth prescribed for all the three types of Uttara is common having reference to the breadth of the pillar at the base as it is described as equal to the same of the pillar at the base. The difference therefore lies in the proportion laid down for the thickness, which in the first instance is as much as the breadth, in the second one-fourth less than the breadth, and in the last half less.

With regard to the situation of the last type, namely, the *Rūpottara*, it is said that the position can be reversed as one pleases. That is to say, the Uttara whose thickness is less than its breadth may be so placed that the breadth is made the depth. This reversed position is termed ‘*Cūlī*’ by the author of the *Manuṣyālayacandrikā*. Says he :—

“ उत्तरविस्तारघने व्यत्यस्यापि प्रकल्पयेत् कापि ।
तत्र तु चूलीति मता तस्यामेवार्पयेत् लुपाः⁴⁴¹ ॥”

441. *Manuṣyālayacandrikā* (T. S. S. Ed.), Ch. V, stanza 32.

The three classes of Uttara described above are referred to by other authors in the same way, and the quotations given below will serve to support the classification given in our text.

Thus Gurudeva⁴⁴² observes :—

“ उत्तरं विन्यसेद्धूर्ध्वं तच्चापि त्रिविधं मतम् ।
खण्डोत्तरं पत्रबन्धं ततो रूपोत्तरं भवेत् ॥
स्तम्भविस्तारविस्तीर्णमुन्नतं चाङ्घ्रिजातिजम् ।
खण्डोत्तरं स्यादेतस्मात् पादोनं पत्रबन्धकम् ॥
स्तम्भव्याससमोत्सेधमुत्सेधार्धेन विस्तृतम् ।
विपरीतं तु वा नीचं रूपोत्तरमिदं भवेत् ॥”

The *Mayamata*⁴⁴³ mentions three types of Uttara in the ‘*Prastara-prakarana*’ :—

“ उत्तरादिवृत्तेरन्तं प्रस्तारावयवं क्रमात् ।
वक्ष्ये संक्षिप्य सर्वेषां हर्म्याणामथ योग्यकम् ॥
उत्तरं त्रिविधं पादविस्तारं तत्समोद्गमम् ।
त्रिपादोदयमध्योच्चं विस्तारं पादतः समम् ॥
खण्डोत्तरं पत्रबन्धं रूपोत्तरमिति त्रिधा ॥”

Patrottara in the above text is called ‘*Patrabandha*,’ and it is so called because of the ornamental pattern ‘*Patra*’ which enters into its composition.

For similar classification of Uttara refer to the *Mañjarī*⁴⁴⁴ which states :—

“ विस्तारतीव्रेण समानि पादैर्भूयोत्तराणि प्रविधाय सम्यक् ।
खण्डोत्तरं पत्रविभूषितं च रूपोत्तरं च त्रिविधं भवेत्तत् ॥”

442. *Īśānagurudevapaddhati*, Uttarārḍha, Paṭala XXXI, 75, 76, 77 (T. S. S. Ed.); also, vide the *Vimarśinī*, pp. 77, 78.

443. *Mayamata* (T. S. S. Ed.), Ch. XVI, sts. 1, 2, 3.

444. *Prayogamañjarī*, Paṭ. VI (Ms. from the Adyar Mss. Library, Madras).

The *Nibandhana*⁴⁴⁵ thus states :—

“ खण्डोत्तरं च पत्रादयं रूपोत्तरमिति त्रिधा ।
उत्तरं चतुरश्रं च स्तम्भाष्टांशेन विस्तृतम् ॥”

STANZA 45

Ornamentation of Rūpottara.

In this stanza the author deals with the ornamentation called ‘*Vājana*’ which is wrought on the Rūpottara. The Rūpottara may be associated with one *Vājana* or two *Vājanas*. In the former case the thickness is divided into five parts and two parts are given to the *Vājana*. In the latter case, the thickness is divided into six parts, and one part is set to the construction of an *Alpavājana* (small *Vājana*) and two parts above it to the moulding of the *Mahāvājana*. The projection of the *Vājanas* will be as much as their own thickness. This rule with regard to the projection is also the one approved by the author of the *Kāśyapaśilpa*, who says :—

“ वाजनोच्चसमं प्रोक्तं वाजनस्य तु निर्गमम्⁴⁴⁶ ॥”

In support of the proportions of the *Vājanas* described above, the commentator Śaṅkara quotes the following lines which are ascribed to Gurudeva⁴⁴⁷ :—

“ उत्तरोच्छ्रयषड्भागत्रिभागं घनमानकम् ।
एकांशं वाजनोत्सेधं द्व्यंशं चैवार्धवाजनम् ॥”

In the last quarter of the stanza, the author states the proportion of the *Paṭṭikā* which is to be placed above the Uttara. The depth of the *Paṭṭikā* will be equal to the thickness of the ‘Uttara’ and its breadth will be half of this depth. Such a *Paṭṭikā* is fixed on the Uttara a little extended outwards and runs all around the Uttara. In the *Manuṣyālaya-candrikā* it is called ‘*Kṣudrottāra*’ or small Uttara. The *Uttarapaṭṭikā*

forms the resting place for the rafters. This is stated in the stanza⁴⁴⁸ :—

“ कुर्यादुत्तरपट्टिकोपरि लुपाः etc. ॥”

The following lines from the *Manuṣyālayacandrikā*, which describe in close succession the process in the construction of the Uttara and the proportions of the parts of the Uttara, are noteworthy :—

“ स्तम्भाधस्तारभेदप्रकथनविधिनैवोत्तराणां च तारं
स्वामीष्टं कल्पयेद् वा वसुवसुयुगलाकोर्मिसङ्ख्याङ्गुलैर्वा ।
श्रेष्ठं खण्डोत्तरं तद्विततिसमघनं मध्यमं पत्रसंज्ञं
पादोच्चं कनिष्ठं विततदलघनं तत्तु रूपोत्तराख्यम् ॥
उत्तरविस्तारघने व्यत्यस्यापि प्रकल्पयेत् कापि ।
तत्र तु चूलीति मता तस्यामेवार्पयेत् लुपाः ॥
एक एव यदि वाजनं भवत्युत्तरस्य शरभाजिते घने ।
उच्चमंशयुगलेन निष्क्रमोऽप्यस्य पट्टमवशिष्टभागतः ॥
अल्पवाजनयुतोत्तरे घने नागभागिनि महत् त्रिभागतः ।
एकतोऽल्पमुभयोश्च निष्क्रमः खोच्चतो भवति पट्टमब्धिभिः ॥
बाणांशिन्यखिलोत्तरस्य तु घने द्वाभ्यां महद् वाजनं
चैकेनाल्पमथातनोतु महितं पट्टं च शिष्टांशतः ।
अब्ध्यादीश्वरपश्चिमांशिनि घने सर्वोत्तरस्यैकतो
युक्त्या वाजनयोश्च निष्क्रममथान्यत्रापि चैवं विधिः ॥
स्तम्भमूर्धनि निधाय पोतिकासुत्तरं तदुपरि प्रकल्पयेत् ।
पोतिकाविवरतः समुद्रतस्तम्भमस्तकशिखाहितावटम् ॥
अथोत्तरोच्चोच्चतदर्धतारां क्षुद्रोत्तराख्योत्तरपट्टिकां च ।
सङ्कोलयेदुत्तरबाह्यपश्चादूर्ध्वं दृढैः खोचितदारुकीलैः⁴⁴⁹ ॥”

445. *Saivāgamanibandhana*, Paṭ. XIII, (Ms. from Tripunittura).

446. *Kāśyapaśilpa*, Pāṭala XIX, 13. (Ānandāśrama Series).

447. *Gurudevapaddhati*, stanza quoted in the *Vimarśinī*. Vide T. S., Part I, page 78.

448. *Tantrasamuccaya*, Pāṭala II, st. 48.

449. *Manuṣyālayacandrikā* (T. S. S. Ed.), Ch. V, stanzas 31-37.

STANZA 46.

The Wooden Ceiling.

The construction of the ceiling with wooden beams and planks forms the subject-matter of this verse. To fix up the ceiling, an 'Uttara' called 'Vājanottara' must be made and placed on the regular Uttara inwards. It will be one Daṇḍa, or three-fourth of a Daṇḍa, or half a Daṇḍa in height. The maximum height prescribed for the Vājana is one Daṇḍa, and the term 'ādi' indicates other alternative proportions $\frac{3}{4}$, $\frac{1}{2}$, and $\frac{1}{4}$. A deduction of one-fourth is first mentioned and extending this principle, the other alternatives of half and a quarter result. Place on the Vājanottara the cross-beams called *Tulās* breadthwise to the structure (i.e.) in the direction of the East-West line if the structure faces the East. The height (i.e. the thickness) of the *Tulās* will be one Daṇḍa and their breadth three-fourth of a Daṇḍa. Above the *Tulās*, in the direction of the Uttara place 'Jayantis' with a thickness half cut into the 'Tulās.' *Jayantis* must be made like *Tulās* and placed cross-wise to the *Tulās*. 'Varṇśa' means the 'Uttara' and 'Anuvārṇśa' consequently means in the direction of the Uttara which is the North-South line in the case of a structure which faces the East. 'Tulās' in this instance, occupy the East-West direction and Jayanti the North-South line. Jayanti is described as 'Khaṇḍadāru,' or a piece of wood, in the *Vivaraṇa*. In temple architecture Jayantis are given the same dimensions as the *Tulās*, but in secular structures, as in the case of an ordinary human dwelling, they possess lesser proportion. The author directs the architect to secure an even surface for the beams of the ceiling and determine the 'Anumārgas' or interspaces between the cross-beams. After having fixed up the 'Anumārgas' planks which have suitable thickness should be spread out and the upper portion should be completely covered up, leaving no hole anywhere.

In support and amplification of the above description, the following lines from allied literature may be cited.

Gurudeva⁴⁵⁰ thus observes :—

“ उत्तरोपरि कुर्यात्तु वाजनं तस्य कथ्यते ।
त्रिचतुष्पञ्चदण्डानामायासस्तस्य सम्मतः ॥
स्तम्भविस्तारपादं वा त्रिपादं वोच्छ्रितं भवेत् ।

450. *Gurudevapaddhati*, Uttarārḍha, Paṭ. XXXI, stanzas 81-86 (T. S. S. Ed.).

[दण्डोच्चं वा त्रिपादं वा वाजनं पूर्ववत् स्मृतम् ॥]
वाजनस्योपरिष्ठात् तु कुर्याद् भारतुलावलिम् ॥
स्तम्भविस्तारामांशमुच्छ्रितार्धेन विस्तृता ।
तुलावली स्यात् तासामप्यूर्ध्वे कुर्याज्जयन्तिकाः ॥
तुलाविस्तारमानोच्चा यथालाभं सुविस्तृताः ।
जयन्त्यश्चानुमार्गः स्याद् दण्डार्धबहलश्चितः ॥
अध्यर्धसममुच्चः स्यादथ पार्श्वानुगोत्तरम् ।
वाजनं च तुलाद्वारानुगताः स्युस्ततोऽपि च ॥
वंशानुगा जयन्त्यः स्युस्तुलावदनुमार्गिकाः ।”

The *Nibandhana*⁴⁵¹ observes :—

“ स्तम्भत्रिभागबहलां पट्टिकासमनिष्क्रमाम् ।
उत्तरोपरि विन्यस्य लुपास्तस्या नियोजयेत् ॥”

The *Mañjarī*⁴⁵² states :—

“ उत्सेधतो दण्डविनिर्मितां च तत्पादहीनां बहलेन भूयः ।
कुर्यात्तथा भारतुलां जयन्तीमुत्सेधविस्तारसमां तथैव ॥
दण्डार्धतुल्यो बहलेन तस्मादुत्सेधतोऽप्यर्धमितोऽनुमार्गम् ।
उत्सेधतो दण्डसमं विदध्यात् तस्योर्ध्वतः प्रस्तरमत्युदारम् ॥
पार्श्वानुगास्तूत्तरपट्टिकाः स्युर्द्वारानुगाः भारतुलाः भवेयुः ।
वंशानुगास्तत्र जयन्तयोऽपि प्रवेशमार्गानुगतोऽनुमार्गः ॥
स्तम्भाः धरेयुस्त्वथ चोत्तराणि तान्येव ताः भारतुलाः धरेयुः ।
ताभिर्ध्रियन्तेऽथ जयन्तयो हि ताभिर्ध्रियन्ते च तथानुमार्गाः ॥”

The *Mayamata*⁴⁵³ states as follows :—

“ वाजनोर्ध्वे वलीकोर्ध्वे तुलां सम्यङ्निवेशयेत् ।
दण्डोच्चं वा त्रिपादोच्चमर्धतारसमन्वितम् ॥

451. *Saivāgamanibandhana*, Paṭ. XIII (Ms. from Tripunittura).

452. *Prayogamañjarī*, Pātala VI, (Ms. from the Adyar Mss. Library).

453. *Mayamata*, (T. S. S. Ed.), XVI, 36, 40-46.

तुलविस्तारोच्चा जयन्ती स्यात् तुलोपरि ।
 अर्धदण्डेन तत्रोच्चा जयन्त्यूर्ध्वेऽनुमार्गकम् ॥
 तदूर्ध्वे फलका पादपादपङ्क्तिवक्राः ।
 इष्टकाचूर्णसङ्घातप्रस्तरतम्भविस्तरम् ॥
 करालमुद्गिशुल्भासकलकचिक्कणकर्मवान् ।
 उत्तरं वाजनं चैव तत्पार्श्वानुगतं भवेत् ॥
 तुला द्वारानुयाता हि जयन्ती तिर्यगागता ।
 अनुमार्गं तदूर्ध्वे तु द्वारस्यानुगतं शुभम् ॥
 द्वारतिर्यगागता वाथ तुला देवनृपेशयोः ।
 त्रिदण्डं वा द्विदण्डं वा स्याद् वलीकतुलान्तरम् ॥
 द्विदण्डं सार्धमर्ध्यर्धं जयन्त्यन्तरमिष्यते ।
 दण्डान्तरमनुमार्गं निश्छिद्रं स्यात् तदूर्ध्वतः ॥
 अथ चित्रविकल्पाङ्गा विधेया प्रस्तरक्रिया ॥”

STANZA 47.

The Stone Ceiling.

This stanza describes the mode of construction of a ceiling with such material as stone or brick. In this alternative method of construction the direction is given as follows: From above half the height of the door construct from the four corners walls in the Garbha with stones, or bricks according to the *Kadalikākarāṇa* process and thus close up gradually. This process is explained by the commentator thus⁴⁵⁴ :—

“ उपर्युपर्यन्तरन्तः प्रवेशनं कदलिकाकरणम् ॥”

That is to say, *Kadalikākarāṇa* is the laying of stones one over the other and drawing of each layer above inwards. When each layer above is drawn more and more inside the area above becomes less and less and when the same process is continued up to the summit, the top area admits of being capped by one stone-cap. This process begins with the four main sides from half of the altitude of the door and continues up to the

top of the door. The upper portion from this summit of the door, obtains the octagonal form, and, when the same is rounded off, it (i.e., the portion above the door and below the stone-cap which is octagonal) presents a handsome wavy appearance. This portion above the door and below the final stone-cap will have a height which is half of the Garbhagrha. The closing up must be made gradual, like the closing of the lotus. The whole ceiling in this peculiar mode of construction with its wavy view and gradual closing at the top like that of a lotus will undoubtedly present to our sight beauty in which the human mind deeply delights. The following authority, quoted in the *Vimarśinī*, supports the author's view :—

“ द्वारार्धात् कदलीकारं द्वारसीमान्तमर्धपुटम् ।
 गर्भार्धं कदलिकोत्सेधमथ पूर्णेष्टकं भवेत्⁴⁵⁵ ॥”

STANZA 48.

The Roof

In this stanza, the author prescribes rules which determine the construction and disposition of the rafters (*Lupās*). The commentator Śaṅkara opens his commentary on this verse with the introductory remarks⁴⁵⁶ :— ‘ शिखरनिर्माणविधिमाह—कुर्यादिति ’ thereby suggesting that the *Śikhara* corresponds to the roof of a building. The rafters are to be so placed that their lower end must rest on the *Uttarapaṭṭikā*, while their upper extremity must be secured in what is known as the *Kūṭa*. The *Kūṭa* here referred to is the top-element of the roofing, which functions in keeping the upper extremity of the rafters and in holding together the whole assemblage of the rafters that enter into the making of the roof. The *Śikhā* at the top of the rafters constitutes the basis for the *Kūṭa* and hence in its situation the bottom of the *Kūṭa* is said to turn downwards. In its shape the *Kūṭa* resembles the flower known as ‘*Dhurdhūra*.’ It is made octagonal, or sixteen-faced or circular; or, it may look like a blossomed lotus. Half of its height below is described as round. The above description of the *Kūṭa* is found in the *Manuṣyālayacandrikā*. The dimensions of the *Kūṭa* are also prescribed there. The following stanzas⁴⁵⁷ which describe the *Kūṭa* may be noted in this connection :—

455. *Ibid.*, p. 79.456. *Ibid.*, p. 80.457. *Manuṣyālayacandrikā* (T. S. S. Ed.), Ch. VI, stanzas 9, 10, 11, 16.454. *Tantrasamuccaya* with *Vimarśinī* (T. S. S. Ed.), Part I, p. 79.

“ कूटः कोटिलुपाग्रकल्पितशिखासम्प्राप्तपार्श्ववटः
 पार्श्वक्रान्तलुपाग्ररन्ध्रनिहितायः कीलसङ्कीलितः ।
 आधारोऽस्य लुपाग्रकल्पितशिखा तस्मादधो मूल ए-
 वोक्तोऽसौ विकृता लुपाश्च सकला गेहे समाब्ध्यश्रके ॥
 धूर्ध्रप्रसवोपमोऽष्टनृपकोणो वा तथा वर्तुलः
 सम्फुल्लाब्जयुतोऽथवाथ गुलिकारूपः समध्यादधः ।
 विस्तारद्विगुणायतस्तदुरगाद्यंशोनदीर्घोऽथवा
 कूटोऽब्ध्यादियवोत्थपत्रविलसन्मध्यप्रदेशो भवेत् ॥
 प्रायः सर्वलुपाघनोन्मितपरीणाहं करोतूत्तर-
 व्यासप्रायततं तथाङ्गुलकृतैर्योन्यादिभिः संयुतम् ।
 पट्टं कोटिलुपावितानसदृशायामं लुपासङ्गम-
 स्थानं पत्रपदोर्ध्वमित्थमुदितं कूटस्वरूपादिकम् ॥
 सर्वत्रेष्टाब्ध्यश्रे तिर्यगधः कल्पितात्र रेखा या ।
 सा हि मुजाथोर्ध्वाग्रा कोटिः स्यात् कोणगामिनीकर्णः ॥”

The *Silparatna* describes the Kūṭa in Chapter XXXIII, Stanzas 51 to 56.

After having described where and how the rafters are to be fixed, the author in the remaining quarters of the stanza deals with the method of determining the length of the rafters. The length of the rafters from the centre to the corner will be as much as the measure of the diagonal (*Karṇasūtra*) connecting the Kūṭa with the Uttara. The two sides consisting of the distance from the Uttara to the centre of the Prastara and from the centre of the Prastara to the summit of the Kūṭa being known, the measure of the third side which forms the hypotenuse as it were of a right-angled triangle can be easily fixed. The length of the line which connects the point in the Uttara (where the lower end of the rafter rests) with the top of the Kūṭa constitutes the length of the rafter from the Uttara to the Kūṭa. There will be as many triangles formed from the Kūṭasūtra (centre of the Gṛha) as there are rafters and in each case, the hypotenuse forms the length of the rafter. The whole length of the rafter does not end with the Uttara, but extends further below the Uttara. The proportion of the 'Avalambana' or the part of the rafter which projects downwards below the Uttara is next stated. Four alternatives are furnished $\frac{1}{8}$, $\frac{1}{6}$, $\frac{1}{7}$ or half of the height of the pillar. The total length of the rafter accordingly will be the length of the *Karṇasūtra*

(diagonal or hypotenuse i.e., the line which connects the point in the Uttara with the top of the Kūṭa) together with any one of the proportions which measure $\frac{1}{8}$, $\frac{1}{6}$, $\frac{1}{7}$ or half of the height of the pillar.

With regard to the measurement of Lupā, the following⁴⁵⁸ statement is found in the *Nibandhana* and *Mañjarī* which agrees with the measurement laid down in our text :—

“ मध्यादारभ्य कर्णान्तमनन्तरलुपाक्रमात् ।
 स्वैः स्वैः कर्णस्थितैः सूत्रैर्लुपानां मानमादिशेत् ॥”
 “ पञ्च द्विभागमथ सप्तभिदि त्रिभागं पादस्य चार्धमिति
 (तत्) त्रिविधं लुपान्तम् ॥”

STANZA 49.

The Nipraphalakā and Valayas

In this stanza the author prescribes the proportions of what are known as the Nipraphalakā and Valayas. *Nipraphalakā* is the plank of wood placed on the lower end of the rafters and when fixed to the rafters, it serves to fasten and hold together the different rafters. The *Vivaraṇakāra*⁴⁵⁹ describes it as 'लुपापुखलया फलका' or the plank fixed to the face of the rafters (i.e., to the lower extremity). The breadth of the Nipraphalakā will be one-eighth, one-sixth, or one-seventh less than that of the Uttara, while its thickness will be one-third of its breadth. *Valayas* are square bands run through the hole bored in the middle of the rafters. They cut their way through the rafters and build them together. The breadth of the Valayas is stated to be two, three āṅgulas etc., according as it befits the rafter and their shape is described as square. The *Mañjarī* gives three alternatives—three āṅgulas, two āṅgulas, and one and a half āṅgulas. Any one of these which agrees most with the size of the rafter is intended to be selected. The Nipraphalakā and Valayas are important inasmuch as they lend strength and cohesion to the rafters and bind them integrally together.

458. *Nibandhana*, XIII, *Mañjarī*, VI; quoted in the *Vimarśinī*, p. 80 (T. S. S. Edition).

459. *Tantrasamuccayavivaraṇa* (Ms. R. No. 1994, G.O.M.L., Madras).

The following statement⁴⁶⁰ of the *Mañjarī*, which prescribes the proportions of Valayas, might be noted in this connection for purpose of comparison :—

“ स्यादङ्गुलत्रयमितं वलयं द्वाङ्गुलं चाध्यर्धमङ्गुलमिति
त्रिविधं लुपानाम् ॥”

STANZA 50.

Cover over the rafters and the making of Stūpikā.

This stanza deals with the final stage in the construction of the Śikhara. From the trend of the text as well as from the commentator's observation we are led to suppose that the Śikhara corresponds to the roof of the shrine. We are instructed by this stanza that rafters should be covered all around with planks, prepared out of good timber such as the Sāka (*tectona grandis*). As regards the top it is stated that it must be covered by the last 'Avayava' of the Śikhara, viz., the *Pidhānaphalakā* or the final coping slab or plank. When the material employed in the construction of the Śikhara is stone or brick, it is called 'Mūrdheṣṭakā.' This element *Pidhānaphalakā* or *Mūrdheṣṭakā* functions in a variety of ways. First of all, it serves to close up the top of the Śikhara. In this capacity it may be described as a coping-slab or coping-stone of the Śikhara. Secondly, it functions as a support to the final element of the structure, viz., Stūpikā. Stūpikā is the finial, the topmost crowning part of the structure, especially of a religious character. It bears, according to our author, distinct proportion to the height of the temple, and, as generally laid down, its height is as much as the height of the basement. It is composed of four traditional parts—*Padma* (full-blown Lotus), *Kumbha* (Pot), *Nāla* (Lotus stalk) and *Kuṣmala* (Lotus-bud). These parts of the Stūpikā, situated one above the other, are found accepted as the four traditional parts of the Stūpikā which adorns the roof of shrines met with in Kerala. Havell remarks: "The water-pot or Kalaśa, containing a lotus-bud, placed above the Mahāpadma or the āmalaka as a finial was a most appropriate symbol of the creative element and of life itself".⁴⁶¹

460. *Prayogamañjarī* (Ms. from the Adyar Mss. Library), Paṭala VI, quoted in the *Vimarśinī*, p. 81 (T.S.S. Ed.) of the *Tantrasamuccaya*, Part I.

461. Havell's *Indian Architecture*, page 99.

The fixing of the Stūpikā to the accompaniment of the ceremonials connected with the act of fixing has been elaborately dealt with in texts like the *Mayamata* and *Gurudevapaddhati*. We shall quote below the relevant extracts from the said texts which indicate the ceremonial importance of the fixing of the Stūpikā.

The *Mayamata*⁴⁶² states :—

“ लुपोर्ध्वे फलकं वोर्ध्वे तस्याः कम्पं निधाय च ॥ ६५ ॥
इष्टकासुधया वापि प्रच्छादनमलङ्कियात् ।
स्थूपिकाकलिदीर्घं चैवोक्तोत्सेधसमं मतम् ॥ ६६ ॥
देवानां द्विजभूमीशवैश्यानां भवनेऽधुना ॥ ११६ ॥
मूर्ध्नेष्टका विधातव्याश्चतस्रो लक्षणान्विताः ।
सुस्निग्धाः समदग्धाश्च सुखनास्ताः सुशोभनाः ॥ ११७ ॥
स्त्रीलिङ्गाश्चापि पुल्लिङ्गा भिन्नच्छिद्रादिवर्जिताः ।
विस्तारायामतीत्रैस्तु प्रथमेष्टकया समाः ॥ ११८ ॥
शिलामये शिला प्रोक्ता सर्वदोषविवर्जिता ।
जन्माद्याशिखरान्तं च यैर्द्रव्यैश्च विनिर्मितम् ॥ ११९ ॥
तैरेवादौ तथान्ते च न्यस्तव्याश्चेष्टकाः शुभाः ।
मिश्रद्रव्यैश्च सङ्कीर्णे यैर्द्रव्यैरुपरि स्थितम् ॥ १२० ॥
तैरेव मूर्ध्नि विन्यासं रहस्यमिदमीरितम् ।
लोहजं दारुजं वापि स्थूपिकाकीलमिष्यते ॥ १२१ ॥
विप्रस्वाध्यायघोषैश्च शङ्खभेर्यादिनिःस्वनैः ॥
स्थापयेदिष्टकाः सम्यक् पूर्वदक्षिणतः क्रमात् ।
शिखरार्धे विमानस्य गग्नपत्रान्तरेऽपि वा ॥ १४५ ॥
शिखरत्रिचतुर्भागावसाने वाम्बुजादधः ।
तदाद्यात् स्थूपिकायामात् कीलदैर्घ्यं प्रगृह्यताम् ॥ १४६ ॥
पूर्वमेवेष्टकास्थानं निश्छिद्रं तु दृढीकृतम् ।
तन्मध्ये नवरत्नानि विन्यसेच्च यथाक्रमम् ॥ १४७ ॥
तदूर्ध्वे स्थूपिकाकीलं स्थापयेदचलं समम् ।

462. *Mayamata*, Ch. XVIII, sts. 65, 66, 116 to 121, 144, 145, 146, 147, 151, 194, 195 (T. S. S. Ed.).

..... ॥ १५१ ॥
 स्थूपिकुम्भं सुवर्णेन ताम्रेण रजतेन वा ।
 उपलेष्टक(या?)सौधैर्वा कृत्वा? त्वेष्टं कोलवत्(सु? स्मृ)तम् ॥ १५४ ॥
 सुसंस्थाप्याचलं यावत् प्रोक्षयेत् गन्धवारिणा ।
 विमानादवरुद्धाथ गर्भगेहं च मण्डपम् ॥ १५५ ॥
 प्रोक्षयित्वा मुखे स्थित्वा नत्वा देवं वदेदिदम् ॥”
 etc. etc. etc.

Gurudeva⁴⁶³ deals with this topic in the sections known as ‘Stūpi-vinyāsa’ and ‘Kumbhavinyāsa’. He thus describes:—

“विमानस्य कृतस्याग्रे स्तूपीकुम्भौ च विन्यसेत् ।
 चतस्र इष्टकाः प्राग्बदधिवास्य विधानतः ॥ ५ ॥
 शिखराग्रस्य मध्ये तु कृत्वा पञ्चावटानथ ।
 सर्वरत्नौषधीबीजलोहधातुरसानपि ॥ ६ ॥
 ततो वरसुगन्धांश्च मूलेशानास्त्रमन्त्रितान् ।
 प्रदक्षिणक्रमेणैव मध्यध्वज्रे निधाय तु ॥ ७ ॥
 पृथिव्यादिचतुस्तत्त्वैः सद्याद्यैर्हृदयादिभिः ।
 आग्नेयादिषु कोणेषु चतस्रोऽपीष्टका न्यसेत् ॥ ८ ॥
 निष्पाद्य स्तूपिकाकीलं लौहं दारवमेव वा ।
 लिङ्गाभं सूचिकाग्रं वा शिखराकारमेव वा ॥ ९ ॥
 ऊर्ध्वभूस्तम्भदीर्घं तद् विस्तृतं पादमानतः ।
 आनुपूर्व्यात् कृशं कुर्यादग्रे चाङ्गुलिविस्तृतम् ॥ १० ॥
 आयामे तु त्रिधा भक्ते चतुरश्रं तु मूलतः ।
 भवेच्च वृत्तो मध्यांशश्चान्त्यांशः शिखिपादवत् ॥ ११ ॥
 पुण्याहवाद्यघोषाद्यैर्लग्ने कीलं तु विन्यसेत् ।
 प्रागुक्ते मध्यमे गते स्तूप्ययामे शरांशके ॥ १२ ॥
 अंशत्रयमदृश्यं स्याद् दृश्यावूर्ध्वोऽंशकौ यथा ।
 शिलाभिरिष्टकाभिर्वा बध्नीयात् परितो दृढम् ॥ १३ ॥

463. *Īśānagurudevapaddhati*, Uttarārḍha, Pāṭala XXXIV, sts. 5-15, 20-23, 25 (T. S. S. Ed.).

एकद्वित्रिद्वययुते तेन ताभ्यां च तैरपि ।
 द्रव्यैराच्छादनं मूर्ध्नि स्तूप्यास्तु परितः स्मृतम् ॥ १४ ॥
 सुधयाथ दृढीकृत्य सवल्लीकं सलक्षणम् ।
 पद्ममष्टदलं कृत्वा स्तूपिकां भूषयेत्ततः ॥ १५ ॥
 अथ कुम्भं तु सौवर्णं राजतं शौल्बमेव वा ॥ २० ॥
 सौधं वा मार्तिकं वापि गृहीत्वा लक्षणान्वितम् ।
 सुदिनर्क्षमुहूर्तादौ स्नात्वाथ स्थपतिः सुधीः ॥ २१ ॥
 भूषितो वस्त्रहेमाद्यैः प्राङ्मुखोदङ्मुखोऽपि वा ।
 कुम्भाघारे तु विन्यस्य हेमरत्नौषधीरसान् ॥ २२ ॥
 स्तूपिकाच्छादकं कुम्भं स्तूप्याकारशिखं न्यसेत् ।
 यथा दृढं सुनिश्चिद्रं कुम्भमूलं समन्ततः ॥ २५ ॥
 सुधालोहादिवन्धेन बध्नीयाच्छलक्षणकुट्टिमम् ॥”

The text of the *Mānasāra* on this subject as presented in P. K. Ācārya's edition leaves much to be desired. The defective nature of the text and the still more defective translation of it have been exposed in the Article on Stūpi in the Journal of “*Indian Culture*.”⁴⁶⁴

SIKHARA AND STŪPIKĀ

Much confusion prevails in the writings of several authors due to the imperfect understanding or gross misunderstanding of the significance of the terms ‘Sikhara’ and ‘Stūpikā.’ In the course of his articles⁴⁶⁵ on ‘Sikhara’ and ‘Stūpi,’ Prof. Pisharoti has attempted to point out the difficulties that confront one in going through the several writings on the subject of Indian temple architecture because of the defective character of the rendering of these technical terms ‘Sikhara’ and ‘Stūpikā.’ We shall not enter here into the details of the discussion, but shall investigate the origin and significance of these two terms. We shall try to understand them in the sense in which they were understood and employed in the original literature on the subject of temple architecture.

Sikhara. The term ‘Sikhara’ is derived from the word ‘Sikhā.’ Its derivation⁴⁶⁶ may be stated as follows:— ‘शिखास्त्यस्येति । शिखा + रः—

464. ‘Stūpi’ by K. R. Pisharoti, *Indian Culture*, Vol. III, No. 2, pp. 353-358.

465. *Annamalai University Journal* 1935; *Indian Culture*, Vol. III, No. 2.

466. Vide *Śabdakalpādruma*, under the word ‘Sikhara.’

‘द्वस्त्र’-शिवरः ।’ This is the derivation given in the *Śabdakalpadruma*. The synonym of Śikhara that is found given there is ‘शिरस्’. Amara and the author of the *Śabdaratnāvalī* take note of the synonym “Śiras.” The *Vācaspatya*⁴⁶⁷ observes : ‘शिखा अस्त्रस्य ‘चरच्’ आलोपः’. It is clear from the derivation explained in the above quoted lexicons that the term ‘Śikhara’ is derived from the word ‘Śikhā.’ Śikhā means ‘top-knot’ (शिरोमध्यस्थकेशः or the tuft of hair on the middle of the head). That which has the tuft of hair is the head and hence ‘Śikhara’ came to denote the ‘head.’ The suffix ‘र’ in शिखा+र is used in the sense of ‘Matup’ which indicates ‘possession.’ The synonyms ‘Śiras’ and ‘Śirṣa’ are found freely and extensively employed by the architectural authorities in their writings on architecture. The authors of the “*Three Main Styles of Indian Temple Architecture*”⁴⁶⁸ have also accepted the derivational meaning ‘head.’ This portion called Śikhara or Śiras, corresponds to the roof of the structure, and is the determining feature of the style of architecture. As the features of the human face serve to distinguish one man from another, so does the shape of the Śikhara help to distinguish one style of temple from another. The final element of Śikhara is the ‘Pidhānaphalakā,’ the coping-slab which covers or closes up the ‘Kūṭa,’ the part at the upper extremity of the roof in which is secured the extremity of the rafters. This Kūṭa, it may be remembered, corresponds to the bone of the forehead, for the term ‘Kūṭa’ means that (i.e., the bone of the forehead with its projection or prominence).⁴⁶⁹

Stūpikā. The origin of this term may be sought in the word ‘Stūpa!’ We do not find in the term ‘Stūpikā’ any corrupt derivation. The word ‘Stūpā’ is found used in the most ancient literary record extant, viz., the *Rgveda*. In the *Rgveda* it occurs in the following passages :—(1)⁴⁷⁰ उप स्पृश दिव्यं सानु स्तूपैः (2)⁴⁷¹ अबुध्ने राजा वरुणो वनस्योर्ध्वं स्तूपं ददते.

In later Vedic literature also, as for instance in the *Vājasaneyi Samhitā*,⁴⁷² *Śatapatha Brāhmaṇa*,⁴⁷³ *Taittirīya Samhitā*,⁴⁷⁴ *Pañcaviṃśa*

*Brāhmaṇa*⁴⁷⁵ etc., the word ‘Stūpa’ is used to denote the tuft of hair or top-knot. Macdonell⁴⁷⁶ and Keith observe : “*Stūpa* in the *Rgveda* and later denotes the ‘top-knot’ of hair as designating the upper part of the head.” Roth also gives this meaning with reference to the word Stūpa or stupa⁴⁷⁷—स्तूप *schopf*, says he. The word ‘Stūpa’ therefore as the ancient Indian literary records indicate, has to be understood in the original sense of ‘top-knot’ or the ‘tuft of hair’ and not in the sense of a Buddhist mound as far as the derivational side of the word is concerned. It was in the sense of top-knot or tuft of hair that Stūpikā was originally and derivationally understood by architectural authorities who conceived of the temple in terms of the human organism. The other synonym found employed in the same sense is the term ‘Śikhā.’ *Gurudeva*⁴⁷⁸ clearly expresses this view of the Hindu builders in the line ‘शिखाशब्देन स्तूपिकोच्यते’. The authors of the ‘*Three Main Styles of Indian Temple Architecture*’ are right when they render the term ‘Śikhā’ by the expression ‘upright tuft,’ but they seem to go wrong when they interpret the same word in the sense of ‘flame’ in the same context, as such a rendering is not called forth by the context.⁴⁷⁹ The meaning ‘flame’ does not fit in with the interpretation of Śikhara in the sense of ‘head’ which they give in the sentence.

Hair on the head is a sign of beauty and it is an aesthetic necessity in that it makes the human form look perfect. It forms synthetically a part of the human figure and grows inevitably from it. It lends to the form a sense of conclusion which is not sudden, but in accord with the principles of ‘punctuation’ and ‘inflection.’ Is not a head without hair, a head which looks bald and dry looked upon as something incomplete and offensive to a keen sense of beauty? In the same way as the human figure is considered imperfect without the mark of hair on the head, is the form of a building viewed when shorn of ‘Śikhā or Stūpikā,’ the aesthetic element which punctuates the upper part of the structure. The presence of this crowning and adorning element is emphasised in accord with the laws of punctuation and inflection which hold good in a really fine building. Hence was Stūpikā or Śikhā held as an indispensable member of a structure by Indian builders, who include it in their six-fold classification of an Indian temple. Being the final and

467. Vide *Vācaspatya* under the word ‘Śikhara.’

468. *Bulletin of the Government Museum, Madras* (Gravelly and Rāmachandran), page 2.

469. Monier William’s Dictionary, Sanskrit to English.

470. *Rg Veda*, vii, 2, 1.

471. *Rg Veda*, i.24, 7.

472. *Vājasaneyi Samhitā*, ii.2; xxv.2. [Stupa=‘tuft of hair’].

473. *Ś.B.*, i, 3, 3, 5; iii, 5, 3, 4. [Stupa=‘tuft of hair’].

474. *Taittirīya Samhitā*, iii.3, 6, 5. [Stūpa=‘top-knot’].

475. *Pañcaviṃśa Brāhmaṇa*, xiii. 4, 4.

476. *Vedic Index of Names and Subjects* (Vol. II, p. 483).

477. *Sanskrit-Wörterbuch* (Böhtlingk und Roth), VII, columns 1268 and 1269.

478. *Gurudevapaddhati*, Uttarārḍha, Paṭ. 28 after st. 36.

479. *Three Main Styles of Indian Temple Architecture* by Gravelly and Rāmachandran, *Bulletin of the Government Museum, Madras*, page 2.

top-most element, it can be rendered by no better corresponding expression than by the term 'finial.' Other terms, such as dome, pinnacle etc., either imperfectly bring out its significance or totally convey sense other than what the term actually stands for. Dr. P. K. Ācārya renders the term by such expressions as "a dome, a cupola, a spherical roof rising like an inverted cup over a circular, square or multangular building, a pinnacle, a steeple-tower."⁴⁸⁰ In another place,⁴⁸¹ the same scholar remarks:—"Above the dome (stūpi) are built in order Śikhara, Śikhā, Śikhānta, and Śikhāmaṇi." In his Translation of the *Mānasāra*, Ācārya translates the term 'Stūpikā' as 'dome', and 'Śikhā' as 'pinnacle'.⁴⁸² None of these varied renderings can be taken to point out the significance of the term 'Stūpikā.' "The dome is an obvious type of covering for the primitive circular hut in countries where building materials are only in small units, such as bricks, and where timber is lacking."⁴⁸³ The term 'dome' is elsewhere⁴⁸⁴ described as "rounded vault forming the roof of a building or chief part of it, and having a circular, elliptical or polygonal base; a cupola." Stūpikā, being not a roof, but the top-most part of a building adorning the roof itself, cannot be said to correspond to a dome. Moreover, the term 'dome' is used only with respect to any structure of circular design, whereas Stūpikā figures in buildings of any shape, circular or square, hexagonal or octagonal. The second statement, where Ācārya speaks of Śikhara etc., being built above the 'Stūpi', conveys no meaning. In the third instance of translation, where Ācārya strives to mark a line of distinction between Stūpikā and Śikhā, no such distinction can be detected, as the term 'Śikhā' is obviously used by Sanskrit writers as a synonym of Stūpikā (शिखाशब्देन स्तूपिकीच्यते —Gurudeva). Even the term 'pinnacle' is only loosely applied to denote 'Stūpikā', because the word 'pinnacle' though employed to refer to the decorative motif serving as the upper termination of a building, is yet distinguished from the term 'finial' which is the topmost decorative element. Finial is situated above the pinnacle. The word (pinnacle) "is distinguished from finial as signifying a larger motive, sometimes of considerable complexity, whereas a finial is a single ornament, and from tower or turret by the fact that a pinnacle is always a strictly subsidiary motive. Thus a Gothic tower and spire may be decorated with pinnacles, each one of which is capped by a finial."⁴⁸⁵

From the above description it will be obvious that the terms dome, pinnacle etc., cannot, in any appropriate sense, be applied to denote the final element of structure 'Stūpikā'. Being the top-most element, it may, however, be described by the expression 'finial.' It is treated as an independent unit by Indian authorities, unit distinct and different from the parts below such as Śikhara, Gala etc. It expresses its relationship with the whole structure and consistent with its importance as a unit, it admits of parts in its turn.

In the division of the Stūpikā into parts and in its proportion with reference to the total height of the structure, there may be noticed some amount of variation, but such a variation is inevitable in the very nature of its development. Kāśyapa⁴⁸⁶ in the course of the enumeration of the several principal parts of a temple, in a variety of proportions, assigns for the Stūpikā proportions $\frac{1}{6}$, $\frac{1}{7}$, $\frac{1}{8}$, $\frac{1}{9}$, $\frac{1}{10}$, and $\frac{1}{11}$ of the total height of the temple. In actual practice too, variation is discernible in the proportion that the Stūpikā bears to the height of the building in the different parts of India. In many of the North Indian shrines finial appears with pot-shape as its pronounced feature and is called therefore 'pot-shaped finial' by some modern scholars.⁴⁸⁷

Modern writers are not unanimous in their opinion in respect of the origin and function of 'Stūpi.' Jouveau Dubreuil⁴⁸⁸ thinks that Stūpis had their origin undoubtedly in the pots of baked earth, placed on wooden roofing with a view to protecting them from rain. A. H. Longhurst,⁴⁸⁹ on the other hand, believes that Stūpi serves no useful purpose. Whether it serves any useful purpose or not, it is considered by architectural authorities in India as an essential element of an Indian temple, an element that adorns the Śikhara and lends the structure an air of completeness and perfection. It is born of the law of punctuation which reigns supreme in the realm of art. It perfectly accords with the interpretation of Indian Temple Architecture in terms of the human organism. The terms 'Śikhā' and 'Stūpikā' which originally denote a 'top-knot' serve in their significatory capacity to lend support to such an interpretation. With regard to its shape, the artist seems to have followed originally the patterns of Padma and Kumuda. Gangoly⁴⁹⁰ suggests

486. Kāśyapaśilpa, (Ānandāśrama Series), Paṭala XXVII.

487. Vide for instance the *History of Indian and Indonesian Art*, page 115.

488. *Dravidian Architecture*, p. 32.

489. *Annual Report of the Archaeological Department*, 1915-16, Southern Circle, Madras, page 31.

490. *Indian Architecture* by Manomohan Gangoly, *Journal of the Bihar and Orissa Research Society*, Vol. XII, Pt. III, page 420.

480. *A Dictionary of Hindu Architecture*, p. 707.

481. *A Dictionary of Hindu Architecture*, p. 588.

482. Vide, Translation of lines 92, 101, 102, Ch. XVIII.

483. *Encyclopaedia Britannica*, 14th Edition, Vol. VII, p. 511.

484. *A New English Dictionary*, Vol. III, p. 593 (Oxford).

485. *Encyclopaedia Britannica*, under "Pinnacle" (14th Ed.), Vol. XVII, p. 942.

that the shape of the vase or Kumbha was probably the result of the gradual conversion of two full-blown lotuses prompted by a sense of symmetry to repeat the base. Havell would have us believe that Kalaśa or sacrificial pot was moulded after the shape of Kumuda. "It was the jar," says he, "which contained the amrita or elixir of immortality, the nectar of the gods; and thus its form was adapted not only to sacrificial vessels, but to the ordinary Indian domestic water-pot, the loṭa".⁴⁹¹ This view is further strengthened by the identification which the Vivaraṇakāra observes in the shape of Kumuda and Kumbha in the statement "कुमुदं कुम्भवद्वृत्तम्"⁴⁹². In its full-blown form Stūpikā is not a mere pot, but an architectural element composed of various parts which from bottom upwards are (1) Eight-petalled lotus or Mahāpadma, (2) Kumbha or pot, (3) Nāla or lotus stalk, and (4) Kuṣmala or lotus bud. All the constituents of a lotus plant—the stalk, the bud and the blossomed flower—are referred to here and, as regards Kumbha, it may be assumed that it is either the result of two full-blown lotuses placed one facing the other and gradually converted to one shape or an adaptation from the shape of the Kumuda, the white water-lily. In any case, the origin of the various parts which compose the Stūpikā is to be traced in the forms of the beautiful products of Nature. These forms are certainly very artistic and enchanting and in the imagination of Indian artists they are important because they are spiritual in their associations. The lotus for instance is the flower associated with the God Viṣṇu or Sūrya and with the Goddess Lakṣmī. The whole lotus plant, inclusive of all the parts, symbolises most beautifully the springing of creative life from the ocean of eternity.

STANZA 51:

The Covering of Śikhara.

In this stanza, the author refers to the materials that may be employed in the covering and protection of the roof. In places where meteorological conditions strongly prevail, the roof needs protection and hence copper sheets, bricks and such other strong materials as are capable of resisting the inclemencies of weather are prescribed for the covering of the roof. An architect must gauge the forces of Nature and so arrange the defending members of the building that they should stand firm against Nature's furious moods and protect the dwellers inside. He must make the roof in such a manner that it must resist the scorch-

ing heat of the summer sun and keep out the beating waters of a heavy rain-fall. The foundation of his building should be so deeply laid and the basement so firmly constructed that his structure must stand unmoved before any sweeping storm. While it is true that architects, here as elsewhere, offered grim resistance to the furious forces of Nature, it must not be supposed that they aimed at conquering Nature in a vein of pride or triumph. For they were ever ready to listen to Her sweeter calls. They felt delighted in the manifestations of the healing and the soothing phenomena of Nature. They gloried in the light of the rising and the setting Sun and gave to their basement mouldings, the light-catching and the shadow-throwing devices. They gloried in the beauty of creation, which is summed up in the lotus and the lily. They adopted Nature's patterns in the repertory of their architectural ornament. It must be remembered in this connection, that the Indian artist is not one who copied Nature simply and for its own sake, or for a merely ornamental purpose. For it was never in his strain to cry 'art for art's sake.' Spirituality, rooted in his soul, endowed him with a vision which is different from the ordinary angle of vision. Contemplative by nature that he is, he visioned with the mind's eye and discovered in the lotus and the lily fair symbols of a creative element and the peaceful serenity of a fundamental and spiritual existence. Thus the relationship of artist with Nature was not one of conflict between man and Nature, but of identification with the inner consciousness of a creative Nature. There was complete association of artist with Nature in all Her restorative office. Though he defended against the destructive energies of Nature with a view to self-protection through the defending members of his building, the artist in India, was on the whole moving in harmony with the rhythmic activity of Nature, and the result he achieved finally was vitally creative and emotionally responsive.

VIMĀNAŚIKHARA.

The compound expression 'Vimānaśikhara' demands some explanation in view of the fact that the two words 'Vimāna' and 'Śikhara' have been imperfectly interpreted and very loosely employed by some modern exponents of the subject of Indian architecture. The authors of the "*Three Main Styles of Indian Temple Architecture*," for instance, call a tower 'Vimāna.' "The tower itself is a Vimāna"⁴⁹³—they say. In the "*Outline of Indian Temple Architecture*," Dr. Gravely

491. *A Study of Indo-Aryan Civilisation*, page 60.

492. *Tantrasamuccaya Vivaraṇa*, Ms. R. No. 1994, G.O.M.L., Madras.

493. Bulletin of the Government Museum, Madras, 1934 (New Series, Gen. Sect. III, Pt. I), page 2.

observes:⁴⁹⁴ "The term *Śikhara* relates to a structure forming part of the tower (*Vimāna*) in all the three styles of temple—*Nāgara*, *Vesara* and *Drāviḍa*—recognised by the *Śilpaśāstras*." He further speaks of "Vimāna of temple."⁴⁹⁵ Charu-Chandra Das Gupta also states referring to a temple, that it originally "consisted of the *Vimāna*,⁴⁹⁶ the *Śikhara* and the *Maṇṭapa*." Banerji in the "History of Orissa" similarly refers to the 'Vimāna and Śikhara of a temple.'⁴⁹⁷ In the wake of S. K. Iyyengar, Gurudas Sarkar observes:⁴⁹⁸ "the name *Vimāna* thus came to be applied to "the tower of inner shrine or sancta of the temples." Dr. Venkaṭa Ramanayya⁴⁹⁹ identifies *Vimāna* with a tower over a shrine, with 'stūpi' as he calls a tower and so on; in other words, he takes it in the sense of a part of the temple. While the term 'Vimāna' is thus interpreted by some in the sense of a part, it is understood in the sense of the whole by others. Thus Masson⁵⁰⁰ and others, the authors of "Ancient India and Indian Civilisation" identify *Vimāna* with the sanctuary. J. Dubreuil⁵⁰¹ says: "In the early Chola period, it is the sanctuary of the temple, which one calls the *Vimāna*, that assumes all of a sudden gigantic proportions etc." Dr. Ananda K. Coomāraswāmy⁵⁰² applies the term 'Vimāna' to refer to 'Dravidian temples.' In the view of the authors of the *Śilpaśāstras* the term 'Vimāna' denotes the whole structure from the basement to the finial. It refers to the central shrine in which is enshrined the image. It is not found used with reference to any part of the temple.

The compound 'विमानशिखरम्' is a *Ṣaṣṭitāt-puruṣa* and is to be spilt as 'विमानस्य शिखरम्' where 'Vimāna' is the whole of which 'Śikhara' is a part. Śaṅkara⁵⁰³ explains the compound expression in the phrase 'प्रासादोपरिप्रदेशम्' which means the above portion of the *Prāsāda*. Here *Vimāna* is interpreted to mean *Prāsāda*, (i.e.) the temple as a whole, inclusive of all its main parts beginning with the

basement and ending with the finial. Gurudeva⁵⁰⁴ speaks of the *Adhiṣṭhāna* as part of the *Vimāna*. Thus he states:—

“ विमानानामधिष्ठानं सोपपीठं निगद्यते ।”

The definition⁵⁰⁵ of *Vimāna* as given by Gurudeva is significant and it runs as follows:—

“ नानामानविधानत्वाद् विमानं शास्त्रतः कृतम् ।”

In the term 'Vimāna,' as defined by Gurudeva, it is interesting to note the component word 'māna' (measure) and the preposition 'Vi' (varied). According to this definition *Vimāna* must be taken to mean the structure which admits of a variety of measures. Temple or palace is given so many wide and varied measures that it came to be classified under various measure types. Variety of measures thus became the distinguishing feature of a temple or palace. Gurudeva devotes one *Paṭala* to the measures of structure and he calls it '*Nānāvīmānalakṣaṇādhikāra*.'⁵⁰⁶ Whatever may be the derivation of the term 'Vimāna,' it deserves to be noticed that the term was consistently and uniformly applied by all Sanskrit writers with reference to the temple, the sanctum sanctorum, and it is found employed in architectural literature as a synonym of terms like '*Prāsāda*,' '*Bhavana*,' '*Harmya*,' etc. Thus the *Mayamata*⁵⁰⁷ states:—

“ विमानं भवनं हर्म्यं सौधं धाम निकेतनम् ।

प्रासादं सदनं सन्न गेहमावासकं गृहम् ॥

आलयं निलयं वासमास्पदं वस्तु वास्तुकम् ।

क्षेत्रमायतनं वेष्टम मन्दिरं धिष्ण्यकं पदम् ॥

लयं क्षयमगारं च तथोदवसितं पुनः ।

स्थानमित्येवमुक्ताश्च पर्यायाख्या हि पण्डितैः ॥”

The *Kāśyapaśilpa*⁵⁰⁸ thus enumerates the synonyms:—

“ प्रासादः सदनं सन्न हर्म्यं धाम निकेतनम् ॥

मन्दिरं भवनं वासो गेहं दिव्यविमानकम् ।

494. Bulletin of the Government Museum, Madras, Vol. III, Pt. II, 1936, page 2, foot-note 4.

495. Ibid., page 4.

496. *Journal of the Department of Letters* (Calcutta), Vol. XXIX, 1937, article, page 1.

497. *History of Orissa*, II, p. 343.

498. *Rūpam*, 1922, p. 55; also, vide p. 42, 'Vimāna of the temple.'

499. *Origin of South Indian Temple*, pp. 78, 37, 38, etc.

500. *Ancient India*, p. 355.

501. *Dravidian Architecture*, p. 37.

502. *Arts and Crafts of India and Ceylon*, p. 118.

503. *Tantrasamuccaya with Vimarśinī* (T. S. S. Ed.), Part I, p. 81.

504. *Īśāna Gurudevapaddhati*, Uttarārdha, Paṭ. XXX, st. 65 (T. S. S. Ed.).

505. Ibid., Paṭala XVIII, st. 2.

506. Ibid., Paṭala XXVIII, st. 2.

507. *Mayamata*, Ch. XIX, 10, 11, 12 (T. S. S. Edition).

508. *Kāśyapaśilpa* (Ānandāśrama Series), XXIII, 1, 2, 3.

आश्रयं चाऽऽस्पदं चैव आधारं च क्रमेण तु ॥
आधारप्रतिधिष्यं च हर्म्यपर्यायवाचकाः ।”

The *Mānasāra*⁵⁰⁹ likewise says:—

“ विमानं सम [ल]ये हर्म्यं चालयं वा चाधिष्यकम् ॥
प्रासादं भवने क्षेत्रे मन्दिरा(रमा)यतनं तदा ।
वेश्म च गृहमावासं क्षयं धाम सनातनम् ॥
वासं गेहमागारं वा सदनं वसितं गृहम् ।
निलयं तल(लं)कोष्ठं च स्थानं पर्यायवाचकम् ॥”

The author of the *Nibandhana* refers to octagonal, circular, square and other shaped Śikhara of the Vimāna, thereby indicating that Śikhara forms a part of the Vimāna (i.e., the temple). Thus the *Nibandhana*⁵¹⁰ states:—

“ अष्टाश्रं मण्डलमयं चतुरश्रं च शालिका ।
कुर्याच्चतुर्विधान्येवं विमानशिखराणि तु ॥”

The *Mañjarī* refers to Vimāna with one Tala in the sense of Ekatalaprāsāda. Thus it observes⁵¹¹:—

“ मूलाग्रयोरेकतले विमाने ।”

Instances may thus be multiplied to show that the term ‘Vimāna’ is used by architectural authorities in ancient India in the sense of not a part, but the whole structure.

THE CAR THEORY.

Dr. Coomāraswāmy presumes that the forms of temples were derived from cars of gods on the ground that in the Rāmāyaṇa, Ayodhya is compared to a celestial car, and that it was described as full of shrines which gave it the impression of the home of the cars of Gods. The ritual of carrying of images in processional car is cited as an instance in point. Continuing he remarks: “The resemblance of the Āryāvarta Śikhara,

to the bamboo scaffolding of a processional car is too striking to be accidental. More than that, we actually find stone temples of great size provided with enormous stone wheels (Koṇārak, Vijayanagar): and the monolithic temples at Māmallapuram (7th century) are actually called *rathas*, that is cars, while the term *Vimāna*, applied to later Dravidian temples, has originally the same sense, of vehicle or moving palace. Something of the sense of life belonging to the older vehicles remains associated with the later buildings.”⁵¹² The supposition that cars formed the prototypes of temples does not seem to us tenable, because it presumes that there were no permanent temples before. Seasonal festivals and processions are essentially conditions of an established system of worship and they demand a permanent abode of the deity that is taken out on ceremonial occasions in processional cars. Kings, who are believed, according to the theory of Divine Right, to represent God on earth are carried in state cars or couches in procession on certain ceremonial occasions, but this does not mean that they are always so carried. They have a permanent palace which constitutes their permanent abode. In like manner the ritual of procession presupposes the existence of a permanent shrine, and cars which happen to be temporary and moving things, would have in all likelihood derived their form from the shape of a structure which is already permanent and settled. Otherwise it presents, as Havell remarks, ‘a case of putting the cart before the horse.’ The shape of the Śikhara or roof, as it is found described in architectural texts, admits of so many varied forms, such as the square, octagonal, hexagonal and the like, and all these could not be said to have had their origin in the circular bamboo scaffolding of a processional car. Again, there is no historical basis for the view that temples were fashioned after the cars. Havell appears to us right in holding that the Rathas of Māmallapuram and the Sūrya temples at Koṇārak are instances of attempts made by medieval builders to give literary imagination concrete form by placing stone wheels on the side of the Vimāna. Havell observes: “The temple car on which the sacred image was carried in procession could not have been introduced into the temple ritual before the image itself became part of it i.e. before the first centuries and after the Christian era—and all the constructive types, as well as the symbolism connected with them, if Indian temple building had been developed before that time. There is no instance of *Vimānas* being made like rathas, or cars, before the tenth century.”⁵¹³

512. *Arts and Crafts of India and Ceylon*, pp. 118, 119.

513. *A Study of Indo-Aryan Civilisation*, p. 44.

509. *Mānasāra*, Text (P. K. Acārya's Edition), XIX, lines 108-112.

510. *Śaivāgamanibandhana*, Pātala XIII (a Ms. from Tripunittura).

511. *Prayogamañjarī*, Pātala VI (Ms. Adyar Mss. Library, Madras).

STANZA 52.

Six main parts and their Proportion.

The author, in this stanza, treats of the proportion of the various parts of a temple coming under the *Alpaprāsāda* class. Six main parts are mentioned beginning with the *Adhiṣṭhāna* and ending with the *Stūpikā* and in the matter of the enumeration of these six parts there is perfect agreement between all the authorities on Indian temple architecture. From bottom upwards the six parts are *Adhiṣṭhāna* (basement), *Pāda* (pillar), *Prastara* (entablature), *Gala* (neck), *Śikhara* (head), and *Stūpikā* (finial). With regard to their height, these parts bear fixed and relative proportion to one another. Our author, in this verse, prescribes the simplest and most commonly accepted proportions. The height of the building, which is twice its breadth, having been divided into eight parts, one part thereof will be given to the *Māsūṛaka* (basement), two parts to the *Stambha* (pillar, wall also), one part to the *Prastara* (entablature), one part to the *Gala* (neck), two parts to the *Śikhara* (head), and one part to the *Stūpikā* (finial). That there is consensus of opinion among the various authorities with regard to the proportion prescribed in our text is made clear by the references given below from allied literature.

The *Kāśyapaśilpa*⁵¹⁴ thus observes :—

“ हर्म्योच्चं वसुधा भज्य एकांशं हि तलोलतम् ।
द्विभागं चरणायामं प्रस्तरस्यैकभागता ॥
गलोच्चं त्वेकभागेन द्विभागं शिखरोदयम् ।
एकांशं स्तूपितुङ्गं तु कल्प्येवं शान्तिकं भवेत् ॥”

The *Gurudevapaddhati*⁵¹⁵ states :—

“ एवं चाल्पविमानानि विज्ञेयानि यथारुचि ।
एकभौमानि वा कुर्याद् द्वितलान्तानि शक्तिः ॥
एतेषामात्तविस्ताराद् द्विगुणः स्यादिहोच्छ्रयः ।
उच्छ्रये चाष्टधा भक्ते स्यादधिष्ठानमंशतः ॥
स्तम्भोत्सेधस्तु भागाभ्यां प्रस्तरस्यैकभागिकः ।
कण्ठश्चांशेन शिखरं द्वाभ्यां स्थूपिस्तथांशतः ॥
एवं धामैकतलकं द्वितलं च समूहयेत् ॥”

514. *Kāśyapaśilpa*, XXVII, 14, 15 (Ānandāśrama Series).

515. *Gurudevapaddhati*, Uttarārdha, XXX, 59-62 (T. S. S. Ed.).

The *Mānasāra*⁵¹⁶ similarly states:—

“ उत्सेधे चाष्टभागे तु चैकांशेन मसूरकम् ।
द्विभागं चाङ्घ्रिकोत्तुङ्गं मञ्चमेवेन कारयेत् ॥
कन्धरं तत्समं कुर्यात्तद्वयं शिखरोदयम् (यः) ।
तदर्धं स्तूपिकोत्तुङ्गं ॥”

The *Silparatna*⁵¹⁷ refers to the present stanza in the Chapter on *Śāntikādinīyama* and adds other alternative proportions given in the *Kāśyapaśilpa*.

The commentator Śaṅkara calls this prescription an alternative rule. Thus he remarks:⁵¹⁸ ‘पक्षान्तरेण कचिदल्पप्रासादे नियममाह ... अल्प इति’. This remark contains the suggestion that there are other alternatives. In stanza 7 the author has already laid down four alternative heights relative to the breadth of the structure but the relative proportions of parts are not stated. Here the author states the most commonly accepted rule regarding the height of the building and refers to the most commonly accepted distribution of height among the members of the structure. The denomination given to this proportion of height (Ht—2B) by Maya is ‘Sarakāmika’. The text of *Kāśyapa*,⁵¹⁹ which deals with four more alternative proportions of the parts of the temple under the technical names *Pauṣṭika*, *Jayada*, *Adbhuta* and *Sarakāmika*, amplifies the topic under consideration. The proportions stated in our text, here, are stated there under the variety of *Prāsāda* called ‘Śāntika.’ The *Silparatna* refers to the lines of *Kāśyapa* in the Chapter styled ‘Śāntikādinīyama.’⁵²⁰ In the matter of the division of the whole height of the temple into a certain number of equal parts and the proportionate distribution of the same among the main six members of the structure, the *Mānasāra* is massive in details. It devotes a large part of the Chapter *Ekatalavidhāna*⁵²¹ towards the treatment of this subject. The proportions laid down in the present stanza of our text, according to Gurudeva, may apply to both *Ekatalavidhāna* and *Dvitalavidhāna*.

516. *Mānasāra* Text, XIX, lines 21-24 (P. K. Ācārya's Ed.).

517. *Silparatna*, Ch. XXXVII (T. S. S. Ed.).

518. *Tantrasamuccaya* with *Vimarśinī*, Part I, p. 81 (T. S. S. Ed.).

519. *Kāśyapaśilpa* (Ānandāśrama Series), XXVII, 15-24.

520. Vide stanzas 4-12.

521. Vide lines 20-107.

STANZA 53.

Divisions of the Prastara.

In this stanza, the author describes the Prastara referred to in the previous verse. The proportions of the various mouldings that form the Prastara are stated here with reference to the height of the Prastara. The height of the Prastara will be half the height of the Stambha or equal to the height of the Adhiṣṭhāna.⁵²² The height of the Prastara is here required to be divided into either 21 or 19 equal parts. In the first case, from bottom upwards, Uttara ('Mr̥mayottara' i.e. Uttara made of baked mud as Śaṅkara describes it, or 'Kalluttara' (i.e.) Uttara made of stone as the vernacular commentators would have it) will be allotted 3 parts and its Vājana 1 part; Bhūtāli (in the *Kāśyapaśilpa* described as 'Bhūtāmālā') 3 parts and its Vājana 1 part; Kapota 7 parts; Ālīṅga-paṭṭi 1 part; Antari 1 part; Prati 3 parts and its Vājana 1 part. In the latter case of the division of the Prastara into 19 parts, Kapota will be given 6 parts and Prati 2 parts and the remaining mouldings will be given the parts as described in the previous instance. From the nature of the description two sets of mouldings are considered, major and secondary. The major mouldings are mentioned once only. Thus Bhūtāli, Kapota and Prati come under the class of major mouldings. Vājana, which is found repeated, and associated with the major mouldings, eventually belongs to the secondary class. The mouldings called Ālīṅgapaṭṭikā and Antari also come under the secondary variety. Bhūtāli is so termed because of its conspicuous presentation in the element of its decoration of such mythological objects as the Bhūtas or goblins. These motifs of ornamentation may be included under the class of the representation of fanciful objects. The moulding called 'Kapota,' as its name suggests, takes its form from the figure of a pigeon's head. It projects like the beak of the pigeon. Rām Rāz describes it as "a crowning member of cornices, pedestals, and entablatures. When employed in the latter, it often connects utility with beauty, in as much as the beak of the bird is so placed as to serve the purpose of a spout to throw off the water falling on the cornice."⁵²³ It is included in the circular class of mouldings by Rām Rāz.⁵²⁴

522. Vide the alternative proportions laid down in verse 52.

523. *Essay on the Architecture of the Hindus* by Rāz, p. 24.

524. *Ibid.*, page 23.

The following stanzas,⁵²⁵ found stated in the *Kāśyapaśilpa*, give support to the proportions of the various parts of the Prastara dealt with in our text:—

“ अथ वक्ष्ये विशेषेण प्रस्तरस्य तु लक्षणम् ।
 स्तम्भार्धमुच्चमानं वा आतोत्सेवांशमेव वा ॥
 तदुच्चमेकविंशं कृत्वा गुणांशमुत्तरम् ।
 वाजनं त्वेकभागेन भूतमालोन्नता त्रिभिः ॥
 भूतमालोपरिष्ठात् तु वाजनं त्वेकभागया ।
 सप्तांशं तु कपोतोच्चमालिङ्गं त्वेकभागया ॥
 अंशेनान्तरिकां कुर्यात् प्रत्युत्सेधं गुणांशकम् ।
 वाजनं त्वेकभागेन अथवान्यप्रकारतः ॥
 तुङ्गमेकोनविंशं कृत्वोत्तरं त्रिभागया ।
 भागेन वाजनं कुर्यादग्न्यंशैर्वलभी भवेत् ॥
 वाजनं त्वेकभागेन कपोतोच्चं रसांशकम् ।
 आलिङ्गमानमंशेन अन्तरि तु प्रकल्पयेत् ॥
 प्रत्युत्सेधं द्विभागेन वाजनं त्वेकभागया ॥”

The *Silparatna*⁵²⁶ under the Chapter termed 'Prastaravidhāna', refers to this stanza of our author. He starts defining the position of the Prastara and its height, which, as stated there, is as follows:—

“ स्तम्भोत्सेवार्धमानं वा मासूरोत्सेधमात्रकम् ।
 प्रस्तरस्योच्छ्रयं कुर्यात् पादस्योर्ध्वं विशेषतः ॥”

Then follows the stanza we have considered viz.— स्तम्भार्धादि etc. Śrī-kumāra furnishes other alternative modes of division and distribution of the height of the Prastara from the standpoint of Daṇḍa measure. In the list of alternatives stated there⁵²⁷ an extract is given which, as a result of comparison with the text of Gurudeva, is found to be taken from Gurudeva's 'Prastarādyadhikāra'⁵²⁸ with some slight changes in the

525. *Kāśyapaśilpa*, XIX, 1-7 (Ānandāśrama Series); quoted in the *Vimarśinī* of the *Tantrasamuccaya*, Part I, pp. 82-83 (T. S. S. Ed.).

526. *Silparatna*, Chapter XXX (T. S. S. Ed.).

527. *Silparatna*, Ch. XXX, sts. 19-30 (T. S. S. Ed.).

528. *Gurudevapaddhati*, Uttarārdha, XXX, sts. 83-97 (T. S. S. Ed.).

order of a few lines. The *Mānasāra*, in the chapter on 'Prastara-vidhāna',⁵²⁹ after having prescribed the different varieties of the height of the entablature relative to the measure of the basement and the pillar, devotes the greater portion of the chapter to the enumeration of the various mouldings and the proportion of each of the mouldings. On the basis of its division into parts, and distribution of these parts among the various mouldings, entablature is described under seven varieties.⁵³⁰

STANZA 54.

The Conclusion of Ekatala.

In this stanza, the author tells us that, after having concluded the subject of *Ekatalaprāsāda*, he proposes to speak of temples coming under *Dvitalaprāsāda*, etc., *Jāti Prāsāda* etc., and *Vṛtta Prāsāda* etc. Temples are classified from different standpoints such as their size, the number of floors they possess and their regular shape in design. According to their size they are broadly treated under two heads, known as *Alpaprāsādas* and *Mahāprāsādas*. In the latter class of *Mahāprāsādas* come the varieties *Jāti*, *Chandas*, *Vikalpa* and *Ābhāsa*. From the point of view of their number of storeys they are known as *Ekatala*, *Dvitala* etc., and on the basis of their shape and design they are classified as '*Caturaśra*' (square), '*Vṛtta*' (circular), '*Caturaśradīrgha*' (rectangular), '*Hastiprsthā*' (apsidal), '*Vṛttāyata*' (elliptical), '*Saḍkōṇa*' (hexagonal), and '*Aṣṭāśra*' (octagonal). So far the author has been dealing with the construction of that type of temple which is characterised by one *tala* and the square shape. It is a simple structure and, compared with the rest, it is small in size and hence is called *Alpaprāsāda*. In design, size and proportion this class differentiates itself from other types of structures which are more elaborate and are dealt with in the section that follows. From the tenor of his statement with regard to the classes of structure, it would appear that the author is giving comparatively fuller details pertaining to the subject of *Alpaprāsādas*. He does not fail, however, to lay down the essential features and outline of the other classes. The emphasis that is laid is found laid on the *Alpaprāsāda* class, and this is in keeping with the practice of Kerala; for rarely do we there come across temples coming under the *Mahāprāsāda* class.

529. *Mānasāra* (P. K. Ācārya's Ed.), Text, Ch. XVI.

530. *Ibid.*, XVI, lines 21-120.

SQUARE, THE FUNDAMENTAL SHAPE.

With regard to shape, it deserves to be noticed that whether in Kerala or outside, the dominating shape is the square one. It is the fundamental shape known to man and appreciated by him since the dawn of civilisation. "The utilisation of rectangular networks must go back at least as far as primitive architectural design": thus observes George Birkhoff in a famous work called "*Aesthetic Measure*." This shape again is found prevailing in the design of all ancient remains and huts of primitive hill tribes. R. L. Mitra suggests that the earliest structures in India and outside, e.g., Egypt, Assyria and Babylon, were square or rectangular. The material remains of Mohenjo-Daro, which give evidence of the large use of brick and timber, afford proof clear enough of the large prevalence of rectangular design since the remotest period of civilisation revealed to us by ancient monumental records. Material remains coming down from the most distant times, such as the 3rd millennium B.C., thus serve to strengthen the view that rectangular shape is a primary and probably the earliest shape, though circular is not unknown, for, as Sir John Marshall tells us, wells of circular design have been unearthed from Mohenjo-Daro. If we accept the view that wood preceded stone as structural material, as some of the stone works and reliefs in stone belonging to the Buddhist times indicate, we must concede that square or rectangular form forms the original and earliest shape, from which other shapes were derived or modified. From this point of view all other shapes may be described as deviations from or modifications or transformations of the fundamental square shape. Literary evidence is not wanting in support of this suggestion; for the following quotations from a work called *Sārāvalī*⁵³¹ or *Sārasaṅgraha* tend to support the view set forth. The verses run thus:—

“तुर्यश्रमेव सकलप्रकृतिस्थितं तत्
क्षेत्रप्रमाणं विकृतान्यपराणि सप्त ॥
तुर्यश्रं प्रथमं कुर्यात् सर्वप्रकृतितं गतम् ।
तद्विकाराणि चान्यानि वर्तयेद्वर्तनापतुः ॥”

531. *Sārāvalī* is an unpublished work on Tantra. As in every other Āgamic treatise, a section of it is devoted to architectural subjects. In Ms. form it is in the possession of traditional Tantrists of Malabar and a copy of it is under preparation for the Cochin Maharaja's Manuscript Library at Tripunittura. The stanzas quoted above are brought to my notice by Prof. K. R. Pisharoti. My thanks are due to Prof. Pisharoti for the valuable piece of information he has furnished on the topic under observation.

These verses, interesting and instructive, throw much light on the subject of our studies in respect of the design and shape as originally conceived by the ancient architects of our land. The aesthetic merit of this square or rectangular design is discussed by Birkhoff in his "*Aesthetic Measure*", and this modern writer too expresses the same view which was set forth in the ancient text. According to Birkhoff square is the best shape, because it produces the most satisfactory impression of symmetry. Says he: "Corresponding to the degree of symmetry involved, we should expect to find the square to be the best in form, the rectangle excellent, and both superior in aesthetic quality to the symmetrical trapezoid. Such a relative rating coincides, I believe, with the facts."⁵³² In comparative appreciation of the square, he observes: "On the score of symmetry alone, the square holds higher rank."⁵³³

EKATALA, DVITALA ETC.

The rendering of the Sanskrit terms 'Ekatala', 'Dvitala,' etc., by such expressions as 'One-storeyed,' 'Two-storeyed' buildings etc., as given by Ācārya, evidently subjects itself to a critical consideration. The Sanskrit word 'tala' refers merely to the lower horizontal surface of the structure. It may be called 'floor,' if by the expression 'floor' we do not imply any technical sense associated with the phrase *first floor*. In English, the expression 'floor,' however, is used almost interchangeably with 'storey,' and this usage has brought into currency, the phrase '*first floor*' meaning thereby the first storey. To differentiate the lower surface from the upper level, the lower plane or surface came to be called the *ground-floor*. When the numerative such as the '*first*' etc. is added to the expression '*floor*,' it acquires the technical sense which is delimiting in its connotation, for it excludes the *ground-floor*. Enumeration begins with the level of the first storey. In Sanskrit language, however, such distinction is not found made as is made by the expressions 'Ground-floor' and 'first-floor.' As far as we know, there is no particular expression used to signify the ground-floor. The term '*tala*' conveys the idea of *ground-floor*. The numerative '*Eka*' when added to the expression '*tala*' refers only to the *ground-floor* and not storey, because, in their enumeration of the horizontal section of the building, the Indian builders start with the ground-floor. In the English style of enumeration the ground-floor is not inclusive but ex-

532. *Aesthetic Measure* by Birkhoff, page 24.

533. *Ibid.*, page 25.

clusive. From the description of Ekatalaprāsāda, it is clear that enumeration starts from the ground-floor. In view of such an obvious difference in the method of approach adopted by Indian and Western writers towards the enumeration of the horizontal surface of the structure, the rendering of Sanskrit terms by English expressions must be accompanied by some explanatory remarks making clear in what exact sense the expressions are employed. Ācārya's interpretation⁵³⁴ of the term 'Ekatala' as One-storeyed, 'Dvitala' as Two-storeyed and so on needs to be revised.

STHĀNAKA, ĀSANA AND ŚAYANA.

The *Mānasāra*⁵³⁵ refers to a further type of classification from the point of view of the dominating or pronounced feature of measurement. Three classes of buildings are thus referred to called *Sthānaka* (standing), *Āsana* (sitting) and *Śayana* (Reclining). This classification is given with a view to keeping the structural features in harmony with the characteristics of the three classes of image known as *Sthānaka*, *Āsana* and *Śayana*. The above classification implies that the *Sthānaka* structure is fitted for housing that image which is in the standing posture, the *Āsana* for that image which is in its sitting posture and the *Śayana* for that image which is in its reclining posture. Temple architecture conceived in terms of the human organism must echo the activities of the human body and mind. Practical and structural considerations should inextricably be bound up with psychological operations. Man's mind is essentially contemplative in character and, as such, seeks to project itself in the object of meditation. The Indian artist sought to fulfil his mental aspiration by turning to the art of architecture, as the fitting means of expressing his mental attitude, which is spiritual in its substance. The image enshrined in a temple is the representation or embodiment of a state of feeling and of consciously directed thought. A temple, the abode of the deity, fulfils its higher function when its construction also suggests the mood or feeling which the image that it contains tends to represent. Those who desire to appreciate the value of Indian art of architecture and sculpture must above all divine its meaning. They should base their observations on two sets of considerations, constructive and psychologi-

534. Ācārya's Translation of the *Mānasāra*; *Essay on Indian Architecture*, p. 50.

535. Vide Ācārya's Edition of the *Mānasāra*, Text, Ch. XIX, lines 7-9.

cal, for, as we have already observed, nothing did the Indian artist seek to build or carve whose significance he could not imagine. The classification of structure into Sthānaka, Āsana and Śayana types is significant in that it is suggestive of the moods which the three classes of image serve to express in their three different postures of standing, sitting and reclining. This psychological implication or consideration, it will be noted here, is in tune with our interpretation of architecture in terms of the human being and further strengthens the subjective side of the viewpoint we have so far attempted to set forth.

The Nayaks of Tanjore

By

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EDITED WITH INTRODUCTION AND NOTES

BY

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CHAPTER VII.

GÖVINDA DIKSHITA

Neither the rule of the Tanjore Nayaks in general, nor the reign of Raghunātha Nayaka in particular, would be complete and full without a reference being made to Gōvinda Dikshita, the illustrious Brahman minister of the kingdom. Gōvinda Dikshita was minister to both Achyutappa Nayaka and his son Raghunātha, and it was to him that these two Nayaks owed a large measure of their successful and glorious rule. The Dikshita played a very prominent part in the good administration of the country, and it may be said that his fame even eclipsed that of the Nayaks. If Raghunātha Nayaka could be compared to the great Krishnadēva Raya of Vijayanagar, Gōvinda Dikshita may well be ranked with the latter's minister, Sāluva Timma. Gōvinda Dikshita's name is still green in the memory of the people of the Chōladēsa and the generation that is fast disappearing, speaks of his greatness and fame as an administrator, as an erudite scholar and as an able minister besides, his high sense of justice and fairness which were all brought to bear upon his high office of minister. His meritorious services with which he enriched the people and the land as well, are held in much esteem even at the present day.

The existence of numerous villages and streets besides other memorials, named after him, stand testimony to his greatness and to the regard which the people and the rulers had for him and his personality. The villages of Gōvindapuram, Gōvindakudi, Ayyampēt and the streets known as Ayyaṅkadei street in Tanjore, Yāgasālai street in Kumbakonam and tanks such as Ayyaṅkuḷam, all these are monuments that go to commemorate his name. In spite of all these remembrances, it is really an irony of fate that very little should be known authentically of such a great person, who lived and played a considerable part in maintaining the prestige of the Nayak rule. In the temple of the village called Pattiswaram in the Kumbakonam Taluk, there stands 'in oriental majesty and grandeur, a statue of this great minister dressed in the state garb with the long robe and with the curious head-dress of the day.' Besides him stands in like manner the magnificent statue of his wife. And Lingās called Dikshitalingās, are still worshipped in the temples of Kumbēsvara at Kumbakonam and Paṇchanadīswara at Tiruvādi (Tiruvaiyar). Whether these Lingās are consecrated by the Dikshita himself or established in his name, are questions that remain

to be settled. But all the same, nothing definite is known about him and his early life, beyond the traditional accounts which though interesting, are so varied as not to admit of easy verification. Pattiswaram and Tirunāgōswaram in the Kumbakonam Taluk and Tiruppalātturai in the Pāpanasam Taluk, are held by the people as places, where he lived and spent his life. The statement that he lived at Pattiswaram and went to Tanjore daily in his palanquin to discharge his duties as minister, looks not only improbable but incredible considering the distance of the place and the importance of his high office.¹ However, the historical remains of a statue and the ruined site shown as the place where his house once stood, as well as epigraphs and the present custom of a section of the community called *Pattinālkārar* going to Pattiswaram to settle their minor differences before the shrine of Gōvinda Dikshita even now,—all these support the statement that in all probability he might have lived and spent his last days at Pattiswaram or it might have been a favourite place of residence of his.

The literary evidence of this period contains only casual references and from them a good account cannot be made of him. Even Yagñanārāyaṇa Dikshita, the son of this famous minister and the biographer of Raghunātha Nayaka, does not give a full account of his father, though he shows in many places that his father was associated with the government of the Nayaks, during the reigns of Achyutappa and Raghunātha. But as regards the minister's early life, it is not possible to derive any knowledge from his son's references. Tradition has it that Gōvinda Dikshita was a Kannada Brahman belonging to the Vasishṭa gōtra and Āśvalāyanasūtra and that he migrated to the Chōḷa Country about the middle of the 16th century. Even of this, there are two versions. One version says that Gōvinda Dikshita, a Kannada Brahman, was noted even as a young man, for his remarkable knowledge of Hindu Sāstras and Astrology. He is said to have been born of very poor parents; and so to find employment he made his way to Vijayanagara at the early age of seventeen. There, he soon became a favourite of Achyutarāya, (A.D. 1529 to A.D. 1542). Gōvinda Dikshita's first meeting with the Rāya is said to have taken place about A.D. 1532, when he went to the royal palace along with several astrologers who had been summoned by the Rāya, to cast the horoscope of a child that had just then born to him. Achyutarāya was very much impressed by the Dikshita's deep

1. An account of Gōvinda Dikshita embodying all the traditions and stories is given in an article entitled *Gōvinda Dikshita* by Mr. N. K. Venkatesam Pantulu, in the *Journal of the Andhra Historical Research Society*, Vol. II, pp. 220-241.

knowledge of astrology, showered on him his favours and employed him in his service. When Achyutarāya gave Śevappa Nayaka, the principality of Tanjore and appointed him to be its governor, the latter is said to have taken along with him, his former master and friend, Gōvinda Dikshita.² It is even claimed that the Nayaka requested Gōvinda Dikshita to accept the governorship of the province, but the latter excused himself by saying that he, being a Brahman, should not encroach upon the right or *dharma* of a Kshatriya, whose duty it was to wield the sceptre. And so he helped Śevappa to become the ruler and himself became his minister. It is said that he continued to be minister of the state for more than the duration of the rule of Śevappa and Achyutappa and even unto the reign of Raghunātha.³ Another version, says that he was a Kannada Brahman and was born of poor parents in Mysore, and he migrated to Vellore, where he took service under his uncle, who was the rāyasam (secretary) of the Ārni Nayaka. Later he was transferred to the Tanjore Samasthānam, when a daughter of this poligar was married to a prince of the Tanjore line. Here, in Tanjore, he rose to prominence and became the minister of state. Neither of these accounts is supported by the literary evidence nor by the epigraphic testimony, but the fact that he was a Kannada Brahman and a great scholar is beyond doubt.⁴ The rest of the tradition of his rise to power cannot withstand internal criticism; for one thing, the epigraphs prove the impossibility of Śevappa being a servant of Gōvinda Dikshita and the former's rise to prominence through him.⁵ Apart from this it is also

2. An account of this traditional story is given in Chapter II. Also *Sāhitya-ratnākara*, Introduction by Dr. T. R. Chintamani.

3. An apt parallelism may be traced between the long ministerial career of the Dikshita at Tanjore leading to the consolidation of the State and to an increase in its prestige and the remarkable services of Ariyanātha Mudaliar, the co-adjutor and Daḷavāy of Visvanatha Nayak, the founder of the Madura Nayak kingdom. He was for over 50 years the "second in power" in the State. Ariyanātha was especially responsible for the organisation of the Pālaiyam system in the Southern Tamil country, and the poligars were specially attached to Ariyanātha and his memory. In one grant his name is associated along with that of the Nayak himself (of 1560 A.D.). Ariyanātha was the Daḷavay and Pradhāni of the State; and his equestrian statue in the Pudumantapam at Madura and the thousand-pillared hall in its great temple are "substantial relics of his importance". Both Ariyanātha and Gōvinda Dikshita were roughly contemporaries and engaged in work of the same character and both were responsible for the consolidation of the two great Nayak States of the south.—[Ed.].

4. The Kannada origin of Gōvinda Dikshita is established by the fact that His Holiness Śrī Saṅkarāchārya of Kāmakoṭi Pīṭha in his *purvāsrama* belonged to this family and he is of Kannada origin.

5. See Chapter II.

obvious from a study of the records that Gōvinda Dikshita could not have been minister to Śevappa, the first Nayaka. Gōvinda Dikshita is mentioned only once in the records of Achyutappa and Raghunātha and the earliest inscription mentioning him by name, is dated A.D. 1588.⁶ This record registers a gift made by the Nayaka for the merit of Gōvinda Dikshita. The literary evidences of *Raghunāthābhīrudayam* and the *Sāhityaratnākara* also speak of Gōvinda Dikshita only during the reign of Achyutappa and Raghunātha and not before. If Gōvinda Dikshita had any association with Śevappa, at least his son Yagnānārāyana would have made mention of it. Moreover, Gōvinda Dikshita's migration from Vellore is not also supported by internal evidence, since there is nothing to prove the marital alliance of the Tanjore Nayaks with the house of Ārni. Hence these traditional accounts are of no material help to the historian.

Mr. N. K. Venkatesam Pantulu⁷ says that Gōvinda Dikshita began his career as minister under the first Nayak Śevappa and continued in office through the reign of Achyutappa; and he also was of help to Raghunātha in the early years of his reign. He does not support the statement contained in the *Tanjore District Manual* which says that Gōvinda Dikshita also lived during the time of Vijayarāghava Nayaka, the last ruler; on the ground that this supposition was consequent on the writer of the *Manual* identifying Achyutappa Nayaka, the second ruler, with the last king, called Vijayarāghava and Achyuta Vijayarāghava in the records. He further adds that this view is incredible when between Śevappa and Vijayarāghava, there was an interval of a century and there was no possibility of his having lived for such a long time. The literary evidence also proves the impossibility of Gōvinda Dikshita having continued as minister under Vijayarāghava. The *Chaturdaṇḍī prakāśika* distinctly says that Vēṅkatēswara Dikshita, one of the sons of Gōvinda Dikshita, was Vijayarāghava's minister and so the father was evidently dead by that time. Therefore the question of Gōvinda Dikshita's early association with Śevappa alone remains to be settled. Mr. Venkatesam Pantulu says that his early association with Śevappa is established and quotes two inscriptions in support of his statement.⁸ He takes the word 'Śevappa Nāyakkarayyan' occurring in

one of them⁹ to mean both Śevappa Nayaka and his minister Gōvinda Dikshita on the ground, that the latter was called Ayyan out of respect. Ayyan, he further adds, is derived from the Sanskrit word Ārya which means 'worshipful.' This argument is not only inconclusive, but also untenable. Unfortunately, one of the epigraphs produced by him for our consideration, does not contain either the name of Śevappa or his minister; while the second inscription which was issued by Achyutappa records that he was the son of Śevappa; (*Śevappa Nāyakkarayyan Achyutappa Nāyakkarayyan Tanjāvūr taṭṭārukku kodutta dharma sāsanaṁ*) and that he made a gift to the goldsmiths of Tanjore. The reference to Śevappa Nāyakkarayyan must be taken to refer to Śevappa Nayaka alone and not to mean himself and his minister. Gōvinda Dikshita is also called in his epigraphs as Dikshitarayyan and the Tanjore records give the rulers the appellation of Ayyan added to their names. Mr. Venkatesam Pantulu, who reads the word Śevappa Nāyakkarayyan as referring to two distinct individuals, viz., the Nayak and the Ayyan, in order to prove the association of Gōvinda Dikshita with Śevappa, is not inclined to read and interpret in the same manner the epigraphs of Vijayarāghava Nayaka, which contain references as Vijayarāghava Nāyakkarayyan.¹⁰ In that case, it must be said that Gōvinda Dikshita also lived during the reign of the last Nayaka Vijayarāghava; but Mr. Pantulu says that he could not have been minister to Vijayarāghava; and hence his view of Gōvinda Dikshita's association with Śevappa from the epigraphs, remains to be proved. The argument that Gōvinda Dikshita was not associated with Vijayarāghava, on the ground that the former could not have lived for more than a century, applies equally to the statement that he was associated with Śevappa very early. Because, Gōvinda Dikshita's latest epigraph is dated A.D. 1634 and if he should have come to Vijayanagar in his 17th year corresponding to A.D. 1532, before the rule of the Nayaks began at Tanjore, then it would give him a very long life of more than a century; and this is also extremely impossible.¹¹ There is also no literary evidence to establish Gōvinda Dikshita's early association with the administration of Śevappa. The *Sangita Sudhā* alone contains a reference to prove that

9. The epigraphs referred to are, Achyutadēva Raya's inscription recording a gift of land by Taṭṭappa Nayaka, son of Mallappa Nayaka to Toppāram Kēṭṭa Pillaiyar and 22 of 1897 dated Saka 1499 and issued by Achyutappa Nayaka in favour of goldsmiths. Mr. Venkatesam Pantulu basing his conclusion on the traditional evidence, works out the epigraphs to suit his conclusion.

10. 543 of 1918 and 709 of 1904.

11. According to tradition he came to Vijayanagar in his 17th year and his first meeting with Achyutarāya took place about A.D. 1532 when a son was born to him. Gōvinda Dikshita had then Śevappa as his servant.

6. 119 of 1930.

7. *The Journal of the Andhra Historical Research Society*, Vol. II, 1928, p. 223.

8. *Ibid.*, p. 224.

Gōvinda Dikshita was in the court of Śevappa and here, this fact is given out by Gōvinda Dikshita himself, when he praised Raghunātha and brought to his notice that even his grandfather had predicted in open court that he (Raghunātha) would become a great ruler. This appreciative reference is said to have been made by Śevappa, when Raghunātha was a tender child interested in play.¹² This statement would only prove that the Dikshita was present in Śevappa's court only from the latter part of his reign, since Raghunātha, his grandson is mentioned as having been a child then.¹³ Even Yagñanārāyaṇa Dikshita speaks of his father's association only with Achyutappa Nayaka and his son, and not with his predecessor. From the *Sāhityaratnākara* it is known for certain that Gōvinda Dikshita was minister to Achyutappa; and the latter took his advice on all matters relating to the internal and foreign policies of the state. Gōvinda Dikshita attended the war council held by Achyutappa on the eve of the great Karnataka civil war of succession, and it was he, who helped in the coronation of Raghunātha Nayaka and the abdication of Achyutappa. Gōvinda Dikshita is said to have also crowned Raghunātha and performed his *Pattābhishēka* ceremony. He taught Raghunātha the science of politics and other śāstras and claimed him as his pupil. Raghunātha Nayaka's march upon Sōlaga and other enemies was the result of Gōvinda Dikshita's wise counsel. When Raghunātha started on his expedition, he is said to have left the administration in the hands of Gōvinda Dikshita. Raghunātha Nayaka's confidence in his minister and the great regard which he had for his learning and experience in administration, are fully borne out by Yagñanārāyaṇa Dikshita in his references in the *Sāhityaratnākara* as well as in several places in the *Raghunātha Vilāsa Nūtakam*. According to the evidence contained in the latter work, it appears that when a drama was enacted in the palace theatre both Raghunātha Nayaka and Gōvinda Dikshita were seated together on the same seat. Yagñanārāyaṇa Dikshita also speaks in glowing terms of the victories won by the Nayak and of the high reputation enjoyed by his father, Gōvinda Dikshita. These references go to show that Gōvinda Dikshita continued to live during the reign of Raghunātha; and the same internal evidence proves that he did not survive in

12. *Sangita Sudhā*, Sl. 48.

पूर्व समेता वयमत्रयुग्मपितामहं चैवमहीमहेन्द्रम् ।
आशीभिरानन्दयितुं तदग्रे त्वय्यादधानेखुरलीषु केलिम् ॥
तदाभवन्तं सखिलोक्थहर्षादस्मान्मुदावाचमिमामवोचत् ।
अस्माकमेतेन भवेत् प्रतिष्ठा चर्युसमर्थञ्च स एष रान्यम् ॥

13. *Sangita Sudhā*, Sl. 49.

the time of Vijayarāghava Nayaka. Venkaṭamakhī, another son of Gōvinda Dikshita and the author of the *Chaturdaṇḍi prakāsika*, says that he wrote the work at the instance of Vijayarāghava, when he was minister to him for some time. If Gōvinda Dikshita continued to live then, Venkaṭamakhī would have mentioned him. Since the latest epigraph¹⁴ of Gōvinda Dikshita is dated in A.D. 1634, it is certain that he lived till then. His earliest record is dated in A.D. 1588¹⁵ and so, his association with the government of the Nayaks will have to be mainly based on the evidence of the epigraphs, between A.D. 1588 and A.D. 1634. This period does not include the years which he spent in the court of Śevappa, whose death had taken place about A.D. 1580. Since Śevappa is said to have seen his grandson, Raghunātha, playing as a boy, Raghunātha's birth may be placed in or about A.D. 1575. As Gōvinda Dikshita bears witness to Śevappa's blessing the child Raghunātha, it is probable that Gōvinda Dikshita had then already settled at Tanjore. Since he says that he was one of those, who were assembled at the durbar hall when Śevappa expressed his high expectations of Raghunātha, it is possible to surmise that he had not then become the minister of state, but was probably employed in the palace as the royal *purōhita*.¹⁶ Hence under the present circumstances, Gōvinda Dikshita's association with the administration of Tanjore may be broadly held to have lasted from A.D. 1575 to A.D. 1634, and in this period of nearly six decades, he was serving the Nayaks in a double capacity both as their 'Kulakūṭastha purōhita' (family priest) and 'Kula māntri.'

From the foregoing account it is evident that Gōvinda Dikshita, a Kannada Brahman hailing from the Mysore country made his way to the court of the Tanjore Nayak during the last years of Śevappa, the first ruler; and he was well received and respectfully treated on account of his profound scholarship and deep learning. Soon the Dikshita made his mark there and rose to be the royal *purōhita*, then to that of a tutor to the prince and lastly to the high office of minister solely by dint of merit.¹⁷ Achyutappa Nayaka's great regard for this minister is best seen in his records referring to the gifts made by him for the merit of Gōvinda Dikshita. Raghunātha Nayaka's veneration for and gratitude to his minister were something extraordinary, since Gōvinda Dikshita was also

14. 257 of 1927.

15. 119 of 1930.

16. The *Sāhityaratnākara* refers to Achyutappa's request made to Gōvinda Dikshita to fix an auspicious day for the celebration of Raghunātha's coronation. *Sāhityaratnākara*, Canto X, Sl. 103. Also Canto XII, Sl. 46. Here Gōvinda Dikshita is called Guru.

17. *Sāhityaratnākara*: Colophon.

his teacher. And in the later years of Raghunātha's reign which witnessed the revival of literary activities, Gōvinda Dikshita must have also played a prominent part; but of this we have no direct evidence.

Gōvinda Dikshita was an orthodox Brahman and he is said to have performed numerous sacrifices. Tradition says that he never neglected to perform Agnihōtra (daily fire worship) and was never wanting in the strict performance of *dharma* as enjoined in the Vēdas and Śāstras. Yagñanārāyana Dikshita speaks of his performing the *Sāgni-citya*, the *Vājapēya* and the *Sarratōmukha* sacrifices and in the performance of the *Vājapēya* sacrifice he was assisted by the Nayaka, Raghunatha, who it is said, held the umbrella over his head. The Yāgasālā street and the Yāgamantapa at Kumbakonam are even now pointed out as marking the places, where Gōvinda Dikshita performed these sacrifices. It is also said that he made large gifts and benefactions on the occasion of the completion of these sacrifices; and his great gifts numbering sixteen (*Ṣōḍaśa mahā-dānas*) and his gift of a village in the name of each tithi (15 days of a *paksha*) are also well known. The modern village called Ēchehangudi *alias* Ekādasi Agrahāram and the village called Mahādhānapuram, Mul-liakkudi *alias* Dikshita Samudra and important streets called Mahadhāna streets, in the towns of Mayavaram, Tiruvidaimarudur and Tiruvaiyar besides others, are all pointed out as great gifts made to the Brahmans on such occasions. Gōvinda Dikshita's name is even now associated with the repair and construction of the sixteen mantapas on the bunds of the Mahāmakham tank at Kumbakonam.¹⁸ It is said that the Nayak, who was pleased with the Dikshita for his charitable endowments, gifted to him a quantity of gold equal to his own weight for further repairs. Gōvinda Dikshita is also spoken of as the builder of several Pushyaman-tapas at different places such as Tiruvaiyar, Kumbakonam, Tiruvidaimarudur, Tiruvaṇanjūli and Vriddhāchalam. As Achyutappa Nayaka also is mentioned by the Dikshita as the builder of these mantapas at these places,¹⁹ it is possible that these works were carried out at the instance of Gōvinda Dikshita. The Rāmaswāmi temples at Kumbakonam, Vijayarāghavapuram and Srirangam were erected during his time.²⁰ The temple at Pattiswaram is said to have received large gifts as well as additions made to its precincts. He is mentioned as the builder of the Āchāravāśal, and the Anantakalyāna mantapa of the Sārāgaswāmi matha at Kumbakonam in A.D. 1631²¹ and also the Turaikkāttuvār

mantapa in the Viṇanagar temple situated in the Mayavaram Taluk.²² Apart from these magnificent charities and public works, tradition has it that he also devoted much attention to the cause of education. The Rājā Pātasala at Kumbakonam traces its origin to the bounty of Gōvinda Dikshita; and several institutions for the teaching and propagation of the Hindu Śāstras and Vēdas were also maintained by him. Even though Sanskrit learning enjoyed special favour, yet the growth of and fostering of the Tamil literature and culture do not seem to have suffered at all for want of patronage either royal or otherwise. Gōvinda Dikshita himself was responsible for the translation of the *Tiruvaiyār Mahātmyam* into Tamil about A.D. 1605.²³

In addition to being a good administrator, Gōvinda Dikshita was also a renowned author. He is said to have written commentaries on the *Jaimini Sūtras* and *Kaumārila Darśana* besides the *Sangīta Sudhā*. He is called *Advaita Vidyācharya*; and Yagñanārāyana Dikshita says that he was not only proficient in the Advaita Philosophy, but had a thorough knowledge of the six systems of philosophy (*Shad darsanas*). Vēṅkatēswara Dikshita (or Vēṅkaṭamakhi), another son of this great minister says that his father reestablished the Advaita school of Philosophy of Śri Sankara and he was the elder contemporary of the great Advaita scholar, Appayya Dikshita. Both of them are said to have made efforts to propagate advaitism.²⁴ While Gōvinda Dikshita completed his *Kaumārila Darśana* (a commentary on Kumārila Bhatta's *darśana*), Appayya Dikshita wrote in comment, his *Parimala* at the former's instance. Appayya Dikshita's reference to an *Advaita Vidyācharya* in his *Siddhāntalēsa Sangraha*, is taken to mean Gōvinda Dikshita himself, for whom the author had a high regard.²⁵ Gōvinda Dikshita was also very proficient in the science of music and may well be called the founder of Karnātic music. Vēṅkaṭamakhi says that the *Sangīta Sudhā* was in reality written by his

22. 164 of 1925.

23. There is a passage in the *Tiruvaiyār Purāṇam* which reads:

மலிபுணல் சூழ்சோனாடு தஞ்சையிற் காத்திருமரசர்
மதியமைச்சர் னெலிமறைதேர் கோவிந்த தீட்சதராயன்
திருவாக்குடைமையாலே, கலியுகத்துச் சகராண்டு
மூவைஞ் ஞாற்றிருபதினமேல் காணுமேழாய்பொலி
வருடத்தை யேரற்றுப் புராணவடமொழி தமிழாற் புகலுற்றேன்.

24. Gōvinda Dikshita by Mr. N. K. Venkatesam Pantulu, *Ibid*.

25. Gōvinda Dikshita is wrongly called the author of *Harivaṃsa Charitam* composed of twenty-three cantos on the ground, that the author of this work is also called Gōvindamantrin. But this is not possible since the latter is said to have belonged to Sāṇḍilya gōtra whereas Gōvinda Dikshita belonged to Vasishta gōtra. (See The Tanjore Sarfoji Maharaja's Saraswathi Mahal Library Catalogue edited by Prof. P. P. S. Sastri.)

18. A.R.E., 1926-27, p. 117.

19. *Sangīta Sudhā*.

20. A.R.E. 1926-27.

21. 270 of 1927.

father.²⁶ Both Yagnanarayana Dikshita and his brother Vēṅkaṭēswara Dikshita were all good musicians and the latter is given credit for his standard work on music the *Chaturdandiprakāsika*,²⁷ wherein he had "reduced the old twenty-two *svaras* to twelve and designed the present *Vina* adapted to the twelve *svaras*." "It appears also that Vēṅkaṭamakhi was the author of the *Mēlakarta* that is in vogue at present in Southern India." Gōvinda Dikshita was also the author of a work on Astrology, since reference is made to his work in the *Tāṇḍava Mālai*.²⁸ The contemporary works say that Gōvinda Dikshita had numerous titles such as *Pada vākya pramāṇa pārvāraha* and *Advaitāchārya*. He was also known by other names as Gōvinda Ādhvari, Gōvinda Yajva and Gōvinda Makhindu.

From the colophon to the *Chaturdandiprakāsika*, it is known that Gōvinda Dikshita's wife was called Nāgamāmba, the daughter of one Nārāyana Dikshita.²⁹ Gōvinda Dikshita is said to have been the father of eight sons, of whom only two are well known. Yagnānārāyana Dikshita has won immortal fame by his works, the *Sāhityaratnākara*, the *Raghunātha Vilāsa Nāṭaka* and the *Alankāra Ratnākara*; and he also performed the *Sāgnicityā* and the *Sarvatōmukhā* sacrifices.³⁰ He studied both under his father Gōvinda Dikshita and his patron Raghunātha, who taught him all the *Sāstras* including *Vyākaraṇa*, *Tarka*, *Mīmāṃsa* and *Vēdānta*. His brother Vēṅkaṭēswara³¹ was also an all round genius and wrote a number of works. The *Vārtikābharaṇam*, a commentary on the *Tuṭṭika* of Kumārilaśwāmi is classified along with other important works on *Mīmāṃsa*. He also wrote the *Karmānta Vārtika*, a commentary on a portion of *Bōdhāyana Srauta Sūtras*, *Sulba Mīmāṃsa*, a treatise on

26. ततो नृ रघुनाथेन्द्र मेलविनानिरूप्यते तद्वक्षणं नृ राज्ञीत स्थानिधिरिति श्रुते । चेन्वमाच्युत भूपालरघुनाथ नृपाङ्किते अस्मत्तातकृते ग्रन्थे प्रोक्ता शोकांलिखामितान् ॥

Chaturdandiprakāsika.

27. The work is not available in its entirety.

28. Report on the Sanskrit and Tamil Mss. for 1896-97, Madras. The introduction of the *Tāṇḍava Mālai* says (pp. 261 and 262):

இன்னாலென்றாலின் வாழித்தெனின் 'மாவந்தை சோதான் மலரடி வணங் குங் கோவிந்த திட்டுநீயத்தின் வாழிந்து' எனவும், கோவிந்த திட்டுநீயத் தங் கொள்கையினுற் கூறுகின்ற மாவந்த நூலின் வழக்கறிந்து தேவந்திசர் போற்றும் பிண்டியஞ் செல்வன் சீர்கூறி வருவணப்பா வைபவ் வந்து.

Also the *Journal of the Andhra Historical Research Society*, Vol. II, p. 237.

29. 'Sri Gōvindadikshita Nāgamāmba vara tritīya nandanasya.'—*Chaturdandiprakāsika*.

30. Colophon to the *Sāhityaratnākara*.

31. He calls himself as the third son of Gōvinda Dikshita in his *Chaturdandiprakāsika*, Colophon.

Vēdic Trigonometry and also *Sangīta Sāmrajya*. But he is well known by his great work on Music, the *Chaturdandiprakāsika*. He was also the teacher of Rājachūdāmani Dikshita, the author of *Rukmaṇi parinayam*³² and of Nilakaṇṭha Dikshita, a grand nephew of Appayya Dikshita. One Liṅgādhvari, the author of *Sivasahasranāmabhāṣya* and *Vēdartha tatva nirṇaya* is said to have been a third son of Gōvinda Dikshita.³³ Rājachūdāmani Dikshita in his *Tantrasikhāmaṇi*, a work on the *Jaimini Sūtras*, says that Vēṅkaṭamakhi also performed several *yagñas*. Nilakaṇṭha Dikshita, the author of *Siva Līlārṇava* and *Gangā-vatarana Kāvya*, speaks of Vēṅkaṭamakhi, his master, as belonging to Vasishtha gōtra and as the son of Gōvinda Dikshita.

Gōvinda Dikshita also appears to have been an authority in *Dharma Sāstras* and also a permanent court of arbitration. His administration of even-handed justice is recorded in an inscription coming from Pattiswaram. The epigraph is dated in the cyclic year Bhava, corresponding to A.D. 1634; and Gōvinda Dikshita is called by the venerable name of Gōvinda Dikshitaswāmi. The record registers a settlement made by him when the *paṭṭunūlkārars* (Saurashtrian weavers) presented him with a petition (*Vaḷakkumurai*) as a result of some differences arising in social matters. It appears that there was some difficulty in the order of precedence in the distribution of betel and nuts among the weavers and the merchants (*Chettis*). Gōvinda Dikshita hearing both sides, seems to have arbitrated and settled the question amicably; but the exact terms of the settlement are not known. The agreement reached among them by making a person liable to offer a new cloth worth five fanams and 30 arecanuts and 100 betel leaves to the goddess of the local temple, if he should transgress the rules, shows clearly that the settlement was made satisfactorily to both the contending parties, who are said to have made up their minds to observe this rule by making a vow in the name of the king.³⁴ This record is also the latest so far known of him and this would show that he was living till A.D. 1634. Since Vēṅkaṭamakhi says that he was for some time the minister of Vijayarāghava (accession 1633) it is probable that Gōvinda Dikshita died shortly after his accession. This is further supported by the fact that no more reference is made to Gōvinda Dikshita in the contemporary literature. Even Yagnānārāyana's name is not mentioned in the reign of Vijayarāghava Nayaka. The absence of any mention of these two

32. Vēṅkaṭamakhi is also said to be the author of *Jātaka Chandrika*—a treatise on Astrology. This has been translated into English by Mr. B. Suryanarayana Rao.

33. *Sāhityaratnākara*, Introduction by Dr. T. R. Chintamani.

34. 257 of 1927.

names or their whereabouts in the works of Vēṅkatamakhi and in the Telugu works of Vijayarāghava, has led some writers to think that both of them must have died about the same period³⁵ and how far this view is correct, will have to be determined by future research.

Gōvinda Dikshita's association with the administration of the Nayaks, is also taken as the cause for the latter's patronage of Saivism. Since the Nayaks were all Vaishnavas by their religious persuasion, it is said that their patronage of Saivism was made possible only by the powerful influence of Gōvinda Dikshita, the great Advaita scholar of the times. Even though his influence over them cannot be undervalued, yet the statement that he was responsible for their catholicity and religious toleration remains to be well established; since the Nayaks in general do not seem to have ill-disposed towards or persecuted any of the rival faiths. Gōvinda Dikshita, though not a native of Tanjore, soon became one; and a review of his life which starting from humble and poor circumstances soon attained to the zenith of power and honour; shows the high regard and esteem which the Nayaks had for learning and scholarship. His rise to power was made easy by the royal patronage and favour and the high sense of duty, honesty, loyalty and charity which Gōvinda Dikshita had in abundance, were responsible for his ultimate success as a great administrator. These qualities made him a hero of the day and when he died, the people deified him. It is popularly believed that he spent his last days in the Maṅgalāmbika shrine at Kumbakonam, performing severe penance.

CHAPTER VIII.

VIJAYARĀGHAVA NAYAKA. (A.D. 1633 to A.D. 1673).

I

Achyuta Vijayarāghava Nayaka¹ better known as Mannārudāsa² and as Vijayarāghava, was the son of Raghunātha Nayaka and succeeded his father on the throne. For his reign and for the subsequent period, there is available only the evidence of the native chronicles and of the Jesuit letters. With regard to the date of his accession, his epigraphs which are few and far between, remain silent, while the chronicles mention no date at all. Raghunātha Nayaka's inscriptions show, that his rule must have extended down to the year A.D. 1634 since a record of his, dated in the cyclic year Bhava corresponding to A.D. 1634 refers to a vow made by two communities at the feet of Nayakkarayyan, who was no other than Raghunātha himself.³ The same epigraph mentions Gōvinda Dikshita also and since it is known for certain, that Gōvinda Dikshita did not continue as the minister to Vijayarāghava also, the reference to Nāyakkarayyan must be taken to mean Raghunātha, and hence the latter ruled as king for about twenty years from A.D. 1614 to A.D. 1634, but his association as co-ruler with his father, dates back atleast from A.D. 1600. Considering the duration of all the individual reigns of the Tanjore Nayaks, it becomes evident that Raghunātha, the most illustrious ruler of this family had but a relatively short reign and his death will have to be placed about A.D. 1634.

It is not known for certain whether he nominated his successor in his own life time and performed the *Yauvarājyābhishēkam*. The internal evidence contained in the *Raghunāthābhīrudayam* of Vijayarāghava⁴ says that he (Vijayarāghava) performed the sixteen great gifts (*shō-dasa mahādānas*) on a day in the year of his coronation. Chengalvala

1. 461 of 1922 from Papanasam is recorded in the name of Achyuta Vijayarāghava Nayaka. Also *Mannārudāsavilāsam*, page 2.

2. Father Proenza in his letter dated 1659 says that the Nayaka called himself as the son of God Mannāru of Mannārgudi, *La Mission Du Madure*, Vol. III, p. 51.

3. 257 of 1927 from Pattiśwaram (Tanjore District). The Inscription is dated in the cyclic year Bava which corresponds to A.D. 1634.

4. *Sources of Vijayanagar History*, p. 255.

35. Mr. K. Sitaramayya: *The Tanjore Andhra Nayaka Charitam*, p. 252.

Kālakavi, the author of *Vijayarāghava Vamsāvalī* and the court poet of Vijayarāghava, has recorded that these sixteen great gifts were made in the cyclic year Srīmukha and in the month of Srāvaṇa; corresponding to August-September, A.D. 1633. These two statements taken together prove that Vijayarāghava's accession must have taken place in the year 1633 and that it was celebrated sometime before the death of Raghunātha.⁶ Mr. K. Sitaramayya also agrees with this date and says that Vijayarāghava's coronation took place in A.D. 1633. This date is further supported by the evidence contained in the *Tantrasikhāmani* of Rājachūdāmani Dikshita, a disciple of Vēṅkatamakhi a son of the illustrious Gōvinda Dikshita. The author says that he wrote his work at the instance of his master, who is referred to have been then the minister in the court of Vijayarāghava. Vēṅkatamakhi in the Introduction to his *Chaturdaṇḍiprakāśika*, mentions that he, in turn, wrote his work at the instance of his patron, Vijayarāghava Nayaka, the ruler and that too when the latter had already donated the sixteen great gifts. It is also stated therein that Vēṅkatamakhi was the establisher (consecrator) of a Chola king and this reference to his part in helping a Chola to the throne must in all probability refer to his help rendered to Vijayarāghava Nayaka himself, as there could not have been then, any possibility for any Chola to have contested the throne. Incidentally this reference shows that the work was written sometime after the coronation of Vijayarāghava and perhaps, when the author himself was occupying the high office of minister.⁷ But the date of his work, *Chaturdaṇḍiprakāśika* is not known. However, from the chronogram expressed in the *Tantrasikhāmani*, it is clear that it was written in Saka 1559⁸ corresponding to A.D. 1637 and it further goes to prove that Vijayarāghava had already become the ruler and that his coronation must have taken place sometime before A.D. 1637.⁹ Hence, the reference made to the Nayak's gifts by Vēṅkatamakhi in his own work and the date of the *Tantrasikhāmani*, settle the year of Vijayarāghava's coronation finally by saying that his accession to the throne must have been an accomplish-

5. *Vijayavilāsam*, alias *Vijayarāghava Vamsāvalī* by Kālakavi, published in Cocanada by the Andhra Sāhitya Samsodha Mandal.

6. Raghunātha must have been then fifty-nine years old. The epigraphs mention him from A.D. 1600. Śevappa, according to the *Sangita Sudhā* lived to see his grandson, Raghunātha. Śevappa's death took place in A.D. 1580.

7. There are more than one reason to believe that Vēṅkatamakhi was his minister only for a short time and that too in the early years of his reign.

8. *Tantrasikhāmani*: धीमान्मन्ये शकस्याब्दे will give 9551.

According to the rule अक्षराणां वामतो गतिः it will yield S. 1559=A.D. 1637.

9. Also the *Tanjavur Andhra Nayaka Charitam*, p. 252.

ed fact before the year A.D. 1637, which is the date of the *Tantrasikhāmani*. These two works, thus bear indirect evidence to the fact that Vijayarāghava's coronation took place in Srīmukha (A.D. 1633) the cyclic year given in the *Vijayarāghava Vamsāvalī*. In that case Raghunātha Nayaka must have anointed Vijayarāghava, as his successor, shortly before his death.

It is sometimes held that Vijayarāghava, the illegitimate heir, usurped the throne. Vijayarāghava was the son of Raghunātha by his chief consort Kalāvati, the daughter of Vēmparāja and Lakṣmamma. Vēmparāja, son of Chinna Malla, was Raghunātha Nayaka's uncle.¹⁰ The *Raghunāthābhūyudayam* of Vijayarāghava says that Vijayarāghava had a brother of the name of Rāmabhadra and that the latter is said to have accompanied Raghunātha to the Tōppūr battle field in A.D. 1617. Mr. T. S. Kuppaswami Sastri, in his *History of the Tanjore Nayaks*, says that Rājachūdāmani Dikshita in his *Ānandarāghava Nāṭakam* has made mention of two sons of Raghunātha, namely Achyuta and Rāmabhadra.¹¹ Vijayarāghava in his *Raghunāthābhūyudayam* calls Rāmabhadra as *Kumāravaratnam*. Of these two, Vijayarāghava would appear to be the eldest son according to the genealogy given in the *Raghunāthābhūyudayam*.¹² But it is said in another place of the same work that Rāmabhadra alone accompanied his father Raghunātha to the field of Tōppūr battle and Vijayarāghava Nayaka, the elder son, is not at all mentioned among the participators of Tōppūr battle. But Mr. Hickey says that of the two sons, Vijayarāghava the younger "excelled his elder brother and consequently the kingdom was given over to him on account of his physical powers and mental acquirements. His elder brother was fain to be content with what he got viz. the territories of Tirukāttupalli (near Tanjore) and Paṇḍanallūr (near Kuttalam)." However, Mr. Hickey does not mention the source from where he drew this conclusion. That Raghunātha Nayaka had more than one son is also known from the

10. *Raghunāthābhūyudayam*; Sources, p. 254. Also *Mannārudāsavilāsam* and *Ushāparinayam* by Raṅgājamma, the poetess. The *Ushāparinayam* says that Raghunātha had Chenchi Lakṣmamma and Kalāvattamma for his consorts. Raghunātha is said to have worshipped god Kāstūri Krishna for the birth of a son. The God appearing before Lakṣmamma is said to have narrated to her the story of Dēvaki and Yaśōdha and that he would now be born to Kalāvati this time. This means that Vijayarāghava was born to Kalāvati.

11. In the *Bharatavākya*m of the *Ānandarāghava Nāṭakam*, Rājachūdāmani Dikshita says:

सारस्य भजतां मनस्सुमनसा सारस्वते शाश्वते शश्यामाकार्मुखशेखरे भक्तुवः श्यामारुणि चेमुषि जीयादच्युतराममदजनकः श्रीचित्रचेव्वाच्युतक्षमाभृद भू रघुनाथ भूमिपतिरप्योचन्द्रमातारकम्.

quoted on p. 264 of Mr. K. Sitaramayya's work.

12. *The Maratha Principality of Tanjore*, p. 43.

evidence contained in the Jesuit letters. A Jesuit letter dated 1659¹³ says that when the Kallans (thieves) plundered the land and set free the prisoners, who were imprisoned in the Vallam fort, there were among them "two brothers of the Nayaka, whom he had shut up in prison, after pulling out their eyes to remove all possibility of succeeding him." This letter shows that Vijayarāghava had two brothers instead of one and the name of the third brother is not known. And from this it is also inferred that these brothers were leading a miserable life as they were blinded and detained as prisoners at the Vallam fort. The reference to Vijayarāghava's 'putting out their eyes to remove all desire on their side of succeeding him,' proves that Vijayarāghava's right to the throne was not above challenge by rivals; and the Jesuit letter incidentally bears witness to his accession only by foul means. Moreover, the internal evidence, even though it remains silent on this question, does not anywhere mention, that Rāmabhadra was ever killed in battle or predeceased Vijayarāghava. Mr. K. Sitaramayya glibly assumes Rāmabhadra to have been an elder brother of Vijayarāghava and concludes, after a careful and critical examination of the available literary sources that Vijayarāghava got the throne through violent usurpation. He advances Vēṅkatamakhi's reference in his *Chaturdaṇḍi-prakāśika*, that he established a Chōḷa king on the throne, as evidence to this point and to prove that Vijayarāghava got the help of Vēṅkatamakhi at the time of his coronation.¹⁴ He further adds that the statements contained in the *Raghunāthābhūdayam* are inconclusive and self-contradictory. For, Vijayarāghava says therein, that he wrote it even while Raghunātha was alive and the latter is said to have offered the succession to him in appreciation of his scholarship. But in the *Prastāvana* (Introduction) it is said that he told his master Tātāchārya, that he had been directed by God Mannāru to write this work and the royal preceptor on hearing this, seems to have blessed him, "called here as the king" and directed him to compose the work in *dvipada* metre. And the *Raghunāthābhūdayam*¹⁵ begins like an address made by Tātāchārya to Vijayarāghava, the ruler. Besides, the same work recounts

13. Bertrand: *La Mission du Madure*, Vol. III, p. 53.

Mentioned in the *Nayaks of Madura*, on page 271-2.

14. *The Tanjore Andhra Nayaka Charitam*, p. 252. The reference to a Chōḷa ruler (Chōḷakṣmājane) must be taken to mean a ruler of Chōḷadēsa of the times and hence Vijayarāghava is referred to. Vēṅkatamakhi also calls himself as *Karnātarājyapratishṭāpanāchārya*.

15. *Sources*, pp. 256-7. Tātāchārya says that he had already obtained the blessings of God Mannāru as well as his own. Tātāchārya asked him to write the work embodying his achievements so that the whole may be offered to the deity as a garland (Tāraka Hāra).

the deeds of both Raghunātha and Vijayarāghava and Mr. Sitaramayya asks the pertinent question that if the work was written at the instance of Tātāchārya by Vijayarāghava when he had already become the ruler, how Raghunātha could have appointed him as ruler in appreciation of this work? That the work was really written long after Vijayarāghava's coronation is further established by the fact that it contains references to the help given by Vijayarāghava to the Vijayanagar Emperor, Srirangarāya III, whose accession took place in A.D. 1642. And hence the composition of this work cannot be referred strictly to the time of his accession, but only to a date approximately about a decade after the event. These observations show, that Vijayarāghava had usurped the throne with the aid of Vēṅkatamakhi and Mr. Sitaramayya adds further colour to the violent temper of Vijayarāghava by referring to his imprisonment of his son Mannāru, as mentioned in the *Tanjāvūri Aṇḍhra Rājula Charitamu*.¹⁶ And the non-co-operation and the disloyalty shown by his subjects on the eve of the Muhammadan invasions upon Tanjore and Vallam about the middle of his reign, are also taken as consequences of Vijayarāghava's violence and lack of popular support. However, Raṅgājamma says that Vijayarāghava was born to Raghunātha and his chief consort (Pattampurāni) by the grace of God. She says that when Raghunātha was praying along with his wives (*Āa sathulanugudi*), Maṇṇāru, the family deity, appeared before him in a vision and blessed him with the birth of a son.¹⁷ This would show that Vijayarāghava was of legitimate birth. The mention of Raghunātha's numerous courtesans as praying along with him, might suggest the possibility that other sons might have been born to him, of whom Rāmabhadra was probably one. The poets of the court did not take the trouble to mention his other sons, as they were not born of his chief consort; and so Rāmabhadra could not have been on the direct line of succession. And hence, Raṅgājamma's account leaves no doubt regarding the legitimacy of Vijayarāghava's succession. And the reference in the *Anandarāghava Nātakam* to two sons of Raghunātha, namely, Achyuta and Rāmabhadra, is not securely established; and since it is not quite known for certain, that Achyuta Vijayarāghava was also called Achyuta Rāmabhadra, it is not possible to pursue the point further. More evidence would be required to prove that Achyuta and Rāmabhadra refer to the same person Vijayarāghava. However, the general character of the Nayaks themselves and their peaceful rule as borne out by the literary evidence, do not admit the possibility of an usurpation. And

16. *Tanjāvūri Aṇḍhra Rājula Charitam*.

17. *Mannārudāsa Vilāsam*.

hence, on account of all these observations, Vijayarāghava's illegitimate succession cannot be admitted until further research into the still unearthened sources should be forthcoming.¹⁸

Vijayarāghava ruled for an appreciable length of time and it is said that he was an octogenarian at the time of his death.¹⁹ All are agreed that he died on the battle field. The early years of his reign immediately following the death of Raghunātha, saw the continuance of peace and tranquillity, and the loyalty of Tanjore to Vijayanagar remained unquestioned. Even though his epigraphs do not bear evidence to prove his loyalty to his suzerains the Vijayanagara Emperors, Venkatapati Raya II and Sriranga Raya III, yet it appears certain, in the absence of any contradictory evidence,²⁰ that he conducted himself as became a loyal feudatory of the empire and did not take advantage of the weak reign of Venkatapati Raya II (1630 to 1642), who was a lover of peace and who did not interfere into the affairs of his feudatories, as he was engaged in repulsing the attacks of the Muhammadan armies of Golkonda and Bijapur converging on his capital. This non-intervention of the Raya in the affairs of the southern Nayak kingdoms was taken full advantage of by the Madura Nayaka, Tirumala, who pursued a vigorous anti-imperial policy and even refused the usual tribute. Venkatapati Raya II had no time to teach Tirumala a sense of subordination; and the Kūniyur plates (1634) of Venkatapati II issued 'in accordance with the wishes of the prosperous and eminent ruler Tirumala,' show that even from the beginning of his reign, Madura displayed only a nominal allegiance and mere outward subordination to the Empire. But Vijayarāghava appears to have remained sincere and loyal towards the Raya and upheld the cause of the empire. And it

18. From the *Raghunāthābhyudayam* of Vijayarāghava and the *Vijayarāghava Vamsāvali*, it is clear that the accession of Vijayarāghava had taken place in the year *Srimukha*, i.e., A.D. 1633, when Raghunātha Nayaka was alive. The literary evidence bears no evidence to show whether Ramabhadra Nayaka, who is said to have been a son of Raghunātha and to have accompanied his father to the Tōppūr battle, was either killed in the action or returned in safety. Even assuming that Ramabhadra did survive the war, one is not able to understand any usurpation on the part of Vijayarāghava in A.D. 1633 when there was Raghunātha Nayaka alive and whose death will have to be placed in the following year, on the authority of his epigraphs.

19. The *Tanjavūri Āndhra Rājula Charitam* and also Taylor's Mss. say that he was eighty years old at the time of his death.

20. Both the internal and foreign evidence agree on the question of Tanjore's loyalty. The *Raghunāthābhyudayam* of Vijayarāghava, contains references to his help given to the Emperor, Srirangarāya. The Jesuit letters also speak of his loyalty and co-operation with the empire.

was perhaps this loyalty of Tanjore to the empire and the emperor's countenance and support to Vijayarāghava in turn, that were responsible for the keeping of Tirumala Nayaka's ambitious and aggressive activities out of Tanjore politics in the early years of his rule and when, the latter was engaged in the fortification of the important citadels of his kingdom and bore also an indifferent attitude towards the empire.²¹

[Note by the Editor.]

21. It is however held by Prof. R. Sathianatha Iyer that there is no definite evidence as to the objective of Tirumala, in organising the defences of his kingdom even at the very outset of his rule, though preparedness for war was essential even without any clear objective. He thus concludes:—"The features of the policy of Tirumala Nayaka towards the Vijayanagara emperor developed only later on under the pressure of circumstances. His original idea was probably to humour the emperor with occasional presents without paying regular tribute. But he was not allowed to continue this ambiguous relationship for long." Dr. S. K. Aiyangar holds that Tirumala's attitude towards the emperor depended upon the conditions of the empire for the time being. The diversion of the attention of Bijapur and Golkonda during the Mughal wars with Ahmednagar in the early decades of the 17th century "synchronised with the active movement of Tirumala towards independence in the South." "The policy of the Nayaks of Madura generally cannot be regarded as having taken into calculation the actual political condition of the times. The empire was struggling for existence during the first forty years of the century being driven successively from one capital on to another. Penukonda had to be vacated Chandragiri had to be similarly abandoned; and early in the reign of Sriranga III, Vellore was being laid siege to. These changes did not happen in a short campaign or two, but by persistent effort of no less than three decades. The absorption of the Chennappattana viceroyalty by Mysore enabled her to make a stand against the aggressions of Bijapur The whole brunt of the efforts of Golkonda had to be borne by the empire practically single-handed. If Tirumala had only realised the situation and had the foresight to see the political consequences of the disintegrating movement of which he had made himself the sponsor, if not the author, he would have certainly adopted a policy of co-operation with the empire. The question of Tirumala's loyalty or disloyalty therefore depends on the question whether, in the political conditions of his time, he could have foreseen the direct results of his action. The action of his predecessors and their attitude towards the empire must necessarily have made it impossible for him to take an impartial view of the situation at the time. The interests of Mysore and the empire ran together a great way. It was the governments behind these two that were for the time saved from the attacks of the Muhammadans. It cannot but have been clear to these, chief among them Tirumala, that what befell the empire would befall them soon after. If Mysore saved herself by sustained effort, the joint efforts of the emperor and his greater feudatories should have been equally successful. That Tirumala and his friends did not adopt this course of action argues either disloyalty or want of political foresight, either of the alternatives not redounding to the credit of the great Nayak of Madura."

This long quotation shows the part that Tirumala has justly to share of the blame and responsibility for the break up of the Hindu power in the South in the 17th century.

But there is no definite evidence to help us to determine whether Tanjore paid her tribute to the empire regularly.

Vijayarāghava was not destined to enjoy a peaceful reign as his latter years were full of troubles and unsuccessful wars. He was driven by force of necessity and incompetence, to purchase peace at a very heavy price from the Muhammadans. His subsequent vacillating attitude towards Sriranga III, was largely due to his single-handed efforts to maintain his own prestige and the safety of his kingdom against great odds. He was hemmed in by the powerful Madura ruler Tirumala, on the one side and the invading Muhammadans on the other. The political circumstances of the times forced him to give up the policy of co-operation and sympathy towards the emperor. And the political conditions were such that they offered only two alternatives to Vijayarāghava, either to co-operate with the Emperor and thus work out his own ruin at the hands of the Muslims or to abandon him to save himself from immediate destruction.

The accession of Sriranga Raya III to the Vijayanagar throne in A.D. 1642²² saw the beginning of the troubles and wars, which brought about not only the decline and ruin of the empire itself, but also the fortunes of Tanjore. Sriranga, unlike his predecessor, was a talented and courageous ruler. At the time of his accession the empire was in a state of rapid decline. On the north, the Sultans of Golkonda and Bijapur began to renew their vigorous attacks on the empire, when their own safety was guaranteed by means of settlement made by the Mughal emperor in A.D. 1636. In the South, the viceroyalty of Madura was truculent and tending to become independent. Mysore had already established herself independent under Kanthirava Narasa and Tirumala Nayaka of Madura began to give up even the show of a nominal allegiance to the empire. The Nayak of Gingee²³ in accordance with their family traditions, joined Tirumala and co-operated with him in his attempt to overthrow the supremacy of the empire. Tanjore alone seems to have remained traditionally loyal. It was under these discouraging political conditions, that Sriranga came to the throne and soon he had to face the

22. His accession is placed on the 29th day of October, A.D. 1642; but an inscription dated A.D. 1630 of his, indicates that he had been selected as Yuvarāja in that year.

23. The English Factory Records mention one Tubaki Krishnappa as the Nayak of Gingee.

difficulties on either side.²⁴ As he had a good training and experience in the administration of government, he reversed the peaceful policy of Venkata II and declared a policy of war against his enemies amongst whom, the opposition of Madura loomed large. For, he thought that the safety of the empire and the power to repulse the Muhammadans lay entirely in the unity and co-operation of his various feudatory rulers. With this object in view, he declared war upon Madura soon after his accession, before proceeding to stabilise his other resources. Vellore was then the Raya's residence and Sriranga Rāya also wanted to regain the lost territories of the empire from the Muhammadans. Thus it becomes evident that Madura was solely responsible for the emperor's serious intervention in the affairs of the South. As subsequent history will show, Sriranga was not destined to work out successfully his ambitious policy and soon he became an emperor without an empire and a refugee in the court of one of his feudatory Nayaks of Bednore. He was the last ruler of his line and with him the history of Vijayanagar comes to an inglorious termination.

From the time when Sriranga began his military operations in the south, the Nayak of Tanjore also had to face serious consequences. According to the evidence of a Jesuit letter,²⁵ Tirumala Nayaka of Madura, the most resourceful of them, formed an alliance with the Nayaks of Tanjore and Gingee to oppose the onward march of the Emperor by making them believe, that in the opposition of the Emperor lay the prosperity of their respective governments.²⁶ The same letter speaks of the Tanjore Nayak's betrayal of his confederates' plans against the Emperor by divulging the same to Sriranga. The Emperor, being informed of the schemes of Madura and Gingee, is said to have attacked the latter. Tirumala though disappointed by the actions of the Tanjore Nayak,

24. According to Foster's extracts the Muhammadan kings of Golkonda and Bijapur began to invade the territories of the Hindu King in A.D. 1642 immediately after the death of Venkatapati II. They are even stated to have occupied the whole country on the coast. *Archaeological Survey of India*, 1911-12, p. 193. The Jesuit letters mention the Muhammadan invasion as a result of Srirangarāya's dealings with the southern Nayaks.

25. *La Mission du Madure*, Vol. III, p. 43.

26. The Jesuit letter says that Tirumala concluded a league with Tanjore and Gingee against their sovereign. Mr. Sitaramayya says that Vijayarāghava at first joined them; but when he came to know their disloyal attitude towards Sriranga, he withdrew from the league unhesitatingly. However, the hostile attitude between Tanjore and Madura from 1610 would stand against the possibility of Tanjore entering into a league with Madura.

Vijayarāghava, did not lose courage and made a successful appeal to the Sultan of Golkonda to invade the emperor's territories and to attack Vellore in order to divert Sriranga's attention from the south. His appeal had its desired effect, since Sriranga is said to have retreated to his dominions and gained a victory over the Muhammadans. These must have happened about A.D. 1643.²⁷

What happened in the south, consequent upon the emperor's withdrawal from Gingee is not known for certain. However, the political relationships and animosities of the times would show that Madura and Gingee must have been opposed to Tanjore as they could not acquiesce with the latter's betrayal. Some positive offensive must have also taken place between Tanjore and the allies and even though we have no direct evidence on this point, yet Vijayarāghava's claims in his *Raghunāthābhyaṇḍayam* that he compelled the Pāndya (Madura) and the Tuṇḍira (Gingee) chiefs to sue for peace, when they opposed Srirangarāya and that he helped the latter by making those chiefs to wait at his door, must have reference to this period. The above statement refers to Vijayarāghava's forcing the allies to come to terms and it may not be improbable if it is held, that he co-operated with Srirangarāya in his siege of Gingee and also continued it for sometime, even after the emperor's retirement to the North.²⁸

The victory gained by Srirangarāya over the Muhammadans did not in any way prove to be final and the Sultan of Golkonda, dismayed

[Note by the Editor.]

27. In 1643 and perhaps in the early part of 1644, Sriranga had succeeded in putting down the opposition of Damarla Venkatappa, who had intrigued with Golkonda and had also defeated and turned back the Golkonda forces which had advanced as far as Pulicat. He had thus contrived to establish himself firmly in power and to push back the advance of Golkonda. Sriranga's position was very strong in 1645 when he gave a charter to the English at Madras in September.

A little later, we find in the Dutch records, a reference to the defeat of Sriranga within the walls of Vellore by a Bijapur army, and forced to pay a war indemnity; though two years earlier he had secured the Bijapurian help in return for 15 lakhs of pagodas and 24 elephants. "This (change) was brought about through the intrigues of Mirjumla, who, after suffering the defeat referred to before, negotiated both with Bijapur and with Kantirava Narasa Raja Udaiyar of Mysore to bring about an attack on Vellore."

After this, the rebel Nayaks of the empire seemed to have come back to their proper allegiance and support of the Raya. Foster tells us that "the three rebellious Nayaks were those of Tanjore, Madura and Sinsider (Gingee?) who inflicted a severe defeat on the royal forces in December 1645 (*The English Factories in India* (1646-50), pp. 24-25).—[Ed.].

28. This seems fairly plausible since subsequent events do not support Vijayarāghava's help to Srirangarāya.

at the success of the Hindu army, made active preparations for another attack. Finding himself insecure, Sriranga again thought that a solution of the problem lay only in the hearty co-operation of his Nayak feudatories of the South. Mr. Sathianatha Aiyar says that 'encouraged by their new attitude, he (the emperor) worked with them to devise plans for the expulsion of the Muhammadans from their recent conquests.'²⁹ Proenza's letter says that Sriranga 'finding the chance of success but in an alliance with the three Nayaks, invited them to join him' and offered them favourable conditions which were accepted.³⁰ The same letter adds that Sriranga came to the south 'to better concert together the means of defence and attack.' But according to the same evidence even his new policy did not produce any result. Proenza says that Sriranga spent more than a year in bringing about a good understanding between the Nayaks, during which the Muhammadan armies quietly achieved the conquest of his dominions. But finally, the Nayaks whose selfish interests and jealousies were insuperable, rejected the call for co-operation with Sriranga and so the latter forsaken and abandoned, lived for sometime in the forests lying to the north of Tanjore and from where he proceeded towards the west when a Muhammadan detachment composed of cavalry from Gingee was sent further south in pursuit of the emperor.³¹ Since the Jesuit letter refers to this chase and to the subsequent siege of Gingee by the Golkonda forces, it may be taken that these events happened about A.D. 1646 which is the date of the fall of Gingee fort³² into the Muhammadan hands.

The Jesuit evidence would have us believe that Tanjore also was opposed to the emperor when it says that Sriranga invited the three Nayaks and offered them favourable terms. But from the general attitude and character of the Tanjore Nayaks, it is not possible to entertain any suspicion as regards the loyalty of Tanjore and the arrival of Srirangarāya near Tanjore on the eve of his proposed negotiations, would only confirm Vijayarāghava's more friendly attitude towards the empire. However, nothing tangible was achieved as Proenza refers to the break-

29. Sriranga III of Vijayanagar. (Third Oriental Conference Report). The reference to the new attitude of the Nayaka was perhaps due to the exertions of Vijayarāghava mentioned before.

30. Bertrand III, p. 43. Sriranga's invitation to the Nayaks and his offer of favourable conditions imply that he no more stood on his technical rights as emperor regarding his relations with his feudatories.

31. Bertrand, p. 43. Sriranga's flight from Tanjore was mainly to escape from the attack of the Muhammadans.

32. Prof. C. S. Srinivasachari, 'History of Gingee,' p. 11. Also 'The Nayaks of Madura', p. 133 and Note 60.

down of the negotiations.³³ Since it is not mentioned that Vijayarāghava upheld the cause of the empire but strangely enough allowed Sriranga to go to the west, the loyalty of Tanjore calls for some explanation. Proenza's letter referring to the conquest of Vellore and other territories by the Muhammadan army of Golkonda and to the retirement of Sriranga from Tanjore, speaks of the siege of Gingee by Golkonda. Thus it becomes clear that Sriranga despaired of the prospects of a joint action on the part of his feudatory Nayaks, and disheartened, by the onward march of the Muhammadan forces which were sent in pursuit of him, had to leave Tanjore, leaving Vijayarāghava to his own fate. Perhaps the emperor thought it insecure and also futile to remain at Tanjore and to oppose his enemies with the aid of Vijayarāghava alone. Moreover, the recent success of Sivappa Nayaka of Ikkēri (Bednore) in raising the second siege of Vellore for a time and his momentary victory³⁴ would have tempted the emperor to join him, so that he could try his chance of winning success by attacking his enemies from the rear. Thus Vijayarāghava was left without any help from the empire, when he was attacked by a detachment of Muslim cavalry. The old animosities between him and Madura would not allow any possibility of entering into an alliance against the Muhammadans and it was this utter helplessness and lack of self-confidence that led him to adopt the extremely unwise but the expedient policy of purchasing peace with his enemies by 'surrendering

33. What led to the failure of this proposed union is not known. Perhaps Madura's growing idea of independence and her suspicion of Tanjore were responsible, besides other factors, for the termination of the negotiations.

[Additional note by the Editor.]

"Tirumala Nayaka, seeking safety in his unsound policy, committed a second folly, which brought about the ruin of all these kingdoms. His ambassadors went, in his name, to treat with Idal Khan (Adil Shah) or the king of the Dakhan who sent him 17,000 horse. With this imposing cavalry and 30,000 infantry of his own, he marched to Gingi. But the Muhammadans of the two armies easily came to an understanding among themselves. The subah of Golkonda concluded a treaty with the general of Idal Khan and retired to the kingdom of Bisnagar to consolidate its conquest; while the 17,000 cavalry of Idal Khan, along with some regiments of infantry continued the siege of Gingi which they were called for to defend. The 30,000 Madura infantry entered into the place, and joined the troops of the king of Gingi..... Soon disagreements and diversions sprang up among these men (the besieged) so diversified in nationality and manners. A revolt broke out, in the midst of the general confusion, the gates of the citadel were thrown open to the enemy who rushed into it, and delivered the town, the richest in all these countries, to pillage." (The Jesuit letter, quoted above.)

34. Sources: *Sivataṭṭavaratnākara*.

himself at discretion.³⁵ Proenza says that the arrival of a detachment composed of cavalry in Tanjore itself 'created a panic in the citadel.'

Tirumala Nayaka stood firm by the side of the Nayak of Gingee and when the latter was besieged by the forces of Golkonda, he was able to enlist the help of Bijapur against the besiegers. He is said to have despatched an army composed of 30,000 infantry along with 17,000 cavalry supplied by Adil Shah, the Bijapur Sultan, to raise the siege of Gingee. When these two armies arrived at Gingee, the general of Golkonda seeing that it was led by the Bijapur general, the Khan-i-Khanan, who was also a faithful follower of Islam like himself, concluded an agreement with him by which the Golkonda general retired to the North, leaving the siege of Gingee in the hands of the Bijapur general. The Madura army, again disappointed, now joined the forces of Gingee and made a protracted siege possible. But a revolt among the besieged, who were composed of heterogeneous groups, soon upset all calculations of success and the Muhammadans easily captured the city. Proenza speaks of the immense booty 'consisting of silver, gold, pearls, and precious stones of inestimable value' captured by the enemies.

Encouraged by the successful siege and capture of Gingee, the Muhammadan army marched against the Nayaks of Tanjore and Madura. According to the Jesuit account, Vijayarāghava at first displayed his cowardice by hiding himself in the inaccessible forests of his kingdom, but had to come out when his territory was overrun by the enemies, who carried plunder and devastation wherever they went. Vijayarāghava had to purchase peace again at a heavy cost by meekly submitting to the will of the conqueror.³⁶ Proenza finds fault with Vijayarāghava for his submission, without the least defence and also for his short-sighted policy of not attempting to advance the cause of the empire,³⁷ even after the re-

35. Bertrand III, p. 45. Mr. Nelson says that Vijayarāghava submitted by sending an embassy to Gingee. Vide the *Madura Manual*, p. 134.

[Additional note by the Editor.]

The Jesuit letter thus tells us about the doings of the Nayaks of Tanjore:— "The Golkonda army advanced on the territory of Gingi. The Nayak of Tanjore knew that he could not give pitched battle to an enemy whose mere number had created so much terror, but he could no longer count on his ally of Madura whom he had scandalously betrayed. Obligated to take sides, he.....delivered himself up to the king of Golkonda and concluded with him a treaty by which he surrendered at discretion." There is much that cannot be cleared up in the above passage regarding the conduct of the ruler of Tanjore, for which an elaborate explanation is offered here.

36. *La Mission du Madure*, Vol. III, p. 47. Also Taylor's *Catalogue Raisonné*, III, p. 40.

37. *Ibid*.

turn of the enemies. But a close study of the political movements of the times would only support the stand taken by Vijayarāghava, however bad and impolitic it was. Sriranga's leaving Tanjore helpless at a critical time, only exposed Vijayarāghava to the attacks of the Muhammadan and Madura forces. However strong and well disciplined the Tanjore forces might have been, yet, on account of her small size and slender resources and middle position, she could not offer an effective check against the torrential stream of the Muhammadan advance. Besides, his loyalty to the empire which led him to betray Madura and Gingee, now made him an irreconcilable foe to Madura and so no alliance with her was possible. Madura, with the idea of achieving independence, would not join Tanjore, which was for the continuance of the Empire. It was this utter helplessness that greatly handicapped him in his active co-operation with Sriranga Rāya. Under these circumstances, only two alternatives remained for immediate solution and Vijayarāghava had to choose between his own safety by submitting to the enemy and taking up the cause of the emperor at his own risk. In the latter course he could not think of joining Mysore which was then loyal to the emperor, because the distance and the immediate presence of Madura between these two would not be suitable for carrying on any united action. Hence it becomes apparent that Vijayarāghava's preferring his own safety was largely the outcome of political sagacity and statesmanship and cannot be called either want of sympathy or short-sightedness or disloyalty. However, his purchase of peace at a very heavy cost definitely proves that he was very much wanting in leadership and courage as well.

This event which happened about A.D. 1646 was a shadow of the coming evils and according to the Jesuit evidence, Khan-i-Khanan, the Bijapur general, invaded Tanjore immediately after his conquest of Madura³⁸ and levied a huge ransom. Proenza says that the general

38. The advance of Khan-i-Khanan upon Mysore was the result of Tirumala's invitation made to Bijapur. The causes for this second Bijapur invasion are said to have been Mysore's protection given to Sriranga and the latter's attempt to regain his territories with the aid of Mysore. Proenza says that Sriranga with an army of Mysoreans 'entered the field, reconquered a part of his provinces and repulsed the army of Golkonda which advanced to attack him.' Prof. Sathianatha Aiyar says that Madura was not all conquered but was obliged to pay subsidy for the help which Tirumala received. *Nayaks of Madura*, p. 131.

Mr. Nelson referring to the event of this period says that Raghunātha and Tambi Sētopati had annexed Pattukkōttai, Mannār Koil, Dēvakōttai, Arantangi, Tiruvarur and Tanjore. But he does not mention the source. *The Madura Manual*, p. 131.

raised large contributions and returned to Bijapur, full of plunder.³⁹ The second invasion of Bijapur upon Mysore and its ultimate success brought to an end the ambitious policy of Srirangarāya and Kanthirava Narasa (1638 to 1659) humbled and frustrated in his policy of Vijayanagar expansion, and finding his hospitality and generosity towards Sriranga were the sources of all his recent troubles, withdrew his co-operation and finally gave up the cause of the emperor. Since this is said to have happened in 1653, the second Bijapur invasion, must have taken place about the same year. Sriranga, thus abandoned for a second time, had to lead a miserable life in the jungles on the confines of his kingdom.⁴⁰ The disappearance of Sriranga from the political field marked the rapid decay of the empire. In the destruction of the empire, Tanjore lost a valuable protector and trusted friend, though from this time onwards, Vijayaraghava Nayaka ceased to be a depen-

39. Bertrand, p. 48.

40. Even though there are pieces of evidence to show that he appealed to Shah-Jahan for help through Aurangzeb by offering himself to become a convert to Islam and that he also made attempts in 1657 and 1658 for the recovery of his kingdom, yet nothing intelligible is known about him after A.D. 1659. "Sriranga III of Vijayanagar" by Prof. R. Sathianatha Iyer. However epigraphs and literature refer to his remaining alive as refugee under Sivappa Nayaka of Ikkēri until A.D. 1675. See 'The Nayaks of Madura,' p. 131 Dr. S. K. Ayyangar places (p. 131 note) his death about 1675. Prof. R. S. Aiyar says that the date of his death cannot be taken later than that of Shivaji's i.e. A.D. 1680.

[Additional note by the Editor]

When Mir Jumla fell out of favour with his master of Golkonda, on account of the intercession of Shah Jahan on his behalf, Sriranga tried to recover his power. A Dutch letter from Batavia tells us that about January 1657, Sriranga had captured Tirupati and was planning the conquest of the neighbouring districts. These must have happened in 1656. But the Raya's cause was injured by the faithlessness and disaffection of his own officers, e.g. the defection of his general, Koneri Chetty. Early in 1658, he was defeated by Tubaki Krishnappa, who was in the service of the enemy, Mir Jumla and who was himself attacked by the Golkonda forces. In 1659 the trade of Madras was greatly injured by the continued operations of the armies of the Raya and of the Muslims in its neighbourhood.

Even in 1661 the Raya continued to enjoy some authority. But the English guns and gunners in the service of the Muslims had contributed to his defeat in many places. Dr. S. K. Aiyangar holds that 1668 A.D. definitely marks the passing of the Carnatic from the Vijayanagar rule to Muslim sway; and after this date Sriranga Raya had to shift for himself outside this region. In 1661-2, the new Madura Nayak, Chokkanatha, planned boldly to re-establish the Raya in his power, to restore Gingi to its Nayak line and to remove the evils that had resulted from the mistaken policy of Tirumala Nayaka. He contrived to defeat the Nayak of Tanjore, reduced him to submission and turned back the Bijapur generals Maula and Sagosi (Shahji) back into Gingi. Then followed an invasion of the Bijapur troops and a second invasion by the Madura forces into the Tanjore country. (See *Journal of Indian History*, Vol. XVIII, Part I, pp. 39-41.)

dent ruler. The disappearance of the empire was followed by the expansion of the Muhammadan armies of Bijapur and Golkonda farther south. Thevenot remarks that "the king of Golkonda seized those dominions of the Coast of Coromandel which lay conveniently for him and the king of Bijapur, having taken what lay next to him, pursued his conquest as far as the Cape of Negapatam," and adds that the kingdom of Bijapur is bounded on the south by the country of the Nayak of Madura, "whose territories reach to the Cape Comorin." The vassalage of Vijayarāghava Nayaka to Bijapur is proved by the observation of Thevenot:—"There are many Naiques to the south of St. Thomas who are sovereigns. The Nayaks of Madura is one. He of Tangiour (Tanjore) is at present a vassal to the king of Bijapur."⁴¹ Robert Orme says that in 1652 the Carnatic was invaded by the armies of Viziapore (Bijapur) and Golkonda acting separately; but agreed it is supposed in the objects and division of their conquests which were accomplished in 1656.⁴²

These observations of the Jesuits and other writers show that the supremacy of Vijayanagar in the south came to an end by A.D. 1646 and by A.D. 1656 the Muhammadan supremacy was established in its stead. The kingdom of Gingee was completely annexed, that of Tanjore became a vassal and Madura paid yearly tributes. From this time onwards Vijayarāghava's foreign policy was mainly concerned with Madura, as he had adopted a policy of submission towards the Muhammadans. After Khan-i-Khanan's leaving Tanjore about A.D. 1653, Vijayarāghava was allowed to rule peacefully for a short period till A.D. 1659. During this short time, Vijayarāghava was perhaps interested in the fortification of the important places of his kingdom even though the internal and foreign evidence do not prove this conclusively.⁴³

By reading between the lines of the Jesuit letters one is led to think that Vijayarāghava by his short-sighted policy and ruinous re-

41. Travels, Pt. III, Pp. 91 and 105.

42. Orme: *Historical Fragments*, p. 62.

43. Bertrand, III p. 50. Father Proenza says that 'the king of Tanjore instead of imitating his (Muthuvirappa Nayaka) example' i.e., in fortifying the citadel and on p. 51 he says that 'the Vallam fort by its natural position and fortifications which art had added it' was considered impregnable. The *Tanjāvūri Āndhra Rājula Charitamu* says that he was responsible for the extension of the fort of Tanjore and adds that the forts of Arantāngi, Pattukōttai, Relāthalli, Tiruppattūr were all begun and completed in one day. Another tradition says that he built the forts of Tirukkāttuppalli, Vallam, Pandanallūr and Sākkōttai in addition to those mentioned in the *Āndhra Rājula Charitamu*. Since subsequent events were full of wars and there is also no reference to show that any of these forts was damaged, it may be said that Vijayarāghava utilised this short period in repairing and fortifying the vulnerable points of his kingdom.

ligious zeal and fervour, neglected his duty of protecting the people from foreign aggression. By his own neglect of duty and want of statesmanship and diplomacy, he made Tanjore a prey to his enemies. About the same time the contemporary Madura Nayaks were devoting their attention in the fortification of their strongholds. Tirumala does not seem to have entered into open hostilities with Tanjore as he was engaged in the settlement of the affairs of the Sētopatis of Ramnad and in his expedition against Mysore.⁴⁴ He died in A.D. 1659 and was succeeded by Muthu Virappa Nayaka in February of that year.⁴⁵ He differed from Tirumala in his policy towards the Muhammadans, and shortly after his accession, he added to the fortifications of Trichinopoly and placed it under the command of his general Lingama Nayaka, so that Trichinopoly might serve as an impregnable defence against future Muhammadan invasions. The Jesuit letter says that he even refused to pay the tribute to Bijapur. The extensive measures of defence taken by him must have had their consequence upon the neighbouring Tanjore and the Jesuit evidence records an appeal made by Vijayarāghava to Adil Shah of Bijapur in that year, instead of co-operating with the Nayak of Madura.⁴⁶ Even though there is nothing to show that Muthu Virappa was at war with Vijayarāghava, yet, the reference to the latter's appeal to Bijapur for help shows that the old family feud between these two houses continued unabated and there was also distrust and suspicion among them. What became of Vijayarāghava's appeal to Bijapur is not known, but from the subsequent events it becomes clear, that Bijapur was indifferent towards him. However, his appeal seems to have enabled the Sultan to understand that the time was best suited for carrying on a conquest of the south. Encouraged by the absence of unity among the Southern Nayaks, the Sultan despatched a large army under 'Sagosi' and 'Mula' with the object of conquering the Nayaks' dominions. The army arriving at Trichinopoly and soon finding that the fort was well fortified and warlike preparations made for her defence, moved towards the east and made a surprise attack upon Tanjore.

The fierce advance of the enemies upon Tanjore itself made Vijayarāghava to lose courage and to take shelter in some other place, without offering them battle. The Jesuit letter says again that Vijayarāghava

44. For an account of the measures of defence taken by Tirumala, see *The Nayaks of Madura*, p. 144.

45. *The Nayaks of Madura*, p. 150.

46. *The Nayaks of Madura*, p. 152. Prof. Sathianatha Aiyar says that Muttu Virappa Nayaka 'urged the Nayak of Tanjore in vain to join him.' The Jesuit letters, Bertrand III p. 269 makes no reference to this attitude.

fled to Vallam leaving Tanjore to be defended by his 'son-in-law.' The date of this attack according to the same source was 19th of March 1659. Proenza⁴⁷ says:—"This town, situated in the midst of a fertile plain, was not inferior to the strong citadels of Europe. Defended by strong artillery and numerous troops, provisioned for several years, it could defy the besiegers, who had not a single cannon at their service. The commander of the fort, a son-in-law of the Nayak, boldly ascended the ramparts, and was struck by an arrow which inflicted a light wound on him; at once his bravery vanished, and he gave up the place shamelessly. The *rajas* also protested against his cowardice. These are warriors of a very noble caste and renowned for their courage. They use only the sword and the lance; they scorn the bow and the gun, and leave as they themselves say, these arms to cowards who dare not face danger closely. Their maxim is never to retreat before the enemy, to conquer or die is to them a sacred law. Faithful to this law, they threw themselves desperately amidst the conquerors and met with a glorious death, which they preferred to a dishonourable life." 'Sagosi' and 'Mula' capturing the fort without hard fighting, proceeded towards Mannārkōil (Mannārgudi), which was 'situated seven leagues east of the former' and which contained a well fortified fort. This fort was also easily taken by the Muhammadans. Encouraged by their easy success they advanced towards Vallam, 'three leagues south-east of Tanjore,' where they were informed that the Nayak had taken his shelter along with his family and hoarded treasures. The fort of Vallam situated 'on a steep rock within which ramparts are erected with incredible labour and expense' and by its natural position and fortification was an impregnable one and Vijayarāghava, it is gathered from the Jesuit accounts, seemed to have determined to defend it with all his energy. Proenza again says 'when the hour of peril was rung, he had no more faith in his courage than in the fidelity of his subjects; he sacrificed his dearest and fled to the forests of Talavarāyan,⁴⁸ his vassal. The army of Idal Khan (Adil Shah) was not even put to the trouble of attacking this third citadel. Those who defended it, frightened by the capture of the two principal towns despaired to resist an enemy so formidable. Besides, actuated only by the feeling of self-preservation, without any kind of devotion for a king who deserved so little of them, they believed that they would be safer in their impenetrable forests than behind their ramparts. As soon as night came, to cover them, they escaped one after

47. Bertrand III, p. 270. Proenza's letter from Trichinopoly dated 1659. *The Nayaks of Madura*, pp. 270-271.

48. Who this vassal was that gave Vijayarāghava shelter is not easy of identification.

another, without noise and with such perfect agreement, that, at day-break, the commander found himself in a deserted town with only a few faithful followers. They themselves made up their mind to follow the fugitive; but when going off, they wished to take their share of the treasures which they abandoned to the enemy; they opened the coffers of the Nayak, took what they could carry of the most precious in gold, pearls and precious stones, and fled to the most inaccessible forests. 'Their strength was not in proportion to their greed.' When the commander himself fled in a panic, the Kallans (wild tribes) of the neighbourhood visited the fort before it was surrounded by the Muhammadan forces and took possession of the 'fabulous treasures which till then were not counted but in measuring them by the bushal.' The fort was emptied of its riches and was thus saved 'from the rapacity of the Muhammadans.' The thieves while searching for the treasures came across the prisons which they threw open and thus set free a large number of prisoners. Proenza calls this 'the happiest episode of this war' and adds that those treasures which were the fruits of the greedy kings and the labour of the poor, when removed gave to all people an honest life. By the time the Muhammadan armies arrived at Vallam the palace was left barren. 'Sagosi' and 'Mula' finding the fort empty and evacuated and bereft of all riches, is said to have put a small garrison in charge of it. Proenza writing sometime after this event (March 19, 1659) says that the Muhammadans have already been 'for several months in possession of this beautiful and fertile country' and adds that at the time of his writing it was not possible for him to say definitely whether they would remain there or go back to their country collecting the riches. In another letter dated 1662, he again says that 'Mula' and 'Sagosi' had occupied the kingdoms of Gingee and Tanjore 'since two years' and 'seemed determined to fix their dominions there.' From the same letter it is also gathered that they had to abandon their project of colonisation, when a famine broke out as a consequence of this invasion and havoc done, to human life. Proenza says that the famine was severe in all this country and was followed by the migration of the people to the neighbouring places like Madura and Satyamangalam, where the ravages were less felt. The Muhammadans themselves suffered much from this pestilence. Their exposure in the open air of dead bodies without burying them, soon developed an epidemic disease resulting in increased mortality. To this was added the disunion among the officers and generals of the army. 'Mula' reduced to this sad plight, tried negotiations with the Nayaks of Tanjore and Madura by saying that he would leave the land if they should agree to advance him the tribute of three years. Vijayarāghava Nayaka, having lost everything already and with nothing more to lose betook himself in the forests, while Madura

paid no heed as she was confident of her strength. And both of them realising the adverse circumstances under which the Muhammadan army was suffering remained quiet. 'Mula' finding that further delay would mean additional loss of men and lives, left Tanjore and laid siege to the fort of Trichinopoly, where again he found the task quite beyond his skill and resources. Bands of Kallans (robber chiefs) caused considerable havoc and further damage to the misfortunes of 'Mula,' who at last finding it very hard to continue the siege for long retired on receiving a moderate sum from the Madura ruler, Muttu Virappa Nayaka.⁴⁹ Thus, for the fourth time, we find Vijayarāghava Nayaka being attacked by the Muhammadan forces and on this occasion he seemed to have suffered much on account of his cowardice and want of popularity with his subjects. Proenza speaks of the Tanjore people, who were left unprotected by the Nayaka 'as those who had no devotion for a king who deserved so little of them.' Even the army was tired of his rule and it did not co-operate with him fully at times of danger. And Vijayarāghava could not even continue his self-made policy of submission and surrender to the enemy, as a result of these frequent invasions and hence we find him adopting a new policy of moving with his men and money from one place to another and thus avoiding the enemy. Vijayarāghava's extreme piety and devotion to God and his intense religious zeal stood by him as a great consoler and he, a philosopher king understood success or failure as only a manifestation of the Supreme Will.

However, Vijayarāghava soon after the departure of 'Mula' to Gingee, occupied Tanjore. Referring to the miserable life led by him, Proenza mentions that the robbers, the former plunderers of the Nayak's treasures in the Vallam fort, took pity on him and restored to him a part of his riches, saying that they plundered it only to preserve it safe.⁵⁰ Thus with the active aid of the Kallans, Vijayarāghava succeeded in re-establishing his authority in the land but as misfortune would have it, he was not destined to rule peacefully even for a short time.

Muttu Virappa Nayaka of Madura died shortly afterwards after a rule of about six months and he was succeeded by Chokkanatha in July 1659. His accession saw the revival of the old long-standing animosities between Tanjore and Madura and also the beginning of internal trou-

bles. As he was only sixteen at the time of his accession, he left the administration in the hands of his Pradhāni, Rāyasam and Dalavāy, who, forming a close association among themselves, were bent upon furthering their own selfish interests. The Jesuit evidence⁵¹ says that Chokkanatha declared a policy of conquest on the advice of his ministers in order to drive away the Muhammadans. With this object, Lingama Nayaka was despatched with forty thousand men to attack 'Sagosi,' who was then encamping at Gingee. Lingama is said to have received bribes from the Muhammadan general and prolonged the campaign, while in Madura, the Pradhāni and the Rāyasam were conspiring together to put an end to the life of Chokkanatha and to instal his brother on the throne. The news of this projected plot was revealed to the Nayak by a lady of his court and he lost no time in taking a bold action. The eyes of the Pradhāni were pulled out and the Rāyasam was murdered and Chokkanatha captured the power from them. Too weak to oppose Lingama Nayaka, he pretended friendship with him only to take him captive at a suitable opportunity and punish him accordingly. But Lingama, whose conscience rendered him suspicious, escaped from Trichinopoly and joined 'Sagosi.' Proclaiming hostility towards Chokkanatha, he besieged Trichinopoly with twelve thousand cavalry. According to the Jesuit evidence,⁵² Vijayarāghava held out assurances to Lingama of his help in his attack upon Madura. The beginning of the siege was favourable to the allies and Lingama thought of capturing Chokkanatha alive. The latter given to understand that the failure of his men was due to the vile and treacherous Pradhāni, soon assumed the command of his army in person and made strong efforts to repulse Lingama and 'Sagosi.' Soon victory was on the side of Madura and the enemies withdrew to Tanjore. Chokkanatha encouraged by the victory, ordered his troops to advance upon Tanjore and attack Vijayarāghava Nayaka for co-operating with 'Sagosi' and Lingama. Vijayarāghava again helpless surrendered to the enemy, while his allies fled to Gingee. Since these events are recorded in a Jesuit letter⁵³ dated A.D. 1662, the invasion of Madura upon Tanjore in order to punish Vijayarāghava for helping Lingama, must have happened between 1660

51. *La Mission du Madure*, Vol. III, p. 121; and 'The Nayaks of Madura,' p. 155. Prof. Sathianatha Aiyar says that Chokkanatha was not responsible for this policy of conquest, since the whole project was worked out by the three officers in order to create confidence in the people. And when Lingama, the Dalavāy, heard of the Nayak's activities he turned an enemy, when the Nayak wanted to deal with him severely.

52. *La Mission du Madure*, Vol. III, p. 123.

53. *La Mission du Madure*, Vol. III, p. 119. Letter of Proenza, dated 1662.

49. For an account of the expedition of 'Sagosi' (Shahji) and 'Mula' (Mustafa Khan), see 'A Great Maratha Service to South India in the Pre-Shivaji Epoch' by Rao Sahab C. S. Srinivasachari—*Sardesai Commemoration Volume*, pp. 76-77.

50. *La Mission Du Madure*, Vol. III, p. 53.

and 1661. This victory of Madura over Tanjore proved to be the first of its kind, ever since the foundation of the Tanjore Nayakship.

The Jesuit letter speaking on the troubled political conditions of this period, says that Tanjore suffered serious consequences on account of these frequent attacks. 'The people abandoned their homes and took refuge in Madura and some at San Thomé. The excessive and fatal religious zeal of Vijayarāghava made him culpably negligent of his subjects' sufferings. To all the mishaps due to the Muhammadan scourge and famine, was added the 'inhuman exploitation of the situation by the Dutch, prompted by mercenary motives.'⁵⁴ A Jesuit writer⁵⁵ says, 'shame, eternal shame to the Dutch, who cruelly speculated on the misery of the Indians. They enticed them to the coast by the bait of abundant food; then, when their number became pretty large and their strength a little recouped, they piled them up in their ships and transported them to other countries to be sold as slaves.'

The retirement of Chokkanatha from Tanjore after Vijayarāghava's abject surrender gave the land some sort of nominal peace. In this short period nothing seems to have happened in Tanjore except the preparations of Vijayarāghava to wreak vengeance upon Madura, as he could not reconcile himself with his submission to Chokkanatha. The recent invasion was so significant, as to induce him to action. But as he found that by himself he could not face Chokkanatha, he was waiting for an opportunity to display his enmity openly. Soon the longed-for opportunity came in A.D. 1663 when 'Vanamian' the able general of Bijapur came to the south on an expedition and laid siege to Trichinopoly.⁵⁶ The Jesuit evidence again tells us that 'Vanamian' was helped by Vijayarāghava of Tanjore, who is said to have been the enemy and opposed Madura 'against the fidelity of treaties.' The Bijapur general laid waste the neighbouring territories but finding that his threats and show of power as well as his several attacks were of no avail, he opened negotiations with Chokkanatha and asked for a ransom as a condition of his leaving his kingdom. The latter availed himself of this and purchased peace by paying a large contribution in money and thus saved himself for the moment from the horrors of war. But he could not

54. 'The Nayaks of Madura', p. 157.

55. *La Mission du Madure*, Vol. III, pp. 124-5.

56. The causes for this expedition are not known for certain. Perhaps the news of the defeat of Sagosi and Lingama at the hands of Chokkanatha, might have induced the Bijapur Sultan for further action. The co-operation of Vijayarāghava of Tanjore with 'Vanamian' and the Jesuit reference to Tanjore's betrayal also admit the probability of Tanjore seeking the help of the Sultan as against Madura.

allow Vijayarāghava unpunished for his betrayal in joining 'Vanamian' in his siege of Trichinopoly, by breaking his treaty with Chokkanatha made recently. Accordingly, the Nayak of Madura marched upon Tanjore for a second time with a large army and soon captured the fort of Vallam which 'by its position and by the rich lands which depend on it' was efficiently garrisoned. Vijayarāghava was forced to surrender and he made peace by agreeing to the timely conditions imposed by the victor. The fort of Vallam which formerly belonged to Madura, but which was transferred to Tanjore by an order of Achyutha Raya at the commencement of the rule of the Tanjore Nayaks in exchange for Trichinopoly, was now lost to Madura by Vijayarāghava as a consequence of this defeat. Chokkanatha Nayaka's annexation of the Vallam fort is confirmed by the Jesuit evidence, which speaks of his return 'after leaving a good garrison in the fortress of which he has just made the conquest.'⁵⁷ The loss of Vallam must have happened in A.D. 1663, since John Nieuhoff speaks of Vijayarāghava's recapturing it in A.D. 1664.⁵⁸ Nieuhoff says "the Nayak of Madura had been for a considerable time in war with the Nayak of Tanjore and taken many places from him; at my time the war was renewed with more vigour than ever; and the Nayak of Tanjore having gathered a great army attacked the Nayak of Madura so briskly that he took from him, in a few days, all the places he had conquered from him before. The army of the Nayak of Madura being much disheartened by the victories of their enemies, the Nayak of Madura sent to me to Koylang his chief governor desiring assistance from the Company; but as it was not our interest to engage on any side, I excused it as handsomely as I could."⁵⁹ And from this it is known that Vijayarāghava recaptured the fort of Vallam and that the latter remained under Chokkanatha only for a very short time. Mr. K. Sitaramayya says that this was the first victory won by Vijayarāghava Nayaka. As Chokkanatha Nayaka was engaged with the reorganisation of the affairs of the Sētupatis of Ramnad and also with the preparations for an attack on Mysore,⁶⁰ and as he was not able to enlist the co-operation of the

57. Proenza in his letter dated 1665 speaks of Vijayarāghava as having been 'defeated and fleeced by Sokkalinga', whom he had notoriously betrayed. *La Mission du Madure*, Vol. III, pp. 164-5. Since the letters were written at a regular interval of three years, the reference to this war will have to be placed in 1663. However the reconquest of Vallam is not mentioned by him.

58. *The Nayaks of Madura*, p. 159.

59. John Nieuhoff: *Voyages and Travels into Brasil and the East Indies*, II, 1703, p. 297.

60. For an account of these wars, see *the Nayaks of Madura*, pp. 159-162.

Dutch,⁶¹ he perhaps allowed Vijayarāghava without opposition, to re-occupy his fort. However, as subsequent events would show, he was preparing for a big offensive against Tanjore.⁶²

From A.D. 1664 to A.D. 1673 there was comparative peace and calm in the country⁶³ and the Nayaks of Madura and Tanjore were busy preparing for their mutual war. The *Tanjāvūri Andhra Rājula Charitam* says that Vijayarāghava fortified the forts of Tanjore, Arantāngi, Pattukkōttai, Tirupattur and Rēlatalli.⁶⁴ The enmity between Tanjore and Madura grew violent and each wanted to get rid of the other. And Madura was the only insuperable enemy of Vijayarāghava. Though his policy was one of submission towards the Muhammadans, yet he could not think of adopting the same towards Madura, as she was also a former feudatory of Vijayanagar like himself. Ever since the foundation of the Tanjore Nayakship as a dependency of Vijayanagar, the Nayaks of Madura had entertained a policy of distrust and hatred towards her. And the latter's interest in the affairs of the empire and her loyalty and the wars waged by Achyutappa Nayaka and Raghunātha Nayaka on behalf of the Vijayanagar emperors against Madura, all these were looked upon by Madura with hatred, since they were not quite in agreement with her idea of independence. The recent help given by Vijayarāghava to 'Sagosi' and 'Mula' and also to 'Vanamian' in their attacks on Trichinopoly, only added momentum to the already existing indignation of Madura. The absence of strong and powerful rulers on the Tanjore throne and the inability and helplessness on the part of the empire to take up her cause, gave Madura an opportunity to wreak vengeance upon Tanjore.

61. Nieuhoff's reference to his refusal of Chokkanatha Nayaka's request in A.D. 1664 was perhaps due to the friendly relations that existed between the Dutch at Negapatam and Vijayarāghava Nayaka. The Dutch took Negapatam from the Portuguese in A.D. 1658 and in that year the Dutch got a deed from the Nayaka (Nammikka Śāsanam: deed of assurance) through one Cinnanna Chetty by which their claim to Negapatam was recognised. One of the clauses of the deed required the Dutch to entertain feelings of friendship and loyalty towards Vijayarāghava. (Two Negapatam grants from Batavia by Prof. K. A. Nilakanta Sastri *Proceedings of meetings of The Indian Historical Records Commission*, Vol. XIV, p. 39).

62. The change of capital from Madura to Trichinopoly in A.D. 1665 and the fortifications carried out at the latter place were all undertaken with a view to attacking Tanjore. *The Nayaks of Madura*, p. 160 and *The La Mission III*, pp. 181-2.

63. Andre Friere in his letter dated 1666 refers to a prospective Bijapur invasion of the South, to collect the promised contributions from the Nayaks. But it is not known what became of this intended invasion. *La Mission III*, page 203.

64. *Sources of Vijayanagar History*, p. 324. Dr. S. K. Aiyangar identifies Rēlatalli with Kilānilai on the road between Arantangi and Tirupattur. Even though there is nothing to show that the above fortifications were made in this period, yet the history of his reign shows that he must have been busy with this work only about this time.

II

(a) *The Fatal War with Madura.*

As was expected the storm broke out in A.D. 1673, when Chokkanatha ordered his troops to march upon Tanjore. Vijayarāghava put up a strong and gallant defence and died a glorious death on the field of battle. The immediate causes for this war are not clear. The chronicles say that Vijayarāghava's refusal to give his daughter in marriage to Chokkanatha and the bad treatment meted out to the Madura ambassadors, who brought the proposal for the marriage alliance were the immediate causes of this war.¹ Whether the marriage proposal was the real cause of this war is not known for certain and unfortunately Andre Freire's letter dated 1673, in which he claims to have written about this war, is not available to us. However, Mr. Nelson, in his *Madura Manual*, has accepted the account of the chronicles and finds fault with Vijayarāghava for rejecting the offer and consequently bringing about his own ruin. He says:—'one would naturally have supposed that the offer of marriage would have been gladly accepted, more especially as the two kings.....were Nayakkans, descended probably from common ancestors.'² Dr. S. K. Aiyangar further gives credence to the account of the chronicles by referring to Raghunātha Nayaka's marriage with a Pāṇḍyan Princess. He thus writes, 'there is also nothing improbable in Tirumala's having married the Tanjore princess, whether she was actually stabbed to death in the manner described or not. In view, therefore of these previous alliances it is extremely likely that Chokkanatha sought an alliance and the refusal to comply must both be considered solely from the point of view of political relationship between the two families.'³ He further adds that the cause for Chokkanatha's proposed alliance was his desire to gain the support of Tanjore against his own enemy Mysore.⁴ However, he concludes that the rejection of the proposal alone was not 'the sole cause of the war between the two.' Mr. Sathianatha Aiyar thinks that Chokkanatha's demand of the Tanjore

1. Taylor: *Oriental Historical Mss*, II, pp. 185 and 191-5; *Catalogue Raisonné*, III, p. 177. Also the *Tanjāvūri Andhra Rājula Charitam*. Also *Sources*, p. 324.

2. *The Madura Manual*, p. 191.

3. *The Nayaks of Madura*, p. 164, Note 33.

4. If Chokkanatha was for real peace and a strong alliance, he need not have precipitated a war immediately on Tanjore. Moreover he had nothing to fear from Mysore by way of an invasion soon after the recent battle of Erode in 1670 which went against him.

princess was only an alleged reason for his intended war.⁵ But he controverts Nelson's view that 'both were Nayakkans descended probably from common ancestors', by saying that this could not have been possible since the ancestor of the Tanjore Nayaks was connected by marriage with the ruling house of Vijayanagar, while those of Madura could not boast of such royal relationship. He adds in further support of his statement, that even though there had been marital alliances between the Nayak families of Tanjore and Madura, yet 'Vijayaraghava may have thought differently of the matter.'⁶ Mr. K. Sitaramayya casts a doubt regarding the truth of this proposed marriage alliance. He says that mutual hatred and enmity between the two lines had been manifest from the year 1616 and so no marriage would have been possible in 1672 or in 1673 or even earlier,⁷ in view of their hostilities. Secondly the higher status, due to their connection with the royal house, of the Tanjore Nayaks, is pressed into service to disprove the possibility of this proposal. He even says that Tirumala Nayaka's marriage with a Tanjore princess is not supported by any reliable testimony as there is no evidence as to its having been a fact found in the Tanjore literature; he adds that Raghunātha Nayaka, who was opposed to the Madura Nayaks in general and to Muthuvirappa Nayaka I in particular, would not have consented under any circumstances to give his daughter in marriage to Tirumala. Even granting that he had made this alliance and that Tirumala murdered his Tanjorean wife, he asks pertinently, whether Raghunātha, the most powerful of all the Tanjore rulers could have kept quiet without revenging himself on his brutal son-in-law for his daughter's death. There is no evidence even in the chronicles to show that Tanjore was at war with Tirumala. And he therefore concludes that Tirumala Nayaka's marriage with Achyuta Raghunāthamma of Tanjore as recorded in the *Tanjāvūri Andhra Rājula Charitam* is not only improbable, but highly impossible. Moreover, none of the literary works of Tanjore mention the existence of a daughter of Raghunātha Nayaka and even the *Raghunāthābhya-dayam* of Vijayarāghava, which contains a genealogy of the Tanjore Nayaks, does not speak of a sister of Vijayarāghava. The Jesuit evidence, which speaks of a son-in-law of Vijayarāghava in A.D. 1659, re-

5. *The Nayaks of Madura*, p. 163.

6. *The Nayaks of Madura*, p. 164. He seems to accept the statement of the *Raghunāthābhya-dayam* that Raghunātha married a Pāṇḍyan princess; but rejects the marriage of Tirumala with a Tanjore princess and his murdering her on the ground that this statement of the chronicles is not confirmed by any other evidence.

7. *The Tanjore Andhra Nayaka Charitam*, pp. 321-2.

mains silent on this matter.⁸ The chronicles of Madura also make no reference either to this marriage proposal or to Tirumala Nayaka's marriage with Raghunātha Nayaka's daughter. Hence it is difficult to give any credence to this fanciful story that has gained so much currency; and so, the truth of Chokkanatha Nayaka's proposed alliance with Tanjore will have to be discountenanced, until it is supported by further evidence and even then, the refusal of Vijayarāghava could not have brought about an immediate crisis.⁹ If the statement were to be supported by future evidence, then the observation of Mr. Sathianatha Aiyar that the Madura Nayak's demand of a Tanjore princess in marriage was made as a subterfuge will remain good. Until then, the question of a marriage alliance as a cause for this war, will not hold good. Hence, the necessity arises of making further enquiry on this question.

The immediate event that preceded this war was the reconquest of Vallam by Vijayarāghava about A.D. 1664.¹⁰ Nieuhoff says that the Nayak of Tanjore attacked the Nayak of Madura and took from him in a few days all that he had lost. This conquest might have encouraged Vijayarāghava to entertain hopes of recovery and revival and he perhaps refused to pay the agreed tribute to Madura.¹¹ Mr. Sathianatha

8. *La Mission*, III, p. 51. If the reference is correct, then, it means that Vijayarāghava had at least a daughter who had been married already by 1659. But the internal evidence does not mention even a daughter of Vijayarāghava, not to speak of two, as mentioned in the Jesuit letters.

9. The view that Vijayarāghava's refusal to comply with the request of Chokkanatha, was due to his nobility and high birth, does not seem to be quite secure. Of course, the Tanjore Nayak, Śevappa, was related to the imperial house of Vijayanagar by his marriage with a sister of one of Achyutarāya's courtesans. That Tirumalāmba herself was not Achyutarāya's queen is stated by her in her *Varadāmbikāparinayam*. But both Nāgama Nayaka, father of Visvanātha Nayaka and Timmappa Nayaka, the father of Śevappa, were brother officers under Krishnadēvarāya and both hailed from the Tondaimaṇḍalam country. And Nāgama Nayaka became the Raya's favourite and that was the reason for his coming down to the South to settle the affairs of the Pāṇḍya. Both of them were Nayaks and Achyutarāya showed his regard for Viswanātha Nayaka, by making a gift for his merit. Apart from this, there is nothing to show that the Tanjore Nayaks were of a higher caste status than the Nayaks of Madura. Both of them were obliged to pay tribute to Vijayanagar according to the Jesuit letters.

10. *The Nayaks of Madura*, p. 159.

11. Vijayarāghava's failure to pay the tribute and his breaking the treaty concluded with Madura are already referred to in the Jesuit letters in connection with Vijayarāghava's help given to 'Vanamian'. Chokkanatha Nayaka's terms, soon after his capture of Vallam would have also contained a reference to Tanjore's tribute.

Aiyar also says that 'it is likely that the loss of the latter's (Madura) conquest in Tanjore referred to by John Nieuhoff was the governing consideration.' And it is also held that Tanjore's part in the struggle of Chokkanatha waged against the Mysore ruler, Dēvaraja Udaiyar (1659-1672) at Erode and the disagreement between the two powers as a result of their defeat; formed the causes for this invasion by Madura. Dr. S. K. Aiyangar¹² says that Dāmarla Aiyapōndra or Aiyappa, a half-brother of Anka, the son of Chenna, and the founder of Chennapatnam exhibited his loyalty towards Sriranga III in a battle at Erode where a confederacy composed of Chokkanatha Nayaka of Madura, a general of the Tanjore Nayaka, Aiyappa and one of the officers of Bijapur, was formed to uphold the claims of the fugitive Emperor, Sriranga III. In this battle Aiyappa fell and the imperial allies were completely defeated. Mr. Sathianatha Aiyar says¹³ that 'it is likely that disagreements rose between Chokkanatha and the ruler of Tanjore as a result of this defeat, which probably precipitated the former's war against the latter in 1673.' This view is untenable in the light of our knowledge of the then existing political relationships between these two houses; and Vijayarāghava's sending his general, to participate in the battle of Erode, in which Madura, his enemy, played a prominent part, will have to be supported by further evidence. And hence a clear analysis of all the sources and other statements can only support the view, that the reconquest of Vijayarāghava Nayaka of his lost territories and the old animosities between Madura and Tanjore, constituted the main causes for a war in A.D. 1673.

Chokkanatha despatched a large army under the command of his Dalavāy Venkatakrishnappa Nayaka with Pēishkār (Revenue Officer or treasurer) Chinpatambi Mudaliar as next in authority. Chinna Kattiri Nayaka, the poligar of Kānnivādi is also said to have accompanied them with his troops.¹⁴ Vijayarāghava, on the receipt of the news of the

12. *Sources of Vijayanagar History*, Introduction, p. 21. Also the *Ushaparinayam* by Damarla Anka:—*Ibid.*, p. 308. The battle of Erode must have taken place in or about A.D. 1670 since the Mysore account says that Chikkadēva Udaiyar (acc. 1672), while yet a prince, offered to attack Madura, when negotiations failed. This is further confirmed by the statement that Dāmarla Aiyappa waged a war with him and the latter in his epigraphs dated A.D. 1679 and 1686 claims to have defeated Chokkanatha of Madura and to have taken Tripura (Trichinopoly), etc. See also 'Sriranga III of Vijayanagar' by Mr. R. Sathianatha Aiyar—*Proceedings of the All-India Third Oriental Conference, Madras, 1924*. The reference to the part played by a general of Tanjore is also vague.

13. *The Nayaks of Madura*, p. 173.

14. *The Nayaks of Madura*, p. 165.

advance of Madura troops, is said to have despatched an army to meet them on their way and offer battle, before they could reach Vallam. Dalavāy Venkatakrishnappa Nayaka defeated the Tanjore army and captured the fort of Vallam and soon arrived near the outskirts of Tanjore. Vijayarāghava, learning of the defeat of his army near Vallam, soon collected a large force and came out to fight, along with his Senapati, Dalavāy Venkatādri Nayaka.¹⁵ In the fierce battle that ensued, the Tanjore army sustained serious losses. It is said that the Madura Dalavāy proposed peace terms in vain to Vijayarāghava Nayaka, who ordered his men to march forward for battle, himself marching at their head. His son, Maṇṇārudās, who had been kept in confinement¹⁶ was also released and he was left behind along with another person, called Akkirāju, to be in charge of the ladies of his family and to blow up the Zenana quarters, if the fight should go against Tanjore. It is said that Vijayarāghava, despairing success, gave the fateful signal, by which the Zenana quarters in the palace were blown up and Maṇṇārudās after this, entered the thick of the battle. Shortly after this happening, both Vijayarāghava and his son rushed forward in the battle and fell. Venkatakrishnappa Nayaka proclaimed his victory and returned to Trichinopoly leaving a garrison behind at Tanjore.¹⁷ This battle, which was fatally disastrous in its results to the Nayak's rule in Tanjore, also proved to be the last of the wars of Madura upon Tanjore. Vijayarāghava finding that he could not escape death, faced it with all courage and died gloriously. And Tanjore was annexed by Chokkanatha Nayaka, who put it in the charge of his foster-brother, Alagiri Nayaka, who was appointed Viceroy, according to the evidence of the Jesuit letters.¹⁸

15. The chronicles mention one Raṅgappa Nayaka as the Dalavāy of Tanjore. Also the *Tanjāvūri Aṇḍhra Rājula Charitam*. But an inscription coming from Tirukkoshthiyur (309 of 1923) mentions one Dalavāy Venkatādri Nayaka. Mr. K. Sitaramayya also says that Venkatādri Nayaka was his general as he is mentioned in a *Kuravaṇji Nāṭakam* and also in the *Ushāparinayam*.

16. The reason for his imprisonment is not known. Tradition has a fanciful story to tell. It says that he advanced his love to one of the daughters of Gōvinda Dīkshita and when this was brought to the notice of the Nayaka by the minister himself, he ordered him to be put into prison. The *Dakshina India Charitam* by Narasimhalu Naidu, Vol. II.

17. An account of this battle is given in Taylor's Mss. II, pp. 191-203. Also the *Tanjāvūri Aṇḍhra Rājula Charitam, Sources*. Mr. V. Rangacharya gives a detailed account of this war. *Indian Antiquary*, 1917, pp. 58-62.

18. *La Mission*, III, p. 247. The Tanjore chronicles also refer to his appointment.

The reign of Vijayarāghava thus came to an end in A.D. 1673 (the date of this disastrous battle).¹⁹

(b) *The Nayak's relations with the Europeans.*

Vijayarāghava Nayaka's relations with the Portuguese were generally friendly except for a short time. The latter continued to hold the port of Negapatam till the middle of A.D. 1658 when it passed into the hands of the Dutch. Speaking of the Portuguese trade on the Eastern Coast and the patronage shown by the Nayaks to them, Mr. Danvers says that in A.D. 1638 both the Nayaks of Gingee and Tanjore were on friendly terms with the Portuguese.²⁰ However, in the keen rivalry between the Portuguese and the Dutch on the question of Eastern trade the Dutch contrived to gain some advantage over their rivals by 1638. In 1636 the Portuguese Viceroy wrote to Lisbon that trade had generally fallen into the hands of the Dutch, who were making attempts to capture San Thome de Meliapore (Mylapore).²¹ The Portuguese, on account of this competition, suffered serious losses not only on the coast but also in Ceylon, where their power was slowly declining, yielding place to the rise of the Dutch power. The Danes of Tranquebar were friendly towards the Portuguese; and about 1638 the President of the Danish East India Company, getting intelligence of a projected attack on the Portuguese in Gao and Ceylon by the Dutch, offered his help to them in their defence of Negapatam and Tranquebar, if they were to allow him to establish a factory in Ceylon. When this request was turned down by the Portuguese authorities, the President made another request with a repetition of his offer of help, and this time the request was to allow the Danes to purchase cinnamon, elephants and arecanuts from Ceylon. Nothing came out of this and the Portuguese lost their fort at Batticalova in Ceylon to the Dutch in 1638. The latter were good enough to permit the Portuguese inhabitants to set sail for Negapatam. The Dutch continued to harrass the Portuguese and attacked Goa in 1639 and Malacca in 1641. About this time the Portuguese seemed to have suffered

19. Unfortunately Andre Freire's letter dated A.D. 1673, in which, he says he had given an account of this war is lost to us. Since his subsequent letter dated 1676 begins with a reference to this war and the occupation of Tanjore by Alagiri, the battle must have come to a close by the end of 1673. Lespinay has two dates as he once records the events under July 1672 and elsewhere places them in 1673.

20. *The Portuguese in India*, Vol. II, p. 252.

21. *Ibid.*, Vol. II, p. 257.

from an attack made by Vijayarāghava of Tanjore.²² The causes for this attack are not known, but it is known that nothing serious had happened as the Records say that the Nayak of Tanjore soon concluded peace with them. However, they began to decline and Conte de Avieras, writing home in December 1643, informed the king of Portugal that all the rulers of South India were against the Portuguese. In 1658, the Dutch under Major Van der Lean captured the settlement of Negapatam without a shot being fired and the Portuguese surrendered completely. According to the terms of surrender, the Portuguese were to be at liberty to leave the town and take with them all their possessions and goods, as well as their church ornaments, and the Dutch should provide them with the means of conveyance in the transportation of goods.²³

From A.D. 1658 onwards Negapatam was held by the Dutch. From the Dutch Records,²⁴ it appears that Vijayarāghava was at first not favourably disposed towards them and even did not recognise their hold of the town; but subsequently he had to acquiesce in their possession when an army sent by him to oppose them was defeated.²⁵ At the instance of Chinna Chetty, *alias* Mallayya, of whom we have read above, Vijayarāghava gave the Dutch a charter offering them valuable trade concessions on 15th September 1658.²⁶ The deed given by Vijayarāghava begins with a reference to Chinna Chetty, who submitted to him that the Dutch were desirous of carrying on trade operations in the port of Negapatam and says that the Nayak gave the fort, the houses and the yards that were in possession of the Portuguese along with ten

22. That Vijayarāghava besieged the town of Negapatam about 1642 is mentioned in a letter dated January 4, 1643, which says that at Negapatam 'the Portuguese have been put to a great strait, for the Naik of Tanjore hath besieged them now upwards of seven months' Foster: *The English Factories in India*, 1640-45, p. 81. Danvers says that Pedro Boreel, a Dutch Commissioner arrived at Tranquebar and endeavoured to persuade the Naik of Tanjore to continue the war with the Portuguese and to besiege Negapatam, offering him to bring another force to aid him in his capture of the town. The Naik, however, refused to act on this and soon made peace with the Portuguese. Vol. II, p. 284.

23. *The Portuguese in India*, Vol. II, p. 324.

24. The two grants from Batavia by Prof. K. A. Nilakanta Sastri.

The Indian Historical Records Commission, Vol. XIV, p. 39.

25. *The Cambridge History of India*, Vol. V, p. 127.

26. The first grant is dated 15th Mārgaḷi of the Cyclic year Vilambi, corresponding to 15th September 1658. The deed is called a Nammikka Śāsanam (deed of Trust).

villages to the Dutch who were asked to pay to the state an annual tribute as tax thereon. The same charter was renewed for a second time on June 5, 1662 by Vijayarāghava, who now gave them the additional privilege of setting up their own mint for the coinage of gold, silver and copper, the profits of which were to be shared between the Company and the Nayak.²⁷ About 1666 the Dutch got from Vijayarāghava Nayaka the port of Trimelipatam (Tirumalairajanpatnam in the Nannilam Taluk of the Tanjore District) and some other places in its neighbourhood on lease, for a period of three years 'for a sum of 2,800 parados, on condition that the Company were neither to fortify the places nor to disembark any merchandise or cloth in these places.' The Company wanted the lease in order to be able to regulate their dealings with the local dyers and also to be free from the molestation of the Nayak's officers. The issue of these charters shows that Negapatam had definitely passed on from the Portuguese into the hands of the Dutch and that Vijayarāghava, who was opposed to the latter at the beginning, had to reconcile himself with them. The grant of additional villages on lease shows further, that Vijayarāghava became more friendly towards them as years passed on.

The Danes at Tranquebar continued to enjoy their privileges unmolested and free from the Nayak's intervention. However, they do not seem to have fared well at all, for want of regular supply of money and ships from home. President Muschamp wrote to London on October 28, 1629²⁸ that the Danes for want of stock and shipping have finished their trade and by report, their general had gone to surrender their castle to the Dutch for 15,000 rials, but it is supposed that the Naik will not suffer them to enjoy it peacefully, unless upon a new composition which will cost them dear. A Dutch letter from Masulipatam dated September 24, 1628, speaks of the possibilities of the Dutch obtaining Tranquebar should the Danes decide to leave, adding that in the event of their refusing it, "Malaya, (Malliah) the Cōmati, would take it as he had a great trade on the Coast and was afraid of being plucked by one or another of the Naiks." In December 15, A.D. 1629, the Dutch Governor-General at Batavia reported to the Company that Roelant Crape, the Danish Admiral of Tranquebar, had proposed that the Dutch should buy the port of Tranquebar for 12,000 or 15,000 rials of eight and that they had refused it. Another letter dated December 2, 1629 contains a reference

(To be Continued)

27. *Tijdschrift, Batavia, Deel LXXIX, A flevring I, p. 7.*

28. Foster: *The English Factories in India, 1623 to 1629, p. 347.*

Finances of the Madras Province 1920-40

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According to the devolution rules framed under the Government of India Act of 1919, from the 1st of April 1921 the Madras Government made an annual contribution of Rs. 345 lakhs to the Central Revenues. This it continued to do upto 1925 when the contribution was reduced to Rs. 221.98 lakhs. Next year, 1926-27, it fell to Rs. 165.19 lakhs and was wholly abolished in 1927-28.

Simultaneously with the reduction and final abolition of the contribution to the Central Revenues there was a steady and gradual improvement in the receipts from the revenue assigned to the Madras Government. This improvement reached its apex in 1929-30; from which year it began to decline as a result of the world economic depression. With the expansion of revenue expenditure also increased; but owing to the fall in revenue from 1930-31 expenditure had to be drastically cut down.

Year.	Revenue.	Expenditure on revenue account.	Surplus (+) or Deficit (—) [Column (2)— Column (3)]
(1)	(2)	(3)	(4)
1920-21	16,19.71	14,79.60	+1,40.11
1921-22	15,79.20	16,77.92	— 98.72
1922-23	16,06.22	16,09.24	— 3.02
1923-24	16,47.85	16,11.54	+ 36.31
1924-25	16,27.59	16,57.06	— 29.47
1925-26	16,93.60	15,95.23	+ 98.37
1926-27	16,83.69	15,82.21	+1,01.48
1927-28	17,05.37	15,03.64	+2,01.73
1928-29	17,53.10	16,13.96	+1,39.14
1929-30	18,08.88	16,84.79	+1,24.09

Year.	Revenue.	Expenditure on revenue account.	Surplus (+) or Deficit (-) [Column (2) — Column (3)]
1930-31	16,83.93	17,89.68	-1,05.75
1931-32	16,29.88	16,24.47	+ 5.41
1932-33	16,40.24	15,63.03	+ 77.21
1933-34	15,50.28	15,44.03	+ 6.25
1934-35	15,62.60	15,51.67	+ 10.93
1935-36	15,88.25	15,83.40	+ 4.85
1935-36 (Madras only)	15,57.66	15,31.03	+ 26.63
1936-37	15,58.04	15,77.37	- 19.33

The above figures show that there were surpluses in eleven years and deficits in five years. While the surpluses in the early years were due to retrenchment, the surpluses in the later years were due to remissions of the provincial contributions. The surplus of 1931-32 was due to an unexpected increase in the yield from the excise and stamp revenues. The deficit in 1921-22 was mainly due to the Non-co-operation movement, the Moplah Rebellion, the famine in the Ceded Districts, the general trade depression and the increase in salaries. The total nett surplus for the sixteen years was 549.48 lakhs. Out of these, 3 crores were utilized for paying off loans from the Central Government and the remainder for capital expenditure mostly productive.

The table (in the next page) shows that land revenue receipts were very high in 1925-26 and 1931-32. Revenue from excise fluctuated during the period. It was at its lowest point in 1921-22 and touched the highest in 1929-30. Since then it has declined substantially. The fall in 1921-22 was undoubtedly due to the Non-co-operation movement while the subsequent decline is probably due to economic depression and the increase of illicit practices. The increase in the stamp revenue was due to the amendment of the Court Fees and Stamps Act and the enhancement of the price of the copy stamp paper. At the same time it must be remembered that stamp revenue has shown a tendency to decline due to economic depression and the measures taken to mitigate agricultural indebtedness by the grant of government loans and also because of the establishment of Land Mortgage Banks and Debt Conciliation Boards. Forest revenue reached the peak point in 1929-30 and ever since has been fluctuating. Since 1928-29 there has been a fall in registration revenue.

The following table gives the figures of revenue under the various heads of account :—

Year.	Land Revenue.	Excise.	Stamps.	Forest.	Registration.	Other Heads.	Total.
1920-21	6,87.04	5,45.80	1,78.10	48.68	30.61	96.86	15,87.09
1921-22	7,24.45	4,97.37	1,89.85	44.80	32.56	99.72	15,88.75
1922-23	7,28.35	5,01.31	2,19.84	47.89	35.98	1,00.67	16,34.04
1923-24	7,12.78	5,32.10	2,34.05	48.98	36.86	1,12.52	16,77.29
1924-25	7,40.20	5,02.99	2,41.51	51.19	37.90	1,03.46	16,77.25
1925-26	7,70.70	4,94.35	2,45.08	51.29	38.60	1,14.92	17,14.94
1926-27	7,54.32	5,10.14	2,52.30	54.98	40.53	1,16.81	17,29.08
1927-28	7,54.35	5,34.37	2,50.11	53.44	39.06	1,25.63	17,56.96
1928-29	7,50.31	5,58.75	2,51.17	61.54	34.12	1,41.30	17,97.19
1929-30	7,50.41	5,92.25	250.92	63.54	34.48	1,55.46	18,47.06
1930-31	7,16.59	5,28.37	2,34.71	51.16	30.37	1,51.85	17,13.05
1931-32	7,69.38	4,28.99	2,34.93	45.29	29.79	1,22.52	16,30.90
1932-33	7,46.84	4,31.69	2,41.58	49.68	32.47	1,21.23	16,23.49
1933-34	6,92.54	4,29.59	2,28.11	41.55	30.28	1,27.15	15,49.22
1934-35	7,16.51	4,24.55	2,17.11	44.31	31.06	1,32.27	15,65.81
1935-36	7,42.39	4,11.93	2,08.18	44.95	30.30	1,37.34	15,75.09
1935-36 (Madras only)	7,30.52	4,00.36	2,04.45	43.53	29.79	1,35.00	15,43.65
1936-37	7,15.44	4,00.79	1,95.08	48.27	29.95	1,55.04	15,44.57

Turning to expenditure the following table gives the figures for expenditure during the period under review.

Year.	Total.	Transferred departments and Development Services included in Reserved.	Charges common to Reserved and Transferred departments.	Reserved departments. (Security Services and other minor departments.)
1920-21	11,75·85	5,09·60	92·78	5,73·47
1921-22	13,11·54	5,86·86	93·42	6,31·26
1922-23	12,98·83	5,62·32	1,09·36	6,27·15
1923-24	13,21·66	5,76·64	1,20·85	6,24·17
1924-25	13,56·95	6,07·84	1,32·16	6,16·95
1925-26	14,22·97	6,63·33	1,49·19	6,10·45
1926-27	14,85·21	7,05·77	1,75·65	6,03·79
1927-28	15,82·57	7,75·82	1,88·28	6,18·47
1928-29	16,59·58	8,50·26	1,93·93	6,15·39
1929-30	17,26·42	9,08·12	1,87·96	6,30·34
1930-31	18,15·07	9,88·07	1,82·48	6,44·52
1931-32	16,26·58	8,34·78	1,83·61	6,08·19
1932-33	15,22·50	7,56·12	1,89·79	5,76·59
1933-34	15,48·97	7,70·60	1,95·58	5,82·70
1934-35	15,54·34	7,67·74	1,94·07	5,92·53
1935-36	15,85·81	7,89·64	2,00·80	5,95·37
1935-36 (Madras only)	15,32·59	7,61·42	1,97·91	5,73·26
1936-37	15,77·09	7,97·57	2,00·10	5,79·42

In 1930-31 the total expenditure was 18,15·07 lakhs of rupees. The expenditure on transferred departments and development services had increased that year by 94% as compared to 1920-21 and that on security services and minor departments by 12%.

According to the Government of India Act of 1919 the Provincial Governments were empowered to raise loans on the security of the revenues allotted to them. On the 1st April 1921 the Government of India debited to the Madras Government 8,75·26 lakhs of rupees. This represented the capital expenses incurred by the Government of India upto 1921 for constructing protective and productive irrigation works in the Madras Presidency. The Government of India were only en-

titled to interest at a fixed rate on this amount but at the same time the option of amortizing the debt was given to Madras. In 1936 the Madras Government debited Rs. 47·07 lakhs to the Orissa Government. In 1937 the outstanding debt of the Madras Government to the Central Government was 8,28·19 lakhs. The annual interest on this amount was 28·12 lakhs. In addition to this debt the Government of India had debited to the Madras Government a sum of Rs. 108·86 lakhs. This represented loans which the Government of India had advanced to local authorities and cultivators. The Madras Government repaid this debt to the Central Government in twelve annual instalments; and it was finally cleared off in 1932-33.

According to part III of the Government of India Act, 1935, the scheme for the decentralization of balances came into effect on 1st April 1937. Along with this there was a consolidation of the debt owed by the Madras Government to the Central Government. At the same time the Government of India held 771·75 lakhs of deposits of various kinds which they had to repay to certain provincial bodies in Madras. The Madras Government took up this liability in return for adjustment by way of reduction of its pre—1921 debt to the Central Government. By this method the pre—1921 debt got reduced to 56·44 lakhs. After this adjustment the total amount owed by the Madras Government to the Central Government was 756·71 lakhs which included the 56·44 lakhs of the pre—1921 debts. All this amount was consolidated into a single debt and the average rate of interest on this debt worked out at 4·71%. This debt was to be paid off within a period of 45 years commencing from 1937-38 and ending in 1981-82 with interest at the rate of 4·5%. The option of redeeming the debt earlier was given to the Madras Government: an amount not exceeding one half of the principal could be returned between 1st April 1945 and 15th October 1946 and the whole or any part of the remainder of the debt between 1st April 1960 and 16th October 1961. The net result of the consolidation was that the debt charges which stood at Rs. 87·67 lakhs under the old arrangement became reduced to Rs. 53·37 lakhs in 1937-38. At the same time the Provincial Government lost interest on about Rs. 55 lakhs on account of furnishing the minimum balance with the Reserve Bank, cash in treasuries and sub-treasuries and of financing all the floating debts. Another fact that has to be mentioned here is that the Madras Government has saved every year roughly 22 lakhs by the Separation of Orissa. On the whole Madras Finance was in a sound position at the advent of Provincial Autonomy. Compared with the opening balance on 1st April 1921 of 58·78 lakhs, on 31st March 1937 there was a revenue closing balance of 61·86 lakhs. Besides this the Madras Government had on

the same date a closing balance of 63.89 lakhs composed of depreciation funds of commercial undertakings, deposits etc. Thus on the 31st March 1937 the total balance to the credit of the Madras Government was 125.75 lakhs apart from the securities held in the Madras Famine Relief Fund.¹

With the advent of Provincial Autonomy in 1937 the functions of the Provincial Government were widened and the New Provincial Governments were eager to strengthen the social services even if that involved deficit budgets and the floatation of new loans. At the same time there was retrenchment in the more costly services and expansion in other directions. The new policy was to some extent handicapped by the lack of control of the Provincial Government over certain items of expenditure and by the lack of scope for further taxation in certain directions. Since further income from taxation was difficult to obtain expenditure had necessarily to be limited.

Even before Provincial Autonomy expenditure in Madras had been fairly well directed, there was an increase of 27% in the Madras expenditure on social services when compared to the period before dyarchy. This cannot be said of any of the other major provinces. Consequently the increase during the period of provincial autonomy in Madras was low as compared with other provinces. Whereas absence of such increase in the dyarchic period has resulted in showing a much higher percentage of increase during the period of provincial autonomy in other provinces. The following table shows the expenditure in Madras from 1937-38 to 1939-40.

Year		Primary functions of Govern- ment	Development Services	Charges Common	Total
1937-1938	..	6,60.26	7,90.80	1,31.90	15,82.96
1938-1939	..	6,51.92	8,33.65	1,35.19	16,20.76
1939-1940	..	6,60.63	8,46.34	1,33.75	16,40.72

Expenditure on the primary functions of government increased at the introduction of provincial autonomy. This is due to frequent meetings of the legislature, long sittings costing increased secretarial staff.

1. All the figures and tables have been taken from Budget Memorandum 1939-40, Government of Madras, Finance Department.

and other constitutional changes including the bi-cameral system. The introduction of prohibition also involved additional expenditure. On the other hand reorganization of departments and retrenchment of unnecessary posts and the stoppage of the hill exodus effected some savings. The net result was that expenditure on security services showed a slight fall.

Turning to development services we shall take up a few items for scrutiny. The following table shows the expenditure on education:—

1937-38	..	..	257.95	(Accounts)
1938-39	..	..	261.57	(Budget Estimate)
1938-39	..	..	262.51	(Revised Estimate)
1939-40	..	..	264.57	(Budget Estimate)

Though the figures show a rise as compared with previous years compulsory primary education, though realised to be highly necessary, could not be introduced since it involved an expense of 6½ to 7½ crores. Expenditure on medical relief also shows a marked increase. Special attention was devoted to water-supply. Efforts were made to combat epidemic diseases and to distribute quinine and initiate anti-malarial measures. A sum of Rs. 1½ lakhs was set apart annually for this purpose. Between 1937-40 during a period of three years a sum of 18 lakhs of rupees has been spent on rural water-supply. In this matter Madras is second only to Bombay which has spent 28.25 lakhs. It is clear, therefore, that public health received special attention during the period of provincial autonomy.

Section 45A (Rule 29 of the Devolution Rules and Schedule IV) of the Government of India Act 1919 which came into force on 1st April 1921 provided for the establishment and maintenance of a famine relief fund in Madras. The provincial revenue set apart for this purpose was 6.61 lakhs annually; this amount was reduced in 1928-29 to 3 lakhs. This sum was to be utilized for famine relief during the year; if there was an unspent balance it was to be added to the Famine Relief Fund. When, however, the Famine Relief Fund reached a maximum of 40 lakhs the provision of an annual amount for expenditure on famine relief was optional. This fund was regarded as invested with the Governor-General in Council who paid interest. On the 1st April 1935 this fund reached the highest point viz., 61.53 lakhs and on 31st March 1936 it was 41.48 lakhs. The Government of India Act 1935 did not provide for the continuance of the Famine Relief Fund; but the Madras Government passed the Madras Famine Relief Fund Act of 1936 by which it continued to maintain a famine relief fund with the balance to its credit with the Central Government on this head, as its nucleus.

During the period 1936-37 to 1939-40 there has been an increase in the revenue receipts of Madras. The following Table shows the revenue distributed over the important heads:—

Year.	1937-38	1938-39 (Revised estimate)	1939-40 (Budget)
Taxes on income other than Corporation tax	18.75	22.95	24.15
Land Revenue and irrigation minus working expenses	6,80.66	6,87.90	7,04.70
Excise	4,03.07	3,68.34	3,55.04
Stamps	1,92.69	1,66.78	1,67.24
Forests	50.46	45.28	44.66
Registration	33.29	31.68	31.74
Motor Vehicles	53.95	60.60	82.91
Other Taxes and Duties	2.87	2.36	18.34
Electric Schemes minus working expenses	17.53	19.67	30.80
Other Heads	1,47.35	1,97.63	1,63.87
Total	16,00.62	16,23.19	16,23.45

There has been an increase in land revenue during the period; and this is in large measure due to favourable seasons and the collection of previous arrears. In the matter of excise which accounted for 25% of the total receipts there has been a decrease in the yield owing to the introduction of prohibition. It must at the same time be added that though there were no collections from the dry areas, the wet areas registered an increase in revenue. The receipt under stamps also showed a decline since measures for debt relief led to a fall in litigation. In 1938-39 grazing fees were reduced by 50% and there has been a consequent shrinkage in forest revenue.

At the same time new sources of revenue were tapped. First among them, in point of time, was the entertainment tax. This tax had already been introduced in Bengal as early as 1922 and therefore it was not new to the country. It had also been adopted in Bombay, Sind, Punjab, U.P. and C.P. before it came to Madras. For a long time it was a source of revenue for local bodies. In 1939 it was made a pro-

vincial item and the local bodies were compensated. Duties on electricity and motor spirit were also attempted. A tax on tobacco was also levied. This tax had also been in existence in other provinces before Madras adopted it. Another measure of taxation was the Sale of Cloth Act 1937. The latest measure introducing new taxation is the Madras General Sales Tax Act of 1939.

Coming to the loan policy of the Madras Government during the period of provincial autonomy one notes that the public debt of the province has increased. This has been the case in all provinces except Bombay and Sind. The debts of the Madras Government rose from 11.05 crores to 16.17 crores of rupees during the period.

A review of the revenue and expenditure of Madras during the past two decades shows that both the income and the expenditure of the Madras Government have increased during the period; but the increase in income has not kept pace with the increase in expenditure. The sources of revenue which have been assigned to the provinces by the Government of India Act 1935 are inelastic; while the functions assigned to the Provincial Government demand much greater expenditure. To remedy this state of things it would be necessary for the Central Government to accelerate the remissions under Income Tax till at last that tax becomes entirely a provincial source of revenue. The income from forests can be substantially increased by a more scientific forest policy. Further retrenchment in expenditure is scarcely possible. The possibility of the state running public utility concerns has to be explored. This province may attempt a monopoly of tobacco.

That there should be a substantial increase in expenditure on productive and nation building undertakings cannot be doubted. Since increased taxes must be based only on increased taxable capacity of the people planned and concerted measures must be taken to improve the income of the people. Haphazard methods will never lead to any substantial improvement and hence a definite plan with a time-limit should be put into force. Money is needed for all this. And one method of securing further income is the introduction of new taxes. These taxes would involve a redistribution of the incidence of taxation.

The first step in this direction would be a scientific study of the working of existing taxes and the scope for new taxation. Taxes on succession would be a productive source of revenue. The present system of land revenue needs careful investigation and the possibility of tapping larger revenues from land has to be carefully considered. Speci-

fic taxes on trades and professions may also be attempted. Taxes on luxuries and advertisements as sources of revenue for local bodies may also be examined. Transit and octroi duties which have been suggested by some people should be avoided since that would involve further restraint on the free flow of goods within the country.

A popular Government can never content itself with a policy of maintaining law and order. The motto of conservative financiers of taxing low and spending low must be discarded and within the bounds of solvent finance a bold and forward policy in regard to taxation, loans and expenditure has to be followed. This well-planned and co-ordinated policy must have as its aim the maximising of the agricultural and industrial production of the country and the improvement of the conditions in which the millions of the country live and labour from day to day. No higher task can await the future provincial finance ministers than the initiation and adoption of a sound and well conceived economic policy which is calculated to banish from our country, poverty, ignorance and disease. In the field of finance, as in other spheres of human activity, extreme conservatism may be only another name for stagnation; and a policy which appears risky and dangerous may prove in the long run to be the safest and most beneficial.

Bharati and Keats

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If the following lines of Keats :—

And they shall be accounted poet-kings
Who simply tell the most heart-easing things

are true, Poet Subramaniya Bharati, who flourished in the first quarter of this century, must be regarded a poet-king. John Keats thought that it was easier to think what poetry should be than to write it. But modern writers such as Mr. Housman would tell us that it is far easier to say such and such lines are poetry than to define poetry. Just as a terrier is able to scent a mouse without being able to define it, one can enjoy poetry without being able to say what poetry is. If, to be accounted a poet-king one need simply "tell the most heart-easing things," Bharati was certainly a poet-king. For sheer simplicity of expression of high and noble thoughts he has a few compeers in Tamil literature. In almost every part of the Tamil country, where nationalism is prevalent there are hosts of people on whose minds in particular he has a strong hold. They have an immense love for his poems and an irresistible desire to read or sing them aloud. He has produced combinations which would give him a high rank among the Tamil poets of modern times because of their appeal to the ear. Verses taken at random would illustrate this statement.

Among things that brought him to prominent notice must be mentioned his ardent love of the country in which he was born and for which he was prepared to offer sacrifices and undergo suffering. To him the Tamil country was sweeter than nectar :—

Amiṭṭil iniyataḍi pāppā—nam
Aṇṇōrkaḷ dēsamaḍi pāppā.

As soon as he heard the word 'Tamiḷnāḍu' sweet honey poured into his ears and as soon as the word 'Fatherland' was uttered there came through the breath a marvellous spirit. This idea is contained in the following lines :—

Sen Tamil nāḍenum pōti nilē—inpat
Tēnvantu pāyutu kāṭiṇilē—cūkaḷ
Tantaiyar nāḍenra pēccinilē—oru
Sakti pirakkutu mūccinilē—

To him Bhārata-dēsam or India appeared to be the best country in the world. Witness for instance the following lines:—

Pārukkullē nalla nāḍu—cūkaḷ
Bhārata nāḍu.

He has sung in many places to the praise of the country where his father and mother and their fore-fathers had lived and played, where several women with golden bodies had played and played in broad moon-light or in the river, and where several women, giving birth to their golden children, had nursed and fondled them. What a contrast to Keats who, though he said,

“Happy is England! I could be content
To see no other verdure than its own;
To feel no other breezes than are blown”

was anxious to see other climes and especially other beauties! Keats, though he said,

“Happy is England, sweet her artless daughters;
Enough their simple loveliness for me”

was burning to see “beauties of deeper glance, to hear their singing, and to float with them about the summer waters.” To Bharati the ladies of Tamilnāḍ appeared to be quite angelic. Not that Bharati did not want to see ladies of other climes but that to him angels, certain celestial beings and certain goddesses appeared as though they were women of Tamilnāḍ.

Bharati's poems abound in repetition of a word or phrase. Human nature requires that a thing should be said twice or thrice if it is to be believed. At any rate, that is the view of Mr. E. A. C. Lamborn. That ought to explain why Milton, in his cruel deprivation, cried:—

Oh dark, dark, dark amid the blaze of noon
Irrecoverably dark, total eclipse
Without all hope of day.

Bharati was highly enamoured of the worship of Sakti, the Goddess of Energy who, according to him, stands supreme to the Hindu Triad. In

order to emphasise to the world the worship of her he has repeated the expression Sakti ever so many times. For instance, under the title ‘Sakti Tiruppuhal’ he has said:—

Sakti Sakti Sakti Sakti Sakti Sakti enṛōtu
Sakti Sakti Sakti enṇār—sākār enṇē ninṇōtu

and again

Sakti Sakti Sakti Sakti Sakti Sakti vālī nī.
Sakti Sakti Sakti Sakti Sakti Sakti vālī nī.

In another place he has said again

ōm Sakti ōm Sakti ōm Sakti ōm Sakti
ōm Sakti enṇu urai ceytiḍuvōm.

It appears as though Sakti would be conjured by means of uttering the expression time and again. Otherwise his 46 verses going under the title ‘Dedication of the Soul to the Sakti,’ would cease to have great value. The burden of the song is “Sakti taṇakkē aḍimai ākku, Sakti taṇakkē aḍimai ākku.” With these exquisite examples of his melody one can compare Keats’

Shed no tear! Oh, Shed no tear
The flower will bloom another year.
Weep no more! Oh weep no more

* * * *

Dry your eyes, oh dry your eyes!

* * * *

Shed no tear! Oh, shed no tear

* * * *

Adieu, adieu—I fly, adieu,

* * * *

Adieu, adieu.

Again, with the melodious and creative beauty in the fore-going verses of Bharati one can compare Keats’ song

“Spirit here that reignest!
Spirit here that painest!
Spirit here that burnest!
Spirit here that mournest!
Spirit! I bow

* * * *

Spirit I look * * *

* * * *

Spirit here that laughest !
 Spirit here that quaffest !
 Spirit here that dancest !
 Noble soul that prancest !
 Spirit ! With thee
 I join in the glee."

Keats is reported to have said in his youth

"Give me women, wine and snuff
 Until I cry out 'hold, enough'

* * * *

They aye shall be
 My beloved Trinity."

Whether this is true or not, that he said "the poet enjoys light and shade and lives in gusto" in a letter to Woodhouse is beyond doubt. The latter statement applies to Bharati in a remarkable manner, for he wished to enjoy moon-light and the shade of the cocoa-nut palms and to live in great gusto as is evident from his three verses entitled '*Kāni Nilam*.' There he has said that he required a storeyed palace with a well, cocoa-nut trees numbering 10 or 12, tender cocoa-nuts, milk-white moon-light, and the sweet notes of a cuckoo. There he would require Goddess Sakti to guard the place while he, with an artless, chaste girl, would sing and dance. The verses under this title would bring to one's mind the following lines of Keats in '*Sleep and Poetry*':—

First the realm I'll pass
 Of Flora, and old Pan : sleep in the grass,
 Feed upon apples red, and strawberries,
 And choose each pleasure that my fancy sees ;
 Catch the white-handed nymphs in shady places,
 To woo sweet kisses from averted faces,—
 Play with their fingers, touch their shoulders white

* * * *

* * * *

Another will entice me on, and on
 Through almond blossoms and rich cinnamon ;
 Till in the bosom of a leafy world

We rest in silence, like two gems upcurl'd
 In the recesses of a pearly shell.

Three ruling passions of Bharati's life appear to have been poesy, fame and beauty. In this way he was like Keats who thought that verse, fame and beauty were intense and unlike Keats who thought at the same time that death was intenser and that death was life's high meed. The nine verses going under the title '*Mūṇṛu Kātal*' would indicate that Bharati strove for poesy, fame and beauty. Stripped of the allegory this poem would represent that he was anxious to obtain the grace of Sarasvathi the Goddess of Learning, of Lakshmi the Goddess of Wealth and of Kālī the beautiful Mother-God. This poem shows that he enjoyed the grace in ample measure of the first two Goddesses ; but that they occasionally eluded his grasp has also been made plain. He did not, however, say as Keats did

"O folly ! What is Love ! and where is it ?
 And for that poor Ambition—It springs
 From a man's little heart's short fever-fit ;
 For Poesy !—no—she has not a joy—
 At least for me—.

Though Keats had a great passion for fame as is evident from a line in his Sonnet "Verse, fame and beauty are intense indeed," he scorned those people who strove for fame. Witness for instance the following lines on '*Fame*':—

Fame, like a wayward girl, will still be coy
 To those who woo her with too slavish knees,
 But makes surrender to some thoughtless boy,
 And dotes the more upon a heart at ease ;
 She is a Gipsy, will not speak to those
 Who have not learnt to be content without her ;

* * * *

Ye love-sick Bards ! repay her scorn for scorn ;
 Ye Artists lovelorn ! madmen that ye are !
 Make your best bow to her and bid adieu,
 Then, if she likes it, she will follow you.

But Bharati never scorned fame nor scorned those that were trying to obtain fame. In several places we find him courting fame. For instance, under the caption '*Vēṇḍum*' he has said

"Dharaniyilē perumai vēṇḍum"

In the sixth verse under the title '*Vaiyam Muḷutum*' he has prayed for a long life of 100 years with fame. That he sought also beauty is evident from the following words "Nittam navam eṇae cuḍar tarum uyir kēṭṭēṇ" contained in stanza 2 of his desidereta. That he had a craving for poesy is far more easily understood, for he has repeated that idea in many places. For instance, under the title '*Yōgha Siddhi—varam Kēttal*'—the following lines occur:—

Pala paṇṇir kōḷi vahaiyinpam—nāṇ
pāḍat tīraṇ aḷaital vēṇḍum.

Under the title '*Kāṇinilam*' the following lines

Enṇaṇ pāṭṭut tīrattālē ivvaiyattaip
Pāḷittiḍa vēṇḍum

and under the title '*Om Sakti*' the following lines

Elḷattanaṇai poḷutum payaṇinri irātu enṇaṇ nāvinilē
Veḷḷameṇap poḷivāy

have occurred. There is no doubt therefore that fame, beauty and poesy were some of the ruling passions of Bharati's life.

He yearned for wealth, joy and long life besides. He has given utterance to this idea in several places. For instance, in a poem entitled '*Vēṇḍum*' he has said "Dhaṇamum inṇamum vēṇḍum." In another poem, namely, '*Yōgha Siddhi*' he has eagerly sought great wealth to be used as capital for certain enterprises:—

Toḷil paṇṇap perunitiyam vēṇḍum.

If in the '*Ode on Indolence*' Keats has decried love, ambition and poesy, we are not to infer therefrom that never were they the ruling passions in his life. On the other hand, it would be well if we said that these things which had great attraction for him at a certain period of his life ceased to interest him at a further stage when probably he lay on his sick-bed. It is in this manner that the lines in the Sonnet

"Verse, fame and beauty are intense indeed,
But Death intenser—Death is life's meed"

are to be interpreted. This records, as in the opinion of Mr. J. M. Murry, "a grim and victorious struggle to detach himself from those passions"; "they dissolved away from him in a triumphant acceptance of Death." Similarly, Bharati, who had an inordinate desire for joy and happiness, found one day that these joys and happiness were probably

something ephemeral, if not illusory. That is why in his condemnation of Māya he has said "Ō māya! Shall I take as true the happiness you give" (Verse 6.), and again "Ō māya! What shall you do with those that know that this body is after all nothing" (Verse 4.).

Even though Keats said in one place

"Ever let the Fancy roam,
Pleasure never is at home:
At a touch sweet pleasure melteth,
Like to bubbles when rain pelteth;
Then let winged Fancy wander
Through the thoughts still spread beyond her,"

he said at another

"Welcome joy, and welcome sorrow

* * * *

I do love you both together

* * * *

Fair and foul I love together."

But Bharati was always and invariably longing for joy and happiness. This is evident from his repeated requests to the Goddess of Energy that his lot must be joy alone and never grief, happiness alone never sorrow. For instance, in '*Pōrri Agaval*' he has stated

"Inṇam kēṭṭēṇ ivāy pōrri
Tunṇam vēṇḍēṇ tuḍaippāy pōrri."

Further, the sixth verse relating to '*Dēsa Muttu Māri*' runs as follows:—

Tunṇamē iyarkai eṇum collai marantiḍuvōm
Inṇamē vēṇḍi nirpōm yāvum avaḷ taruvāḷ.

Whereas Keats thought that Death was life's high meed and said

I know this Being's lease,
My fancy to its utmost blisses spreads;
Yet would I on this very midnight cease,

Bharati has given expression in many places to his desire to survive and last long. One of the reasons why he asked people to worship Sakti was that they might thereby conquer Death. He himself was a staunch be-

liever in an ever lasting and imperishable life. At one place he has said that by the worship of Sakti people could live with fame for 100 years. In another (in St. 7 of 'Shiva Sakti Pugala') he has stated that if there were the grace of Sakti people could live eternally. In yet another place ('Mahā Sakti Venpā' St. 4.) he has shown that he believed that the Goddess has made us all in order that we might live 100 years. He has clearly expressed himself in 'Pōrri Agaval' (line 23) against Death:—

Cāvinai vēṇḍēn tavirppāy pōrri.

Evidently his guru, by name Kuḷaccāmi or Māṅkoṭṭaiccāmi has told him that man could conquer Death. He was therefore a firm believer in the theory of the immortality of the soul. What Bharati apparently thought by saying that man could conquer death was that Man's soul was not mortal even though his body was. This could be inferred from the way in which he has appealed to Mahā Sakti either to kill his foul desire or to take away his breath, either to give light to his mind or to reduce him to a corpse:—

Mōgattaik koṇruviḍu—allāl eṇṇaṇ mūccai nīruttiviḍu

* * * * *

Chintai teḷivāḱku—allāl itaic cetta uḍalāḱku.

Keats in his 'Ode to a Nightingale' said

"Thou wast not born for death, immortal bird!
No hungry generations tread thee down;
The voice I hear this passing night was heard
In ancient days by emperor and clown."

and expressed himself in favour of leaving the world unseen, and fading away into the dim forest with the nightingale. He wanted apparently to get away from the world "where but to think was to be full of sorrow." Even so Bharati wanted to soar above and live like a bird, to eat without toil, to reap without sowing, to spend the night with stories, and to sleep and sleep during night:—

(1) Māṇḍarē nīvir eṇ madhattaik
Kaikkōṇmin; pāḍupaḍal vēṇḍā.

(2) Viṭṭu viḍutalai āki nīrpāy intac
Ciṭṭuk kuruviyaip pōlē—uṇḍu
Marraṇ poḷutu katai collit tūṅkip piṇ
Vaikaṇaiyāḱum muṇ pādiviḷippuṇṇu

(3) Ciṇṇaṇ ciṇu kuruvi pōlē—nī
Tirintu paṇantu vā pāppā.

(4) Kāṭṭil uḷḷa paṇavaikalpōl vālvōm appā.

Not that these poets had a brief for indolence but that they wanted to emphasise the pleasure of occasional idleness. In a Journal Letter of March-April 1819, as published by Miss Amy Lowell, it is found that John Keats wrote "This morning I am in a sort of temper, indolent and supremely careless." In a previous letter he wrote "I do not know what I did on Monday—nothing—nothing—nothing." Despite this, he wrote in the poem 'Sleep and Poetry'

"But off despondence, miserable bane
They should not know thee, who athirst to gain
A noble end, are thirsty every hour."

In a similar manner, though Bharati said in one place "hark, toil not, nature will give you food," has said in another ('Bhārata-māthā Navaratnamālai' St. 7), that those that serve the mother-country should never be despondent:—

Cuḍutaluṇ kuḷirtalum uyirkku illai;
Cōrvu, vīccigaḷ toṇḍarukku illai.

In another point there is striking resemblance between Keats and Bharati and that is in regard to relationship of Man and Woman.

"Woman!
When I see thee meek, and kind, and tender,
Heavens! How desperately do I adore
Thy winning graces;—to be thy defender
I hotly burn—"

so said Keats. Bharati's line of argument was that since all things in the world are said to be God woman being a thing of the world ought to be God. This is expressed in his poem entitled 'Where is God' (St. 3) and in 'Bharati Sixty-Six' (St. 45). In this part of the country he had even a sermon to preach: Respect woman (Taiyalai uyavru cey—'New Ātti-cūdi').

In his 'Ode to Fanny' Keats said "Love, love alone, has pains severe and many" and in his Sonnet commencing as "I cry your mercy—love!" he said

O! Let me have thee whole—all—all—be mine!
That shape, that fairness, that sweet minor zest
Of love, your lips, those hands, those eyes divine

* * * * *
Yourself—your soul—in pity give me all,
Withhold no atom's atom or I die.

What a parallel to Bharati whose burden of the song in the allegorical poem on the Indian Cuckoo is represented to be

Kātal kātal kātal,
Kātal pōyir katar pōyir
Cātal, cātal, cātal!

The passage means "love, love, love, withhold love, withhold love, and I am dead, dead, dead." In a poem written to a lady in October 1819 Keats remarked

"Give me those lips again!
Enough! Enough! It is enough for me
To dream of thee!"

Bharati similarly had a craving which has been expressed in '*Kaṇṇammā*—*En Kātalī*':—

Kāttiruppēṇḍi—itu pār kaṇṇattu muttamonru.

Both Bharati and Keats apparently could not brook philosophical obstruction in the path of love. Bharati, for instance, in his vision of '*Krishna—a hunter—as his lover*' was told by him, "Away with your Shastras! I want only happiness with you":—

Ēḍi Sāttiraṅkaḷ vēṇḍē—niṇatu inṇam vēṇḍumaḍi, kaṇiyē!

In another vision where Bharati was the lover and Krishna was the beloved, Bharati told Krishna, "Why this philosophy! Would those that are warm in love care for this philosophy"?

The passage runs:—

Sāttiram pēsukirāy—Kaṇṇammā! Sāttiram ētukkaḍi?
Attiram koṇḍavarkkē—Kaṇṇammā! Sāttiram uṇṭōḍi?

Apart from his appeal to the senses in other places, this alone would suffice to show that Bharati would take a place by the side of John Keats

as a poet of sensuous perfection. The way in which the wondrous serpent-woman has been developed from Burton's "Anatomy of Melancholy," transformed and recreated by Keats contains a happy parallel. The poem '*Lamia*'—Part II—has the following words:—

Do not all charms fly
At the mere touch of cold philosophy?
There was an awful rainbow once in heaven:
* * * * * She is given
In the dull catalogue of common things.
Philosophy will clip an angel's wings,
Conquer all mysteries by rule and line.

When the beautiful Lamia is about to be united in marriage with Lycius, there steps in Apollonius, his sage instructor, as an uninvited guest and with his eyes fixed on her, sends her into a swoon and cries out to Lycius

"Fool, fool—from every ill
Of life have I preserved thee to this day
And shall I see thee made a serpent's prey?"

Because of the approach of the philosopher, Apollonius, the whole charm of the lovers is fled.

Bharati in his vision of '*Krishna as his Father*' has represented Him as one that would laugh at the untrue Shastras of mankind. Further in stanza 7 therein he has said that He was the giver of the Vedas but those Vedas are not in men's language and in what is called Veda to-day there is a small admixture of His Vedas. Thus, Bharati lamented that the Vedas had been written and revised by persons interested in showing their own religion as the best. What a parallel to this is contained in the words of Keats relating to persons who have written the history of Jesus Christ! Keats wrote "He (Jesus) was so great a man that though he transmitted no writing of his own to posterity, we have his mind and his sayings and his greatness handed to us by others. It is to be lamented that the history of Jesus was written and revised by men interested in the pious frauds of Religion".

Mr. F. M. Owen in his Study of Keats has told us that Keats was not merely a sensuous poet but something more. That his imagination and poetic genius carried him beyond the earliest developments of the mind to the spiritual and more prominent elements of human nature is Mr. Owen's opinion. If this is true of Keats, it is truer still of Bharati. Keats in a letter is reported to have said as follows:—"Give me this credit—Do you not think I strive—to know myself? Give me this

credit (of knowing myself) and you will not think that on my own account I repeat Milton's lines

'How charming is divine philosophy
Not harsh and crabbed as dull fools suppose
But musical as is Appollo's lute'

no—not for myself—Nothing ever becomes real till it is experienced". Bharati similarly has said in several places '*Know thyself*' (Deivam nī enru unar—'*New Atticūdi*'). In '*Sarva Madha Samarasam*' (St. 10) the following is found:—"Thou art God, thou art God; God thou art; it is Delusion that takes hold of thy mind and says 'thou art not God'; Remove Delusion and thou wilt know thyself."

Bharati and Keats, who lived in two different countries have so many thoughts that are like and yet unlike. It would be very interesting to make a further comparison of them.

The Hormic Theory

(BEING AN EXPOSITION AND A CRITICAL EVALUATION WITH
ORIGINAL SUGGESTIONS FOR THE IMPROVEMENT AND
EXTENSION OF WILLIAM McDOUGALL'S
PSYCHOLOGICAL THEORY).

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PART I

CHAPTER I

AN EXPOSITION OF THE HORMIC THEORY

Section I. Introduction.

"It is too simple to be true," said a not very friendly critic of McDougall's psychological theory. Yes; it is simple, so simple that it can be expressed in two simple sentences; "Animal, as well as human behaviour is *purposive*"; and "Purpose implies a purposing *mind*." Yet, how profound has been the influence of this theory, not only on academic psychology, but also on the social sciences and animal biology! In psychology, McDougall's hormism has produced a Copernican revolution, shifting the centre of interest from the barren field of abstract cognitive analysis, to the real and living realm of feeling and conation. It has engendered in the psychologist a hitherto unknown degree of self-confidence and a spirit of hopefulness in his capacity to solve the riddles of life. To the student of the social sciences it offers, in the place of the unscientific and self-contradictory *ad hoc* psychologies which each one of them constructed for one's own narrow purposes at variance with and often in defiance of the others, a thoroughly tested, reliable and scientific psychology of human nature. And to the animal biologist, by forcing him to recognise the existence of *mind* even in the humblest of living creatures, hormic psychology opens up a vast vista of knowledge and experience hitherto hidden from him by mechanistic biology. Not only in these major fields, but in other minor ones too McDougall's influence is being felt. There is not a writer of any importance in psychology and the social sciences who does not refer to the great leader of the hormic school. What, then, are the outstanding features of this psychological theory which is known as the hormic theory? It is to the task of supplying an adequate answer to this question that we shall address ourselves in this monograph. An attempt will be made to analyse the theory, and to set forth its various implications. At the same time a critical evaluation of the more significant contributions of the theory to the elucidation of the baffling psychological problems will be made, and, what is of the utmost importance, it will be shown how the defects in the theory may be rectified, and in what directions it may be fruitfully extended. This formidable task is undertaken, because we feel that when the conflicting schools of psychology come to realise the need, as they must very soon, for sinking their differences and for evolving a single all-embracing

psychological theory, they will find that in the hormic theory there is the foundation, well and truly laid, for a unified psychology.

Section II. The Background.

Such an outstanding and epoch-making psychological theory as the hormic theory could not have come into existence without a significant history behind it. But, the purely historical aspect of the theory is not of any great interest to us. What we need is a critical evaluation of the significant antecedents of the theory in the evolution of psychology. In common with the other contemporary schools, the hormic school revolted against the barren intellectualism and introspectionism of the later nineteenth century. Associationism with its atomistic conception of mental structure and function found for itself a fresh source of strength and support in mechanistic biology and chemistry, and physiology of the "muscle-nerve" preparation type. By 1900 a very interesting period of transition was reached in the evolution of psychology, wherein the germs of the brilliant contemporary theories seemed to lie unreconciled by the side of the old principles which were soon going to be thrown over-board. "In theory the psychologists of 1900 subscribed to the definition of psychology as the science of consciousness, but in practice they were studying performance as well as experience. In theory they were for an analytical psychology patterned after chemistry, . . . but in practice they often disregarded this scheme. In theory they were mostly associationists, but not dogmatically so; the high noon of association was already past. In theory they were strong for a physiological psychology, but in practice they made a profound bow to the brain and passed on their way. . . ."¹ It is against this background that we have to view the contributions not only of hormic psychology, but also of other contemporary schools. But in the case of the school we are considering there is an important middle ground which enters into, and colours the foreground. This middle ground is represented by behaviourism. "An outline of Psychology", which along with "an Outline of Abnormal Psychology" constitutes the most valuable contribution of McDougall to contemporary psychology, is in fact, one long sustained argument against the conclusions of mechanistic psychology. There are passages in the book illustrative of the use of the great forensic abilities of the author to shatter the conclusions of behaviourism. We have, therefore, to view the hormic theory as a protest not only against the older intellectualistic schools, but also against modern mechanistic behaviourism.

1. Woodworth, R. S. : Contemporary Schools of Psychology, pp. 10 and 11.

Some one has remarked that one taking up the study of McDougall for the first time may be led into the belief that our author is a behaviourist, because great stress is laid in his works on "performance" or "behaviour" as against "experience"; and animal studies figure most prominently in the opening chapter of his more important publications. It is true that McDougall attaches great value to the study of animal behaviour and of the active side of human behaviour, but that does not make him a behaviourist. Behaviourism and purposivism are in wide disagreement among themselves. Their agreement is negative in effect. It is similar to the pact which two opposed extremists may enter into for purposes of defeating a common enemy. Both took up a revolutionary attitude towards associationism, and condemned it most emphatically. But there the agreement ended. As soon as behaviourism and purposivism emerged from the distant back-ground of associationism, the latter separated itself from and protested against the aims and methods of the former. For behaviourism the "subject matter of psychology is behaviour—not conscious contents, not mental functions, not psycho-physical processes of any sort, but movements in time and space. Behaviour is the activity of the organism as a whole. . . . Only objective methods are accepted as valid. Introspection is completely rejected".² The conditioned reflex is the principle *par excellence* of the behaviourist for explaining all the highly intricate and complex problems of human behaviour. The behaviourist sees nothing mysterious in personality, which is merely "the sum total of an individual's reactions and tendencies to reaction." Personality "can be studied by the matter of fact methods of science." "The whole system of behaviour, then, the complete personality, is built up out of a few simple reactions by the process of conditioning. A limited *repertoire* of native responses, the process of conditioning, the stimuli provided by the body and by the environment, social as well as physical—these are all that the behaviourist needs."³ The S—R formula is the foundation of behaviourism; study of behaviour, prediction of future acts of behaviour and their control on the basis of this mechanistic formula are its aims. And against every one of the principles implied in the method and aims of behaviourism McDougall protested. So, we have to consider the development of purposivism against this middleground of S—R psychology. Purposivism exposes the inherent defects of behaviourism, corrects these defects, and then, after assimilating all that is of value in mechanism, towers over it in its new-

2. Heidebreder, E. Seven Psychologies, p. 243.

3. Ibid.

found strength drawn from the correct understanding of the hidden springs of human activities.

Section III. Some relevant aspects of McDougall's early Life and Work.

It will be helpful to our general understanding of the hormic position if, before we enter upon a critical discussion of purposivism, we could consider two topics, apparently of minor importance, but yet having some significant bearing on the general trend of McDougall's psychology. These are, (1) the influence of McDougall's early life on his psychology and (2) the value of our author's earlier work in the field of neurology.

All obituary notices of the great leader of hormism have drawn freely on McDougall's autobiographical sketch in the "*History of Psychology in Autobiography*." This article is a mine of information about the way in which McDougall's mind developed, and incidentally it throws light on certain obscure characteristics of purposivism. We may refer at once to the question which has been uppermost in the minds of many students of hormic psychology—why did not McDougall found a school, as Watson did or the Gertalt leaders did? The answer is found in the autobiographical essay. "I have never" says our author, "fitted neatly into any social group, never been able to find myself wholly at one with any party or any system, and, though not insensible to the attractions of group-life, group-feeling and thinking, have always stood outside, critical and ill-content."⁴ This inherent mental trait is largely responsible for the utter indifference which McDougall displayed for the benefits to be derived from founding a school of Hormic Psychology. Had he been more aggressive, the hormic theory would have been better understood, and more widely recognised as the most satisfactory principle for the explanation of human behaviour. This fact was brought home to the mind of our author in a very poignant manner in his later life. In the Preface to "*Psycho-analysis and Social Psychology*", published in 1936, McDougall writes, "I have realised too late that I might have done much more for my chosen science, had I from the first spoken with a less modest voice. It seems to me probable that, had I at the outset put forward my views in a more self-assertive and clamant fashion, I might have been acknowledged as the leader of a powerful and perhaps dominant school of psychology, instead of remaining a *well nigh solitary outsider*, playing a lone hand; I might even have 'put over' the type of psychology which I believe to be most nearly true, and to be indispensable for the advance of all the social sciences. For, in psychology, far more than in any other field of science, *the prestige and authority of a*

4. *History of Psychology in Autobiography* (Murchison), Vol. I, p. 192.

like-minded group would seem to be essential to the success of any theory or system".⁵ The unfortunate mental trait to which McDougall has frankly confessed has forced him to stand aloof as a *solitary outsider*, and has deprived him of the power to create a *like minded group*. The loss is all on our side, the side of students of psychology.

There is another biographical incident of great importance to us. It relates to the genesis of the central hormic thesis, and illustrates strikingly the non-rational and intuitive origin of all great scientific hypotheses. "Lecturing one day in 1906" says McDougall, "I found myself making the sweeping assertion that the energy displayed in every human activity might in principle be traced back to some inborn disposition or instinct. When I returned home I reflected that this was a very sweeping generalisation, one not to be found in any of the books; and that if it was true, it was very important. I set to apply this principle in detail, becoming more and more convinced of its truth, and of its importance; and my social psychology emerged."⁶ First an intuitive insight, and then rational development—that is the way in which science has developed. Accordingly, the great hormic truth revealed itself all on a sudden to the genius of McDougall in a flash of "insight," and then it was patiently developed by the founder of hormic psychology. And in the process of development the theory has undergone radical changes, not always for the better. One of the major aims of this monograph is to indicate the three main stages in the evolution of hormic psychology as marked out by McDougall's *Social Psychology* (1908), *An Outline of Psychology* (1923), and the *Energies of Men* (1932), and to show how on the whole the first named work is superior to the others.

The second topic, which we said is worthy of treatment in a preliminary approach to hormic psychology, is the significance of McDougall's work in the field of physiological psychology. Special importance is attached by us to this work, because it exemplifies the operation of the hormic principle even in the early physiological contributions of McDougall. In a series of brilliant papers contributed to *mind* and *Brain* McDougall showed how the synapse is the real seat of consciousness. As a fruitful corollary to this position he developed a theory of inhibition which is eminently purposive. "According to this theory, inhibition is always the negative aspect of a positive process—the

5. *Op. Cit.*, p. v (*Italics ours*).

6. *History of Psychology in Autobiography* (Murchison), Vol. I, p. 208.

whole event consisting in a redistribution of energy rather than a mere prevention of something that would otherwise occur.....McDougall applied it to a great variety of phenomena at all levels of the nervous system; the reciprocal inhibitions of the spinal level, inhibitions on the sensory level,.....the mutual inhibitions of instincts, and finally many well-known features of the "attention process". The theory seems to fit in admirably, too, with the "displacement" and "sublimation" doctrines of the psycho-analysts and also (as McDougall himself has pointed out in a recent paper) with the phenomena of the conditioned reflex as demonstrated by Pavlov.⁷ The theory is of special importance to us, not because of its all-embracing nature, but because it lays the foundation for the category of purpose in biology and psychology.

Section IV. The Orienting Category of Purpose.

In estimating the value of McDougall's contribution to psychological theory, it is well to point out at the outset the orientation he has given to the entire field of the study of human nature in its many aspects by the introduction of the category of purpose. Causation is the ruling concept in the physical, and evolution in the biological sciences. The social sciences were wandering aimlessly without any such category or guiding principle. Facts had been gathered by the thousand, but those were like so many loosely scattered, disorganised and unoriented iron-filings in a non-magnetic field. McDougall brought into this chaotic mass the powerful electro-magnet of the category of purpose, and immediately the disorderly mass marshalled itself into an orderly sequence of events. Working with its aid and under its guidance the psychologist has no difficulty in unravelling the tangled skein of human behaviour, individual as well as social, conscious as well as sub-conscious. Truly may it be said that the introduction of the concept of purpose has produced a revolution in psychology as deep and significant as the Copernican revolution in mathematical physics. "If psychology can point" says Professor Koffka⁸ "the way where science and life will meet, if it can lay the foundations of a system of knowledge that will contain the behaviour of a single atom as well as that of an amoeba, a white rat, a chimpanzee, and a human being, with all the latter's curious activities which we call social conduct, music and art, literature and drama, then an acquaintance with such a psychology should be worth while and repay the time and effort spent in its acquisition." Such a psychology is

the hormic psychology of McDougall, and we have no hesitation in affirming that the category which is its foundation is bound to prevail in the realm of the social sciences.

The introduction of the *orienting concept of purpose* into psychology was the result of the objective observation of animal behaviour carefully controlled by rigorous scientific standards. McDougall noted and analysed out certain characteristics of the behaviour of living organisms. They are *spontaneity* of movement; *persistence* of activity independent of the continuance of the stimulus; *variation* of direction of persistent movements in order to overcome obstacles; *cessation* of movements when the goal has been reached and the needs of the organism satisfied; *preparation* for the new situation towards the production of which the action contributes; *improvement* in the efficacy of behaviour with successive repetitions of the act; and finally the *total reaction* of the organism to the behavioural situation. Wherever we notice all these characteristics we may safely argue for the purposiveness of the activity of the behaving agent. Purposiveness is the essence of mental activity, and is an expression and manifestation of mind. *The view that all animal and human behaviour is purposive, and that purposive action is fundamentally different from mechanical process is the corner stone of the hormic theory.*

Section V. The Biological basis of Hormic Psychology.

In connection with and in support of his hormic hypothesis McDougall has made a very elaborate study of animals at all levels of the evolutionary scale—from the humblest amoeba to the most developed primate next to man. This has given rise to the belief that McDougall has made psychology biological, and the biological foundation has made hormic psychology much more scientific than it would otherwise be. The implications of this statement are far reaching. It is true that animal studies constitute a most important section of McDougall's major works on psychology. But it is not mechanistic biology that our author employs in his investigation of animal behaviour. It is not the biology of "dissection"; it is not the biology of the "muscle-nerve" preparation; it is not the biology of the dead animal, it is not even the biology of the body of the living animal, but it is the *biology of the mind of the animal* and of its purposive behaviour. He makes his position very clear in the *History of Psychology in Autobiography*. "I had come to see," he writes "more and more clearly that the main defect of the psychologies with which I had struggled in the opening years of the century was their acceptance or their compromise with, the mechanistic biology, and their consequent neglect

7. Flugel, J. C.: A Hundred Years of Psychology, pp. 270-1.

8. Principles of Gestalt Psychology, p. 23.

of the purposive or the biological aspect of all mental life." Besides his Lamarckian experiments on white rats are not controlled by the "tail-less-dog begetting tail-less-puppy" ideology, but by a purely *psychical outlook*. The acquired characteristic whose inheritance is being investigated is distinctly mental as it relates to "Maze Learning."⁹ Speaking of these experiments McDougall says, "...a positive answer indisputably established by experiment would not only give us a working theory of biological evolution, but would be a heavy blow to mechanistic biology. *It would place mind at the very heart of the evolutionary process instead of leaving it as a bye-product of that process*" Hence the biology which McDougall championed was not of the type which would pull psychology down to the level of a science dealing with muscles and bones, but that which would raise biology up to the higher level by forcing it to treat of the mind of animals.

Section VI. Mental Structure and Mental Function.

The consideration of purpose in the realm of animal and human behaviour leads us to the next great contribution of McDougall to psychological theory. Purpose implies a purposing mind. What, then, is the nature of this mind? In answering this question McDougall draws a distinction between *structure and function* which has great value for students of psychology, normal and abnormal. The distinction, let us emphasise at once, is not the usual distinction between neural or cerebral structure and mental function which is somehow to be associated with that structure. It is not the distinction on the basis of which the puzzling difference between neurosis and psychosis is drawn. It is an epoch-making distinction between *mental structure* and *mental function* that McDougall attempts to draw for the first time in the history of psychology. This distinction is bound to revolutionise our outlook in psychology, particularly in abnormal psychology.

The method of inferring structure from function is used very widely in contemporary science. The minute details of the structural organisation relating to electrons and genes, which by their very nature are invisible, have been drawn with astonishing skill. That which is unobservable is made to generate observable behaviour under known conditions. And from the observed results the structure of the organisation which has given rise to these results is inferred by the hypothetico-deductive method. It is in this way that the relative organisations of electrons and protons in an atom, of atoms in a chemical compound, and of genes in a chromosome are reconstructed

⁹ Op. cit., p. 215.

and presented to us. These, of course, are not arti-facts, but at the same time it must be remembered that they are only mental constructs or conceptual hypotheses, based no doubt on perceptual facts. While such a procedure is believed, to generate "hard objective facts" in the physical sciences, there is no reason why it should not yield the same result in psychology. McDougall employed this well-tried scientific method for establishing those mental facts which constitute the core of the hormic theory.

The implication of this procedure is so little known, even amongst those scientists who make an extensive application of it in their research fields, that it is necessary to elaborate it a little. Spectroscopy is now an important branch of experimental physics. The spectroscope yields, when it is employed in the experiments relating to the structure of the nucleus of matter, a negative with certain characteristic lines. These lines are made the starting points for an elaborate process of hypothetico-deductive reasoning at the end of which (after passing, no doubt, through the highly abstract and symbolic realm of mathematics) a picture is presented to us of the way in which the electrons dance round the protons. Between the final conclusion and the original premise, the connection is remote, inferential, tortuous and hypothetical. Yet the lay man believes that the physicist "sees" electrons just as we see books and inkstands on our table. So great is the ascendancy over the lay mind that the scientist has secured! Similarly from the colour of the eye of the fruit-fly the experimental biologist infers not only the existence, but the exact position of the gene in a particular chromosome in the cell. Here, again the man in the street is blissfully unaware of the fact that the gene is a mental construct. But when the self-same method is employed in psychology, and equally objective conclusions drawn by the hard rigorous scientific method are presented to the lay public, the reaction is different. Every lay man has a mind, and therefore, is not the owner of a mind competent to criticise the conclusions of those who meddle in minds! However, we may assure the lay public that so far as the methodology of the investigation of mental structure goes, hormic psychology is on a level with mathematical physics and experimental biology.

McDougall attaches, very rightly, great importance to this distinction between mental structure and mental function. The concluding sections of the opening chapter of his great work, *An Outline of Psychology*, is devoted to this topic. "Mental structure is" he says there, "that enduring growing framework of the mind which we infer from the observed manifestations of mind in experience and in behaviour;

and this develops, grows, and even when the mind is at rest, endures.....". Next to the introduction of *purpose* into the erstwhile chaotic field of psychology, this distinction between *mental structure* and *mental function* ranks as the most significant contribution of McDougall to contemporary psychological theory.

Section VII. *The Instinctual Structure of Mind.*

The next important contribution is the nature of mental structure as inferred scientifically from behaviour. This is the foundation of hormic psychology, and in one sense, is the most valuable gift of McDougall to the whole race of psychologists and sociologists. After a very careful examination of behaviour among animals, primitive men and civilised nations, McDougall came to the epoch-making conclusion that *mind is instinctual in structure*. He has proved convincingly "that the great behaviour patterns which are so easily discernible in the animal world also underlie *all* human actions. "All is no exaggeration. Like the higher animals, we are born with a few big instinctive drives, forming the warp and the woof of our nervous system. These cause us to pay attention spontaneously to certain things, to feel certain strong desires and emotions in regard to them, and to set about acting in a particular manner. But the manner in which we shall strive for the goals that attract us is less precisely defined than with animals, just as animal instincts are less stereotyped than those of insects....."

"By a careful study of our emotional life and of human behaviour under primitive and special conditions, McDougall concluded that *Homo sapiens* and the higher animals are possessed of some fourteen distinct instinctive drives, i.e., inborn, unlearned ways of feeling and acting, which can nevertheless be modified by education to meet civilised needs. Through the veneer of civilised intentions it is often difficult to perceive the fundamental grain of our instinctive constitution, although most people with a frank self-analysis can discern the primitive instinctive drive beyond any of their actions. We have been taught new ways of gaining the old ends, ways not socially objectionable; we are stimulated by many novel settings in place of the old original exciting situation; occasionally we have even learned to be satisfied with goals slightly different from the original biological one....; but we remain, nevertheless, creatures drawing our life interests from instincts and behaving in predictable emotional patterns....." It is in these striking words that Professor R. B. Cattell sums up in *Your Mind and Mine*,¹⁰ McDougall's

10. *Op. Cit.*, pp. 97-103.

contribution to psychology. There are one or two easily remediable errors in this admirable summary of the central hormic theme: the first is the reference to nervous system in speaking of the nature of instinctive drives; it is not the nervous system, but *mind* that is the seat of these drives: the second error lies in the reference to the *veneer* of civilisation; the difficulty lies not in seeing the relation between so called civilised behaviour and its primitive instinctive origins, but in seeing the relation between such behaviour and its correct instinctive foundation. When these defects are set right we shall have in the quotation given above the gist of McDougall's hormic theory.

Section VIII. *The Hormic Revolt.*

We are too near the event to realise fully the deep significance of the revolution that has taken place in psychology. Freud and McDougall have blazed the trail through the jungle of the human mind for all future psychologists. The utter futility of analytic psychology confined to cognition was keenly felt by the early sociologists and economists who began to theorise on their own account on the nature of human behaviour. These *ad hoc* psychologies of authors like Paret, Le Bon, and Trotter have had a most pernicious influence on the development of our science, and to this deplorable effect has been added the not less retarding influence of the crude creations misnamed psychologies of writers on ethics. To wipe out these popular psychologies is not easy, and will take a long time. McDougall has essayed the formidable task of setting things right by the publication of his *Social Psychology*. In spite of the simplicity, directness and convincingness of the theory propounded by the leader of the hormic school, misunderstandings of its fundamental doctrines persist in the minds of many leading psychologists. So great is the illusion-creating power of scientific terminology even when it is far removed from fact!

Section IX. *What is an Instinct?*

It has been mentioned already that hormic psychology gathers facts of mental structure from a careful observation of facts of behaviour. This process has shown that mind, of the animal as well as of man, is "*a bundle of instincts*," to put it rather crudely and bluntly. There is nothing more and nothing less than "instinct" in the mind of any member of the whole range of living organisms from the humblest amoeba to the proudest human being. What, then, is an instinct? "An instinct" is an "innate disposition which determines the organism to perceive (to pay attention to) any object of a certain class, and to experience in its presence a certain emotional excitement and an impulse to action

which finds expression in a specific mode of behaviour in relation to that object."¹¹ In an oft quoted passage McDougall expresses, in language which reaches poetic heights, the great importance of these instinctive structures. "We may say, then, that directly or indirectly the instincts are the prime movers of all human activity; by the conative or impulsive force of some instinct (or of some habit derived from an instinct), every train of thought, however cold and passionless it may seem, is borne along towards its end, and every bodily activity is initiated and sustained. The instinctive impulses determine the ends of all activities and supply the driving power by which all mental activities are sustained; and all the complex intellectual apparatus of the most highly developed mind is but a means towards these ends, is but the instrument by which these impulses seek their satisfactions, while pleasure and pain do but serve to guide them in their choice of the means."

"Take away these instinctive dispositions with their powerful impulses, and the organism would become incapable of activity of any kind; it would lie inert and motionless like a wonderful clock-work whose main-spring had been removed or a steam-engine whose fires had been drawn. These impulses are the mental forces that maintain and shape all the life of individuals and societies, and in them we are confronted with the central mystery of life and mind and will."¹²

The concept of instinct is the very life and soul of the hormic theory. Instincts are placed by the hormic psychologist at the very centre of the vortex of ceaseless human strivings. They make or mar human individuals and human societies. There is no act of human behaviour which may not be traced ultimately to one or another of the fundamental instincts. As there is prevalent in the scientific world a great deal of misunderstanding, due either to ignorance or wilful neglect, regarding the nature of the claims and achievements of the central thesis of hormic psychology it is necessary for us to set forth clearly the structure of an instinct.

One of the great merits of the McDougallian system is the extensive use it makes of the funded psychological knowledge of the human race in literature and tradition, and in those stores of common-sense experience, namely, proverbs. "The wise psychologist will regard literature as a vast store-house of information about human experience, and will not neglect to draw from it what he can." Taking a word in common usage he refines its meaning, making its

connotation scientifically accurate, and then employs it in his psychology. He could have created, as Freud did, an elaborate scientific terminology removed far from current usage, and could have made psychology very abstruse and hence beyond lay cavil. But he chose to keep close to ordinary human experience. The result has been rather disastrous to the reputation of the hormic school of psychology. Critics have become blind to the fact that words in ordinary usage, such as instinct and emotion, when they occur in McDougall's works, have a special connotation. They have, in consequence, misinterpreted many of the valuable conclusions of hormism. To guard ourselves against such an insidious temptation to climb down to easy going levels of pseudo-psychologising, and to warn critics of shallow understanding we shall present here a detailed picture of instinct as conceived by hormic psychology.

Following the laudable method of refining the connotations of words, McDougall first clears the ground by brushing aside the errors in the popular conception of instinct. When man constructs a very complicated piece of machinery, such as an automatic central telephone exchange, we say he is using his intelligence; but when an insect achieves a similar result, as the spider does when he constructs his trap-door device, we say that the action is instinctive. Animals are creatures of instinct while man alone is the proud possessor of intelligence. Instinct and intelligence are thus placed in opposition to each other. McDougall has demonstrated clearly in the opening chapters of *An Outline of Psychology* and *The Energies of Men* the utter folly of such a view. Drawing his examples from his own observation, and from those of eminent field biologists he has proved beyond any shadow of doubt that animals, even those low down the scale of evolution, are intelligent. It is true that long before McDougall, scientific workers in the field of natural science interested themselves in the problem of intelligence in animal behaviour. But our author was the first champion of animal intelligence to assemble a formidable battery of scientific evidence which shattered to shreds the mechanistic and tropistic conceptions of animal behaviour. Our behaviour has an unmistakable instinctive basis, and animals display remarkable intelligence in many of their acts of adaptation to the environment. Instinct and intelligence are to be used not as contradictory and mutually exclusive, but as complimentary principles of explanation of behaviour. In fact, intelligence is a part of instinct, and is subservient to it. "The chief lesson" says McDougall "I would have the student learn from the behaviour of insects is that Instinct and Intelligence are not two diverse principles of action or of guidance of action. Instinctive behaviour is indistinguishable from

11. *An Outline of Psychology*, p. 110.

12. *Social Psychology*, p. 18.

intelligent behaviour by any outward mark. . . . Intelligence operates only and always in the service of the instinctive impulses to action".¹³ The conclusion is a great achievement in itself, backed as it is by an indisputable range of scientific evidence. Its implications, however, are of utmost value to the general hormic theory. It grounds cognition and the development of cognitive abilities firmly in conation, making the latter the living stem of which the former are only branches. It dispels the illusion of the old type of psychology that cognition is independent of conation, and is different from it in essence.

The second error which McDougall corrects is a purely scientific one, and so, much more difficult to tackle, and which even when disproved does not fail to exercise fascination over men's minds. Instinct is not to be identified with the congenitally determined preadaptation of the nervous system to react in a special way to specific stimuli. This is the biological view of instinct, and on this view instinctive behaviour is merely one kind of vital adaptation of the organism. Biologists, at any rate some of them, tend to regard instincts as combinations of reflexes, and in any case there is no attempt in biology to rise above the level of the body. Biology, as we have observed already, is interested only in the body of the animal, and its view of instincts is bound to be narrow and unsatisfactory. Psychology should not be misled by biology.

Having dispelled the illusions besetting the concept of instinct, it becomes the duty of the hormic psychologist to describe the true structure of instinct. The first point that hormic theory urges is that *instinct is a fact of innate mental organisation. It is a psychical fact. It is a concrete fact of mental structure or organisation inferred from facts of behaviour.* We are familiar with the marvellous models of life-like wax figures which move their limbs in a very realistic manner. One who has a knowledge of the working of electrical machinery appropriate to these models can, by a careful observation of the movements of these figures, reconstruct the structure of the mechanism hidden inside. Similarly the leader of hormic psychology, with a mind rich in information relating to animal behaviour, has constructed a picture of the structure of mind which initiates purposive behaviour. This picture let us assert, even at the risk of being condemned for unnecessary repetition, is scientifically accurate, and may, without any hesitation, be accepted as their guiding principle by those who seek for a true understanding of human nature.

(To be continued.)

13. An Outline of Psychology, pp. 92-3.

PRAMEYAMĀLĀ

BY

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EDITED WITH TRANSLATION AND NOTES

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॥ श्रीमते रामानुजाय नमः ॥

॥ वात्स्यश्रीवरदगुरवे नमः ॥

नमश्श्रीविष्णुचित्तार्यपदपङ्कजपांसवे ।
रामानुजमुनीन्द्रोक्तिरहस्यज्ञानहेतवे ॥
जगतामुपकाराय जातं यतिवरात्मना ।
प्रगुणीकृतसन्मार्गं भजामः पुरुषोत्तमम् ॥

॥ श्रीभाष्यप्रमेयमाला ॥

सचेतोमधुकरवृन्दसेवनीयां
सौरभ्यं श्रुतिशिरसस्समादधानाम् ।
वत्सानां कुलपतिरदभुतामकार्षी-
दम्लानां वरदगुरुः प्रमेयमालाम् ॥

॥ अध्ययनविधिनिरूपणम् ॥

मीमांसाया विधिप्राप्तत्वागतः प्राप्तत्वविवेकार्थमध्ययनविधिर्निरूप्यते । किमध्ययन-
विधिरर्थज्ञानपर्यवसायी, आहोस्विदक्षरराशिग्रहणमात्रे पर्यवस्यति ? अर्थज्ञानपर्यवसायीति
पूर्वः पक्षः । तथा हि—अध्ययनविधेरक्षरराशिग्रहणमात्रपर्यवसायित्वे मीमांसाश्रवणस्य
प्रवर्तकभावादनारम्भणीया मीमांसा स्यात् । साङ्ख्यवेदाध्ययनात्प्रयोजनवदर्थप्राप्तप्रतीतिरुत्पन्नो-

ऽनुरागो मीमांसायां प्रवर्तक इति चेत्, नैतत्; “वेदमधीत्य अभिसमावृत्य” “वेदमधीत्य स्नायात्” इति श्रुतिस्मृतिभ्यामध्ययनानन्तरं समावर्तनादिप्राप्तेर्मध्ये मीमांसावसराभावात्; मीमांसाश्रवणस्य रागप्राप्तस्य विधिबाधितत्वात् । विधिर्हि रागं बाधते; यथा ‘न कलत्रं भक्षयेत्’ इत्यादिः । वैधे तु मीमांसाश्रवणे स्नान-विधिरपि श्रवणमबाधित्वा ततः परस्तादेवावसरमश्नुते । स्वतःप्रतीतमध्ययनानन्तरं समावर्तनस्यार्थज्ञानपर्यन्ताध्ययनविधिबलेन बाधितुं युज्यते । रागस्तु न विधिमन्य-थाकर्तुमलम् । किञ्च अध्ययनविधेः पुरुषार्थपर्यवसानावश्यम्भावात् पाठमात्रस्य चापुरुषार्थत्वा-त्पुरुषार्थपर्यवसानायावश्यमर्थज्ञानपर्यन्तो विधिरास्थेयः । किञ्च यद्यक्षरराशिग्रहणमात्रपर्यवसायी विधिस्स्यात्, तदा पाठग्रहणार्थतया विनियुक्तत्वात्स्वाध्यायस्याविवक्षितार्थता स्यात् । ततश्च तदर्थविचाररूपा मीमांसा नारम्भणीया स्यात्; तस्मादध्ययनविधिरर्थज्ञानपर्यवसायीति ।

राद्धान्तस्तु—नाध्ययनविधिरर्थज्ञानपर्यवसायी; किन्तु अक्षरराशिग्रहणमात्रे पर्य-वस्यति; अप्राप्तप्रापकत्वाच्छास्त्रस्य । ‘अप्राप्ते शास्त्रमर्थवत्’ इति हि न्यायविदः । मीमां-साश्रवणञ्च साङ्गाध्ययनवतः पुरुषस्य प्रयोजनवदर्थपानप्रतीत्या रागतः प्राप्तमिति न तत्र विधिना व्यापरितव्यम् । स्नानविधिस्तु रागं बाधत इति चेत्, किमिति बाधते? स्नानादे-रध्ययनानन्तरभावित्वादध्ययनोत्तरकालस्य कृत्स्नस्य स्नानादिविध्यवरुद्धतया मध्येऽवसरा-भावान्मीमांसाश्रवणं बाध्यत इति चेत्, नैतदेवम्; न हि स्नानादिविध्यः कृत्स्नं कालमव-रुन्धते; रागतः प्राप्तानां द्रव्यार्जनभोजनादीनाञ्चानवसरप्रसङ्गात् । याजनाध्यापनप्रतिग्रहा हि द्रव्यार्जनापायतया रागतः प्राप्ता इति न विधिविषयतामनुभवितुमर्हन्ति । श्रावयिता चाचार्यः कर्मविध्यनवरुद्धावसरलाभादेव हि श्रावयति । तस्मान्मीमांसाश्रवणस्यापि रागतः प्राप्तस्य स्नानादिविध्यनवरुद्धेऽप्येव कालेऽवसरसम्भवान्न तस्य स्नानादिविधिबाध्यता ।

यत्तुक्तम्—विधेः पुरुषार्थपर्यवसानायावश्यकत्वमिति; तत्रेदं प्रष्टव्यम् । किं साक्षात्पुरुषार्थपर्यवसानाय विधेरर्थज्ञानपर्यवसायित्वाश्रयणम्? आहोस्वित् परम्परया पुरुषार्थपर्यवसानायेति? न तावत्प्रथमः कल्पः; अर्थज्ञानस्यापि साक्षात्पुरुषार्थत्वाभावात् । तस्य हि स्वर्गादिसाधनयागाद्यनुष्ठानोपयोगितयैव पुरुषार्थत्वान्न स्वर्गादिवत्साक्षात्पुरुषार्थत्वम्

ततश्चार्थज्ञानपर्यवसायी विधिर्न स्यात् । द्वितीये तु कल्पेऽर्थज्ञानवत्पाठग्रहणस्यापि परम्परया पुरुषार्थत्वसम्भवात्तस्मिन्नेव विधिपर्यवसानं स्यात् । इयांस्तु विशेषः—एकस्मिन्पक्षे स्वतः प्राप्तमर्थज्ञानमिति तत्र विधिव्यापारकल्पनावैयर्थ्यम्; अन्यत्र च तदभाव इति ।

यत्तुक्तम्—विधेः पाठग्रहणपर्यवसायित्वे स्वाध्यायस्य स्वार्थेष्वतत्परत्वमापद्यत इति; तत्र । न ह्यन्यतः प्राप्तमर्थपरत्वं पाठग्रहणपर्यवसायी विधिव्याहन्ति । यथा परमतेऽध्ययन-विधिसिद्धमर्थपरत्वं स्वाध्यायस्य जपविधिर्न विहन्ति, तथात्रापि व्युत्पत्तिसिद्धं स्वाभाविकमर्थ-परत्वनाध्ययनविधिर्विहन्तुमलम् । यथा च बह्वैरुण्यत्वभास्वरत्वशक्तियुक्तस्य पाकार्थमुष्णत्व-शक्त्या विनियोगेऽपि भास्वरत्वशक्तिप्रयुक्तमर्थप्रकाशनं न विरुध्यते; एवमक्षरस्वरूपेण पाठार्थ-तया विनियोगेऽपि बोधकत्वशक्त्यर्थपरत्वं न विरुद्धम् । किञ्च, ‘स्वाध्यायोऽध्येतव्यः’ इति स्वाध्यायस्य कर्मत्वावगमात्तस्यैव साध्यत्वमवगम्यते । यथा ‘अग्नीनादधीत’ इत्यग्नीनां कर्मत्वावगमात्तेषामेव साध्यत्वमित्याधानविधिरग्निग्रहणमात्रे पर्यवस्यति; एवमध्ययनविधिः साध्यतयावगतस्वाध्यायग्रहणमात्रे पर्यवस्यति । स्वाध्यायशब्दवाच्यञ्चाक्षरराशिमात्रम्; नार्थज्ञानमपि । तस्मात्स्वाध्यायशब्दवाच्योऽक्षरराशिरेवाध्ययनसाध्य इत्यवगम्यते । अत एवेद-मपि निरस्तम्—यदध्ययनं नियोगविषयो न स्वाध्यायसंस्कार इति कैश्चिदुत्प्रेक्षितम् । द्रव्य-निष्ठस्य हि भावार्थस्य न नियोगविषयता युक्ता । यथा आधानस्याग्निनिष्ठस्य न नियोग-विषयता, यथा चावघातादेर्ब्रह्मादिनिष्ठस्य न नियोगार्थता; अत्रापि स्वाध्यायस्य कर्मत्वावग-मात्स्वाध्यायनिष्ठमध्ययनमवगतमिति न नियोगविषयत्वम् । ‘सक्तूञ्जुहोति’, ‘सुवर्णं भार्यम्’ इत्यादिषु कर्मत्वावगमेऽपि नियोगविषयत्वं दृष्टमिति चेत्, तत्र; कर्मत्वं नाम कर्तुः क्रिययाप्तुमिष्टतमत्वम् । अतः कर्मतयावगतस्य साध्यत्वं स्वतः प्रतीयते । क्वचित्तदेव हेतुवशादपोद्यते ‘सक्तूञ्जुहोति’ इत्यादिषु । कस्तत्र हेतुः? विनियोगान्तरादर्शनमिति ब्रूमः । संस्कार्यस्य हि द्रव्यस्य विनियोगान्तरेण भवितव्यम् । संस्कारो हि नाम कार्यान्तर-योग्यताकरणम् । अत्र त्वर्थबोधजपादिलक्षणकार्यान्तरदर्शनाच्च स्वतः प्राप्तसंस्कार्यत्वस्यापवाद इति स्वाध्यायसंस्कार एवाध्ययनम् । अतोऽध्ययनविधिरक्षरराशिग्रहणमात्रपर्यवसायी; मीमांसारम्भश्च रागप्राप्त इति स्थितम् ॥

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायां

अध्ययनविधिनिरूपणम् ॥

॥ अथ ऐकशास्त्र्य समर्थनम् ॥

ऐकशास्त्र्यमथ ब्रूमः कर्मब्रह्मविचारयोः ।
 शारीरकाद्यसूत्रोक्तपौर्वापर्यप्रसिद्धये ॥

वेदाख्यैकप्रबन्धार्थविषयत्वात्तदिष्यते ।
 तन्निर्णयाख्यञ्च फलमेकमेव तयोर्यतः ॥

विषयैक्यं फलैक्यञ्च कर्मकाण्डेऽपि कारणम् ।
 ऐकशास्त्र्यस्य धर्मा हि विषयस्तस्य निर्णयः ॥

फलञ्च तत्र वेदार्थः कृत्स्नो विषय इष्यते ।
 तन्निर्णयः फलञ्चात्र तदैक्यादेकशास्त्रता ॥

अर्थभेदात्कर्तृभेदादन्योन्यञ्च विरोधतः ।
 शास्त्रभेदप्रसङ्गश्चेन्नैवमत्र प्रसज्यते ॥

अध्यायपादषट्केषु प्रत्येकं भेद इष्यते ।
 अवान्तरार्थभेदेन शास्त्रभेदावहो न सः ॥

धूर्तस्वामिकपर्दिभ्यां कृतयोर्व्याख्ययोर्द्वयोः ।
 आपस्तम्बीयसूत्रार्थपरयोर्द्वैकशास्त्रता ॥

वैयाकरणवृत्त्यादौ भिन्नकर्तृकता तथा ।
 दृष्टेति कर्तृभेदश्च न शास्त्रैक्यस्य बाधकः ॥

देवताविग्रहाद्यर्थनिषेधात्तत्समर्थनात् ।
 विरुद्धार्थत्वमस्तीति यदुक्तं तन्न युज्यते ।

ऐकशास्त्र्यसमर्थनम्

५

कर्मस्वश्रुतवेदान्ताः श्रद्धावन्तो भवन्त्विति ।
 तथा जैमिनिराचार्यो विग्रहादि निरस्यति ॥

एवमन्यपरोक्ष्यापि मा भून्मन्दधियां भ्रमः ।
 इति कचिन्निराचक्रे जैमिनिं बादरायणः ॥

बादरायणसूत्रेषु बहुशश्चास्ति जैमिनेः ।
 त्रय्यन्तार्थप्रतिष्ठार्थं साक्षित्वेन परिग्रहः ॥

नन्वनन्यपरैवेयं जैमिनेरुक्तिरिष्यते ।
 द्रव्यदैवतसामान्ये द्रव्यप्राबल्यसाधिका ॥

न चायमतिवादस्यादनुष्ठानविरोधतः ।
 हविःप्राधान्यतस्सर्वे ह्यनुतिष्ठन्ति साधवः ॥

उच्यते तात्त्विकन्नात्र हविःप्राधान्यमीरितम् ।
 किन्तु प्रातीतिकं, तच्च प्राथम्येन प्रतीतता ॥

प्रत्यक्षसिद्धं हि हविस्स्वरूपं देवता पुनः ।
 शास्त्रैकवेद्या प्राथम्यं प्रत्यक्षस्यैव वस्तुनः ॥

अस्ति प्रतीतौ शास्त्रान्तु पश्चादेवावबोधकम् ।
 अर्थस्य सन्निकर्षो हि बलीयस्त्वनिबन्धनम् ॥

श्रुत्यादौ साधितस्तद्वदत्रापि हि भविष्यति ।
 अतश्शास्त्रैकवेद्याया देवतायास्तु वास्तवम् ॥

प्रातीतिकादप्राधान्यात्प्राधान्यं न विहन्यते ।
 ननु शास्त्रैकवेद्यत्वाद्भविषो न प्रधानता ॥

प्रातीतिकी हविष्टुं हि न प्रत्यक्षस्य गोचरः ।
 मैवं हविष्टुमात्रं हि शास्त्रवेद्यं तदाश्रयः ॥
 द्रव्यं प्रत्यक्षसिद्धत्वात् तु शास्त्रस्य गोचरः ।
 देवतात्वं देवतायास्वरूपमिति च द्वयम् ॥
 शास्त्रैकवेद्यमित्युक्तं हविःप्राधान्यमव्ययम् ।
 अतस्वरूपप्राधान्यं हविषो न विवक्षितम् ॥
 बोधायनस्तु भगवानैकशास्त्र्यमुदैरयत् ।
 ततश्चान्यपरैर्वोक्तिर्जैमिनेरिति निश्चितम् ॥
 तस्मान्नार्थविरोधोऽस्ति कर्मब्रह्मविचारयोः ।
 ऐकशास्त्र्यमतः कर्मब्रह्ममीमांसयोस्स्थितम् ॥

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायामैकशास्त्र्यसमर्थनम् ॥

॥ अथ प्रपञ्चमिथ्यात्वभङ्गः ॥

नन्विदमैकशास्त्र्यं तत्प्रयुक्तं पौर्वापर्यञ्चानुपपन्नम्; शारीरकावसेयस्याखण्डैकरसचिन्मात्र-
 ब्रह्मगोचरस्य ज्ञानस्य अविद्याकल्पितकर्मकर्तृसाधनफलादिविविधभेदावलम्बिना कर्मविचारे-
 णानुपयोगात्, प्रत्युत विपरीतवासनोत्पादनद्वारेण विरोधाच्च । मिथ्याभूतस्य हि संसारस्य
 शुक्तिकारजतरज्जुसर्पादेरिवाधिष्ठानयाथात्म्यज्ञानमात्रमेव निवर्तकं युक्तम् । ब्रह्मव्यतिरिक्तस्य
 मिथ्यात्वमनुमानादिसिद्धम् । तथाहि—विवादपदं, मिथ्या, दृश्यत्वात्, शुक्तिकारूप्यव-
 दिति । श्रुतिश्च 'नेह नानास्ति' इत्यादिरिति ।

तदसत्; दृश्यत्वहेतोरात्मन्यनैकान्त्यात् । कथम्? 'आत्मा वा अरे द्रष्टव्यः'
 'दृश्यते त्वग्रथा बुद्ध्या' इत्यादिश्रुतिभिः । 'यत्तददृश्यम्' इत्यादिश्रुतिष्वात्मनो दृश्य-

त्वप्रतिषेधोऽपि प्रतीयत इति चेत्, न; तस्मिन्नेव वाक्ये 'परिश्यन्ति धीराः' 'दृश्यते
 त्वग्रथा बुद्ध्या' इत्यादिषु दृश्यत्वविशेषविधानात्; दृश्यत्वनिषेधवचनस्य प्राकृतचक्षुरा-
 दिदृश्यतानिषेधपरत्वावगमाच्च । तथा च श्रुतिः 'न मांसचक्षुरभिवीक्षते तम्' 'न चक्षुषा
 गृह्यते नापि वाचा' 'न चक्षुषा पश्यति' इत्यादिका ।

यच्च आत्मा दृश्यो न भवति, आत्मत्वात्, यद् दृश्यं न तदात्मा, यथा घट इत्या-
 त्मनो दृश्यत्वनिषेधानुमानम्; तदपि अग्नीषोमीयहिंसा न धर्मः, हिंसात्वात्, यथा ब्राह्मण-
 हिंसादि, इत्यनुमानवदागमबाधितम् । किञ्च, घटो दृश्यो न भवति, घटत्वात्, यद् दृश्यं
 तदघटभूतं दृष्टम्; यथा पटादौत्यपि प्रसज्यते । इदं रजतमितिवत् घटस्सन्, पटस्स-
 न्निति घटाद्यधिष्ठानतयाभ्युपगतस्य सम्मात्रस्यापि घटादिवद् दृश्यत्वस्यावर्जनीयत्वादनैका-
 न्त्यं सुस्पष्टम् ।

विवादपदं मिथ्येति मिथ्यात्वं सत्यं उत मिथ्या? पूर्वत्र तेनैवानैकान्त्यम् । उत्तरत्र
 प्रपञ्चसत्यत्वसिद्धिः । अयमनुयोगो नित्यसमा जातिरिति चेत्, न; अधिष्ठानसंविदो
 मिथ्यात्ववादिनं माध्यमिकं प्रति मिथ्येत्युक्तिर्मिथ्येति भवता साधितत्वात्, तेन च भवत्सं-
 वित्तेरबाधितत्वाच्च । लोकेऽप्यपवरके घटोऽस्तीत्युक्तवन्तं प्रति केनापि घटो नास्तीत्युक्ते
 पुनरपि नास्तीत्युक्तिर्मिथ्येति वचनं यथा घटसद्भावसाधकं भवति, तथा मिथ्यात्वस्य मिथ्यात्वे
 प्रपञ्चस्य सत्यत्वसिद्धिः । न चात्र जातित्वम्; स्वव्याघाताभावात् । तर्हि नित्यसमायाः को
 विषयः? सत्यत्वस्य सत्यत्वासत्यत्वविकल्पेन, नित्यत्वादेश्च नित्यत्वानित्यत्वविकल्पेन दूषणम् ।
 सत्यत्वनित्यत्वादेः प्रमाणसिद्धस्य स्वपरनिर्वाहादिरक्षितत्वात् तद्विकल्पे नित्यसमा; तर्काङ्ग-
 पञ्चकान्यतमहीनत्वादिति । दृश्यत्वानुमानं प्रत्यक्षानुमानागमैः प्रतिपन्नस्य सत्यस्य प्रपञ्चस्य
 मिथ्यात्वसाधनाद्धर्मिग्राहकप्रमाणविरुद्धञ्च । एवमनुमानान्तरेष्वपि दूषणमूढम् । एवं 'नेह
 नानास्ति' इत्यादिनिषेधवाक्यानामपि तत्तद्धर्मिग्राहकप्रमाणाविरोधेन स्वतन्त्रभेदनिषेधपरत्वं
 तत्तत्प्रकरणादिभिरवसितम् ॥

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायाम् प्रपञ्चमिथ्यात्वभङ्गः ॥

॥ अथ भेददूषणनिस्तारः ॥

यत्तु भेदमिथ्यात्ववादिभिरुक्तम्—प्रमाणतः स्वरूपतश्च दुर्निरूपत्वाद्भेदो न सम्भवति । तथाहि—प्रत्यक्षं तावद्भेदग्राहकं भेदवादिभिरिष्यते । तत्र किं प्रत्यक्षकृत्यं स्वरूपग्रहणं भेदग्रहणञ्चैकम् ? उत भिन्नम् ? भिन्नत्वे च प्रत्यक्षं किं स्वरूपग्राहि ? उत भेदग्राहि ? अथ उभयग्राहि ? उभयग्राहित्वे च युगपत्किम् ? क्रमेण वा ? न तावत् स्वरूपभेदग्रहणैक्यम् ; प्रतियोगिनिरपेक्षत्वसापेक्षत्वलक्षणविरुद्धधर्माध्यासात् । भिन्नत्वपक्षे च स्वरूपमात्रग्राहित्वे भेदग्राहित्वं प्रत्यक्षस्य न स्यात् । भेदमात्रग्राहित्वन्तु न सम्भवति ; स्वरूपग्रहणसापेक्षत्वाद्भेदग्रहणस्य । उभयग्राहित्वेऽपि युगपद्यत्र सम्भवति । स्वरूपग्रहणप्रतियोगिस्मरणसापेक्षत्वाद्भेदग्रहणस्य, तन्निरपेक्षत्वाच्च स्वरूपग्रहणस्य । प्रत्यक्षज्ञानस्य क्षणिकत्वात्क्रमेणोभयग्राहित्वञ्च न सम्भवति । अतो न भेदः प्रत्यक्षविषयः । तदुक्तं **संवित्सिद्धौ**—

“युगपद्यक्रमायोगाद्व्यवच्छेदविधानयोः ।

ऐक्यायोगाच्च भेदो न प्रत्यक्षज्ञानगोचरः ॥”^१

इति । भेदग्रहणमत्र व्यवच्छेद इत्युच्यते, स्वरूपग्रहणं तु विधानमिति । अत एव च न प्रमाणान्तरविषयत्वं भेदस्य । अतो भेदः प्रमाणतो दुर्निरूपः ; तथा स्वरूपतश्च । तथाहि—किं भेदो वस्तुनस्वरूपम् ? उत धर्मः ? न तावत्स्वरूपम् ; स्वरूपभेदगोचरयोः घटः भिन्नः इति शब्दयोः हस्तः करः इतिवत् पर्यायत्वप्रसङ्गात् । किञ्च भेदस्य प्रतियोगिसापेक्षत्वात्, तन्निरपेक्षत्वाच्च स्वरूपस्य न स्वरूपं भेदः । ननु भेदस्य न प्रतियोगिसापेक्षत्वम् ; स्वरूपस्यैव भेदत्वेन प्रतियोगिनिरपेक्षस्वरूपग्रहणेनैव भेदस्य गृहीतत्वात् । अयमस्माद्विन्न इति भेदव्यवहारो तु प्रतियोगिसापेक्षत्वम् ; न ग्रहणे । नैवम् ; यदि भिन्न इति व्यवहारः स्वरूपविषयः, तदा तस्यापि प्रतियोगिसापेक्षत्वं स्यात्, घट इति व्यवहारवत् । यथा घट इति व्यवहारः स्वरूपविषयः न प्रतियोगिसापेक्षः, भेदव्यवहारोऽपि तथैव स्यात् । अपि च स्वरूपस्य भेदत्वे स्वरूपे

भिन्न इति व्यवहारो न स्यात् । भिन्नो हि भेदयोगी । अथ स्वरूपान्तराभ्युपगमेन भिन्न इति व्यपदेशोपपत्तिः, तर्हि तस्यापि स्वरूपान्तरापेक्षया अनवस्था स्यात् । नामान्तरेण धर्मपक्षाङ्गीकारश्च । किञ्च स्वरूपं किमनुवृत्तं व्यावृत्तं वा ? अनुवृत्तत्वे भेदत्वहानिः । व्यावृत्तत्वे स्वरूपं स्वरूपमिति अनुवृत्तप्रयोगो न स्यात् । नापि स्वरूपविशेषो भेद इति वक्तुं शक्यम् । तत्र किं स्वरूपमेव विशेषः ? स्वरूपस्य विशेषो वेति विवेचनीयम् । आद्ये प्रागुक्ता दोषास्त्युः । द्वितीये धर्मभेदपक्षस्वीकारस्स्यात् । अतो न स्वरूपं भेदः । नापि धर्मः । स किं स्वरूपाद्विन्नः ? उताभिन्नः ? अभिन्नत्वे स्वरूपभेदपक्षाङ्गीकारस्स्यात् । भिन्नत्वे च तस्यापि भेदस्तद्धर्मस्तस्यापीत्यनवस्था । किञ्च धर्मप्रतियोगिज्ञाने सति भेदग्रहणम्, भेदग्रहणे सति तयोर्धर्मितया प्रतियोगितया च ज्ञानमित्यन्योन्याश्रयणं स्यात् । न ह्येकमेव वस्तु एकापेक्षया धर्मितया प्रतियोगितया च प्रत्येतुं शक्यते । अन्यच्चान्योन्याश्रयणम् ; जात्यादिधर्माणां धर्मिणश्च धर्मधर्मिभावग्रहणे सति भेदग्रहणम्, भेदग्रहणे सति धर्मधर्मिभावग्रहणमिति । न खल्वेकस्यैव स्वात्मानं प्रति धर्मधर्मितया प्रतिपत्तिरसम्भवति । अतस्सन्मात्रस्यैव ग्राहकं प्रत्यक्षम् ; न भेदग्राहीति ।

अत्र प्रतिविधिः—इदं तावद्भेदापलापिनं प्रति पृच्छामः—किं भवान् भेदप्रतीत्यभावं ब्रूते ? उत प्रतीतेरकारणत्वम् ? अनिरूपितकारणत्वं वा ? आहोस्विन्नविषयत्वम् ? बाध्यविषयत्वं वेति ? न तावदाद्यः कल्पः कल्पते ; स्वपक्षपरपक्षदूषणादिसमस्तभेदव्यवहारोच्छेदप्रसङ्गात्, वेदान्ततत्त्वज्ञाननिवर्त्याभावेन सर्ववेदान्तानारम्भप्रसङ्गाच्च । अतो भवतापि भेदप्रतीतिरवश्याभ्युपगन्तव्या । भवदभ्युपगमश्च तथैव । द्वितीयेऽपि सिद्धायाः प्रतीतेरकारणत्वं किं तस्यास्सिद्धिविरोधि वा ? न वा ? नो चेन्न नः क्षतिः । विरोधि चेत् प्रतीतेस्सिद्धत्वादेव स्वसिद्धिविरोधपरिहाराय स्वकारणं स्वयमेव कल्पयति । कार्यं हि प्रतीतं कारणकल्पनायां प्रमाणम् । न पुनस्फुटावधारितं कार्यं कारणनिरूपणायापह्नवमर्हति । तथा च **संवित्सिद्धौ**—

“सत्यं प्रतीतिरस्त्यस्या मूलं नास्तीति चेन्न तत् ।

सा चेदस्ति तथा मूलं कल्प्यतां कार्यभूतया ॥”

इति । नापि तृतीयः ; कार्यविशेषेणैव तदनुगुणकारणविशेषस्य निरूपितत्वात् । तदप्युक्तं संवित्सिद्धौ—

‘ क्लृप्तं चेन्द्रियलिङ्गादि तद्भावानुविधानतः ’

इति । चतुर्थश्च न सम्भवति ; स्वपक्षपरपक्षसाधनदृष्ट्यादिभेदप्रतीतेरपि निर्विषयत्व-प्रसङ्गात् । तथा च सति स्वोभिमतासिद्ध्या भेदोऽप्रतिपक्षस्यात् । नापि पञ्चमः ; समस्त-भेदबाध्यत्वे तद्वेतुभूतप्रतीतेरपि बाध्यविषयत्वेन भेदापलापसिद्धेः । किञ्च, तर्केण हि भवतो भेदापलापः । तर्कस्य च व्याप्यपेक्षया व्याप्तिग्राहकप्रत्यक्षादिप्रमाणमूलत्वमवश्या-श्रयणायम् । अतस्तर्कः स्वमूलबाधाय न भवति ; स्वमूलबाधे स्वात्मलाभासिद्धेः । तर्कस्य प्रमाणानुग्राहकतया तदङ्गत्वात्तेन स्वानुग्राह्यप्रधानबाधश्च न सम्भवति । सूत्रितञ्च—‘ तर्का-प्रतिष्ठानादपि ’ इति । अतोऽवश्यं भवतापि भेदोऽभ्युपगन्तव्यः ।

यत्तु प्रमाणतस्वरूपतश्च दुर्निरूपत्वाद्भेदो न सम्भवतीत्युक्तम्, तदयुक्तम् ; जात्यादि-विशिष्टस्यैव वस्तुनः प्रत्यक्षविषयत्वात् ; जात्यादेरेव प्रतियोग्यपेक्षया वस्तुनः स्वस्य च भेदव्यवहाराच्च । तथा हि—जात्यादिविशिष्टमेव वस्तु प्रत्यक्षेण प्रतीयते । तत्र विशेषणविशेष्ययोर्द्वयोरपि योग्यत्वाद्युपपदेव ग्रहणम् । भेदशब्देऽपि प्रयुज्यमाने तस्य पुत्रादि-शब्दस्येव प्रतिसम्बन्धिनिरूपिताकारे व्युत्पन्नत्वात्प्रतियोग्यपेक्षेति न कश्चिद्दोषः । अत एवा-न्योन्याश्रयादिकमपि परिहृतम् । पर्यायत्वप्रसङ्गस्तु स्वरूपशब्दवत्परिहार्यः । तद्वदेव प्रति-योगिसापेक्षत्वनिरपेक्षत्ववैषम्यमपि दत्तोत्तरम् । व्यावृत्तव्यवहारे तु हेतुत्वाविशेषात्स्वरूपस्यापि भेदशब्दार्थत्वे न दोषः । तत्र भिन्न इति व्यवहारो धर्मभेदोल्लेखेन, व्यावृत्तव्यव-हारहेतुत्वमात्रेण वा स्यात् । स्वरूपस्य व्यावृत्तत्वेऽप्यनुवृत्तोपाध्युपलक्षिताकारे स्वरूपशब्दस्य वृत्तेरनुवृत्तप्रयोगोपपत्तिः । धर्मपक्षेऽनवस्था तु संविदादिवत्स्वपरनिर्वाहेण परिहृता । अतः प्रत्यक्षसिद्धस्य भेदस्य प्रमाणतः स्वरूपतो न कश्चिद्दोष इति ॥

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायां भेददृष्टान्तिस्तारः ॥

॥ अथ भावान्तराभावसमर्थनम् ॥

यत्तु भेदस्यान्योन्याभावरूपत्वात्तस्य च षष्ठप्रमाणवेद्यत्वान्न प्रत्यक्षत्वमित्याहुः । तदसत् ; अभावाख्यपदार्थान्तराभ्युपगमेऽपि प्रतिपत्त्यापरोक्ष्यादिभिस्तस्य प्रत्यक्षप्राप्त्यत्व-सिद्धेः । भावान्तरमेवाभावमभिदध्महे ; अतिरिक्तस्यानुपलम्भादनुपपत्तेश्च । ननु अघटं भूतल-मित्यादिव्यवहारो भूतलाद्यतिरिक्तार्थनिबन्धनः ; विशिष्टव्यवहारत्वात्, यदित्थं तदित्थम्, यथा घटघटितं भूतलमिति व्यवहार इत्यतिरिक्तसिद्धिरिति चेत् । अत्रोच्यते—प्रतियोगिबुद्धौ वस्तुधीरेवोपेता नास्तीतिव्यवहारहेतुरिति । तत्रातिरिक्तार्थस्तु तत्प्रतियोगिरूपो वा ? तदन्यो वा कश्चिद् भूतलादिविशेषः ? तदन्यो वा ? तत्राद्ययोस्सिद्धसाधनता ; प्रतियोगिनो घटादेः विशेषस्य च प्राङ्गुलत्वादेरस्माकमपि सिद्धत्वात् । तदुक्तम्—‘प्रतियोगिबुद्धौ वस्तु-विशेषधीरेवोपेता’ इति । न तृतीयः ; प्रमाणाभावात् । विशिष्टव्यवहारस्य त्वदभ्युपेतया प्रति-योगिबुद्धिपूर्वकवस्तुधियैवोपपादितत्वात्, भवदभिमतार्थावगमकत्वाच्च । ननु घटोऽस्तीति विशि-ष्टव्यवहारेऽपि तथात्वमापद्येत । तथा च प्रामाणिकार्थपरित्यागः स्यादिति चेत्, तन्न ; भूतलादि-विशेषव्यतिरिक्तप्रतियोगिरूपार्थान्तराभावेन घटोऽस्तीति विशिष्टव्यवहारासिद्धेः । अभावरूप-प्रतियोग्यभ्युपगमे तत्प्रतियोगिभावाभ्युपगमापातात्तन्मन्तरेण तदनिरूपणात् । स्वरूपेण निरूपणे भावत्वापाताच्च । तथा च लाघवाद्भाव एवास्तु ; एतेनैव तद्व्यवहारसिद्धेः । यत्र कुत्र-चित्सिद्धे भावरूपे प्रतियोगिनि तत्र तद्व्यवहारस्य तद्वत्तया दर्शनादन्यत्रापि तथैव कल्पनोप-मिति प्रकृतेऽपि तथाभ्युपेयम् । नास्तीतिव्यवहारहेतुभूतदेशादिविशेषप्रतियोगिकेतर-देशादिविशेष एवास्तीतिव्यवहारहेतुरिति चेन्न ; अन्योन्याश्रयणात् । अस्तिव्यवहारहेतु-विशेषसिद्धौ नास्तिव्यवहारहेतुविशेषसिद्धिः ; तत्सिद्धौ चास्तीतिव्यवहारहेतुविशेषसिद्धिरिति । वस्तुमात्रविवक्षायां सर्वत्र सर्वव्यवहारप्रसङ्गः ।

किञ्च नास्तिव्यवहारहेतुधियमन्तरेण अत्र घटोऽस्तीति व्यवहारदर्शने सर्वैरभ्युपेते । न हि पित्रादिवत्केनचित्प्रतियोगिना घटादिर्निरूप्यते । न च सर्वोऽपि भावो भवता शक्य-

निहवः; निहवहेतुभूतविशिष्टव्यवहारतदर्थयोरभावे निहवस्यैवाभावात् । निहवाभावे च निहोतव्यमस्त्येव ।

ननु पिशाचादिप्रतियोगिबुद्धिपूर्वकप्राक्कणत्वादिविशेषावगमेऽपि कचित्पिशाचाद्यभाव-
व्यवहारो न जायते । तत्र त्वभावनामा कश्चिदस्त्येव ; यदवगमे नास्तीति व्यवहारः; यस्य चान-
वगमे न तद्व्यवहार इति । तन्न ; भावक्षेऽपि समानत्वात् । देशादेः प्रत्यक्षत्वेऽपि पिशाचादि-
सम्बन्धस्य प्रमाणान्तरवेद्यत्वेन तदनवगमे न तद्व्यवहारः । देशादिविशेषधारो भवतां नास्तीति-
व्यवहारहेतुरिति चेत् ; तन्न ; तत्प्रतियोगिप्राहकप्राह्यविशेषविशिष्टत्वेन देशादेरभ्युपगमा-
त्तथान्यत्र क्लृप्तत्वाच्च । तद्वदेव तदस्तिताव्यवहारोऽपि भविष्यतीति चेत् , न ; पिशा-
चादिसद्भावानभ्युपगमे तद्विशेषोपलम्भकप्रमाणाभावात् ; तद्विशेषोपलम्भमूलस्य विशेषस्यैवा-
सिद्धेस्तदस्तीति व्यवहारस्यानुपपन्नत्वात् ; तत्सिद्धौ तदतिरिक्तविशेषकल्पनागौरवाच्च । ताव-
न्मात्रेण च तन्नास्तीत्यादिव्यवहारोपपत्तेः । विशिष्टव्यवहारस्य च भूतलातिरिक्ततद्गतघटादि-
विशेषव्याप्तस्य पक्षस्य तदभावेऽभ्युपगमे सर्वानुमानमङ्गप्रसङ्ग इति चेत् , न ; द्रव्यत्वानुष्णत्व-
वदुपपत्तेः । द्रव्यत्वविशेषप्रयुक्तमनुष्णत्वम् ; न तु द्रव्यत्वमात्रप्रयुक्तमिति हि तत्र निर्णयः ।
अत्रापि विशिष्टव्यवहारविशेषप्रयुक्तं देहल्यादिविशेषातिरिक्तघटादिविशिष्टत्वम् ; न तु विशि-
ष्टव्यवहारमात्रप्रयुक्तमिति सन्तोष्यम् । तदेतत्सर्वमभिहितम् — ‘प्रतियोगिबुद्धौ वस्तुधारे-
वोपेता नास्तीति व्यवहारहेतुः’ इति । एवञ्च भावान्तरस्यैवाभावत्वात्तस्य प्रत्यक्षयोग्यत्वा-
द्भेदोऽपि प्रत्यक्ष इति स्थितम् ॥

॥ इति वत्सकुलतिलकश्रीवरदगुरुविरचितायां श्रीभाष्यप्रमेयमालायां
भावान्तराभावसमर्थनम् ॥

॥ अथ अखण्डवाक्यार्थभङ्गः ॥

यत्तु समानाधिकरणपदसमुदायात्मकानामखण्डैकरसप्रतिपादकत्वमाचक्षते, तदपि
मन्दम् ; वाक्यान्तरवत्तेषामपि विशिष्टविषयत्वावश्यम्भावात् । इह खलु भगवता पतञ्जलिना
महाभाष्ये ‘लटश्शतृशानचावप्रथमासमानाधिकरणे’ इत्येतत्सूत्रार्थविवरणावसरे सामानाधि-
करण्यलक्षणमुक्तम् — ‘भिन्नप्रवृत्तिनिमित्तानां शब्दानामेकस्मिन्नर्थे वृत्तिस्सामानाधिकरण्यम्’
इति । अस्यार्थः—प्रवृत्तेर्निमित्तं प्रवृत्तिनिमित्तम् । प्रकृष्टा वृत्तिः प्रवृत्तिः ; शब्दस्यार्थे
वृत्तिर्नाम तद्बोधनम् । तत्र विशेष्यभूतप्रधानार्थविषया वृत्तिः प्रवृत्तिः ; तस्याः प्रवृत्तेर्निमित्तं द्वारम् ।
तच्च विशेषणभूतं जातिगुणादिकम् । समानं—एकं ; अधिकरणं—विशेषणानामाधारभूतं विशेष-
ण्यम् ; एकस्मिन्नर्थे वृत्तिरित्येकशब्देन समानशब्दो व्याख्यातः । अर्थशब्दश्च विशेष्यभूत-
प्रधानाभिधेयपरः । एतदुक्तं भवति—त्रिविधाशब्दाः केचिद्विशेषणतो विशेष्यतश्चैकार्थाः ;
यथा ‘घटः कुम्भः, नीलं कृष्णम्’ इत्यादयः । केचिच्चोभयतश्च भिन्नार्थाः ; यथा—‘गौरजो
महिषः, नीलं शुक्लं पीतम्’ इत्यादयः । केचिच्च विशेषणतो भिन्नार्था विशेष्यतश्चैकार्थाः ;
यथा ‘नीलमुत्पलम्’, ‘देवदत्तश्श्यामो युवा लोहिताक्षः’ इत्यादयः । तत्र पूर्वकोटिद्वयव्या-
वृत्ततृतीयकोटिनिविष्टानां शब्दानां सामानाधिकरण्यमिति ‘भिन्नप्रवृत्तिनिमित्तानां शब्दानाम्’
इत्यादिवाक्येन प्रतिपाद्यते । तत्र ‘भिन्नप्रवृत्तिनिमित्तानाम्’ इत्यनेन विशेषणतो विशेष्य-
तश्चैकार्थानां नीलं कृष्णमित्यादीनां न सामानाधिकरण्यमित्युच्यते । एकस्मिन्नर्थे वृत्तिरित्यनेन
चोभयतो भिन्नार्थानां ‘गौरजो महिषः’ इत्यादीनां न सामानाधिकरण्यमित्युच्यते । तस्मा-
द्विशेषणतो भिन्नार्थानां विशेष्यतश्चैकार्थानां नीलमुत्पलमित्यादीनामेव सामानाधिकरण्यमिति ।
तत्र प्रवृत्तिनिमित्तशब्दयोरेवं वार्थः—प्रवृत्तिः—अभिधानम् ; तस्य निमित्तं—अभिधेयम् ।
अर्थशब्दश्च अभिधेयवचनः । भिन्नाभिधेयानां शब्दानामेकस्मिन्नभिधेये प्रवृत्तिस्सामानाधि-
करण्यम् । भिन्नविशेषणानां शब्दानामेकस्मिन्विशेष्ये वृत्तिस्सामानाधिकरण्यमित्युक्तं भवति ।
भिन्नपदसामर्थ्येन निमित्तशब्दनिर्दिष्टं विशेषणभूतमभिधेयमेकशब्दसामर्थ्येन चार्थशब्द-
निर्दिष्टं विशेष्यभूतमभिधेयमित्यवगम्यते । अतश्चोभयथाप्यनेकविशेषणाभिधायिनां शब्दाना-

मेकस्मिन्विशेष्ये पर्यवसानं सामानाधिकरण्यमिति 'भिन्नप्रवृत्तिनिमित्तानां शब्दानाम्' इत्यादिसामानाधिकरण्यलक्षणवाक्येनोक्तं भवति ॥

ननु सामानाधिकरण्यस्य तावदेकार्थत्वमविगीतम् । तत्र सामानाधिकरणानि सत्यादि-पदानि किं सत्यत्वादिविशेषणमात्रपराणि ? उत तत्तद्विशेषणविशिष्टपराणि ? अथ स्वरूपमात्र-पराणीति विवेचनीयम् । न तावद्विशेषणमात्रपराणि ; विशेषणानामनेकत्वादेकार्थत्वासिद्धेः । नापि विशिष्टपराणि ; विकल्पासहत्वात् । किं क्रमेण युगपद्वा विशिष्टार्थप्रतिपादनम् पदानाम् ? न तावत्क्रमेण ; विशेषणानामन्योन्यसमवायप्रसङ्गात् । प्रथममेकेन विशेषणेन विशिष्टतया-वगतस्य वस्तुनः पश्चाद्विशेषणान्तरविशिष्टतयावबोधनं हि क्रमेण प्रतिपादनम् । तत्र विशिष्टं प्रति विशेषणतयान्वीयमानं पूर्वविशेषणस्यापि विशेषणं भवतीति विशेषणाना-मन्योन्यविशेषणविशेष्यभावप्रसङ्गो दुर्वारः । अवर्जनीयश्च पदानां क्रमेणार्थप्रतिपादनम् । कुतः ? उद्देश्योपादेयविभागवत्त्वात्सर्ववाक्यानाम् । नापि युगपत् ; उद्देश्योपादेयविभागहानिप्रसङ्गेन युगपत्प्रतिपादनासम्भवात् । सम्भवे विशेषणानां परस्परैक्यप्रसङ्गाच्च । तथाहि—प्रातिपदि-कानां विशिष्टार्थपरत्वे प्रातिपदिकार्थैक्यपरस्य समानविभक्तिनिर्देशस्य विशिष्टैक्यपरत्वमवश्या-श्रयणोयमिति विशेष्यैक्यवद्विशेषणानामप्यैक्यं प्रतिपाद्यमापद्येत । किञ्च विशेषणानां व्यावर्त-कत्वस्वाभाव्याद्विशेषणभेदेन विशेष्यभेदप्रसङ्गो दुर्वारः । तथाहि—भेदकं विशेषणम्, भेद्यं विशेष्य-मिति विशेषणविशेष्ययोस्वरूपविवेकः । अतः पारिशेष्यात् सामानाधिकरण्यपदानां स्वरूपमात्र-प्रतिपादनपरत्वमास्थेयम् । एवं तर्हि पदानां पर्यायत्वं, एकेनैव पदेन स्वरूपं प्रतिपन्नमिति पदान्तरप्रयोगवैयर्थ्यं, प्रवृत्तिनिमित्तभेदाभावेन सामानाधिकरण्यलक्षणहानिश्च प्रसज्यते । नैवम् ; एकस्यैवार्थस्य तत्तत्पदार्थविरोधिप्रत्यनीकपरत्वेन पदानामपर्यायत्वमर्थवत्त्वं, तत एव निमित्तभेदलाभात्सामानाधिकरण्यलक्षणसिद्धिश्च । तथाहि—विकारास्पदजडपरि-च्छिन्नस्वरूपस्य कृत्स्नस्य जगतः कारणतयावगतस्य ब्रह्मणः कार्यगतविकारास्पदत्वजडत्व-परिच्छिन्नत्वशङ्कायां तद्विशुदासार्थं सत्यादिशोधकवाक्यं प्रवर्तते । तत्र सत्यपदं ब्रह्मणो विका-रास्पदत्वशङ्कां निवर्तयति ; ज्ञानपदं जडत्वशङ्कां, अनन्तपदञ्च परिच्छिन्नत्वप्रसक्तिम् । न चैतावता ब्रह्मणस्तत्तद्व्यावृत्तिरूपधर्मवत्त्वप्रसङ्गः ; ब्रह्मस्वरूपस्यैव सकलैतरव्यावृत्तिरूपत्वात् । यथा शौक्यादेः काष्ण्यादिव्यावृत्तिस्तत्तत्पदार्थस्वरूपमेव ; न धर्मान्तरम् ; धर्मान्तरानुप-

लम्भात् । तदभ्युपगमेऽनवस्थानाच्च । अतः काष्ण्यव्यावृत्तं रक्तिमव्यावृत्तं 'पीतिमव्यावृत्तं शौक्यमिति पदानां शौक्यस्वरूपमात्रविषयाणां व्यावर्त्यभेदेन यथा न पर्यायत्वमर्थवत्त्वमेका-र्थत्वञ्च, तथा सत्यादिपदानां ब्रह्मस्वरूपमात्रविषयाणामप्यसत्यादिव्यावर्त्यभेदेन न पर्यायत्वादि-दोषप्रसक्तिः ।

नन्वेवं सत्यत्वादिगुणविशिष्टवस्तुवाचिनां सत्यादिपदानां तत्तद्गुणपरित्यागेन तत्तद्विरोधिवावृत्तस्वरूपमात्रपरत्वे लक्षणा स्यात् । मैवम्—अवाच्योपस्थापने हि पदानां लक्षणा । यथा 'गङ्गायां घोषः प्रतिवसति' इत्यत्र गङ्गापदस्य कूलोपस्थापने । न हि कूलं गङ्गापदवाच्यम् । अत्र तु सत्यादिपदानां वाच्यैकदेशभूतविशेषणपरित्यागेऽपि वाच्ये प्रधा-नांशभूतविशेष्यस्वरूपप्रतिपादानां लक्षणाप्रसङ्गः । तथापि विशिष्टवाचिनश्शब्दस्य विशेष्य-मात्रपरत्वे स्वारस्यभङ्गः प्रसज्यत इति चेत्, नैष दोषः । सामानाधिकरण्यवाक्येष्वेकार्थपरत्व-बलाद्विशेषणपरित्यागेन स्वरूपमात्रपरत्वमेव पदानां स्वारसिकम् । व्यधिकरणवाक्येष्वेव हि पदानां विशिष्टपरता स्वारसिकी । भवतु वा लक्षणा पदानाम् ; तथापि न दोषः ; वाक्य-तात्पर्यानुगुणा हि लक्षणा तद्विरोधिमुख्यवृत्तेर्बलीयसी दृष्टा ; यथा गङ्गापदे । सामानाधि-करण्यस्य द्वैक्य एव तात्पर्यमिति सर्वसम्मतम् ।

ननु सर्वपदानां लक्षणा न दृष्टचरी, अयुक्ता च । कैश्चित्पदैः वाक्यतात्पर्यनिश्चये सत्येव हि तदानुगुणेन पदान्तरलक्षणा । केन पदेन वाक्यतात्पर्यं निश्चित्य सर्वपदलक्षणा स्वीक्रियते ?

उच्यते—दृष्टा तावत् 'विषं मुङ्क्ष्व' इत्यादिषु सर्वपदलक्षणा । तत्र हि विषपदं निषिद्धभोज्यं लक्षयति । मुङ्क्ष्वेति भोजननिवृत्तिम् । तत्र योग्यतादिवशाद्वाक्यतात्पर्यनिश्चयः । सत्यादिवाक्येषु तु सामानाधिकरणेषु समानविभक्तिबलादैक्यतात्पर्यनिश्चयः । तदविरोधाय प्रातिपदिकानां तु सर्वेषां लक्षणा स्वीक्रियते । एकपदलक्षणायामपि वाक्यतात्पर्यविरोध एव हेतुः । यथा गङ्गायां घोष इत्यादिषु । तदविरोधे त्वेकस्यापि पदस्य लक्षणा न दृष्टा । यथा 'गङ्गायां मत्स्याः प्रतिवसन्ति' इत्यादिषु । अतो वाक्यतात्पर्याविरोधाय एकस्येव सर्वपदानां लक्षणा न दोषाय । दृश्यते च विशेषणानां विशेष्यभेदकत्वम् । यथा खण्डो मुण्डः घटः पट इत्यादिषु ।

ननु 'नीलमुत्पलम्' 'देवदत्तः श्यामो युवा' इत्यादिषु विशेषणभेदेऽपि विशेष्यैक्यं दृश्यते । नैष दोषः । तत्र हि स्वतः प्राप्तं विशेषणानां विशेष्यभेदकत्वं प्रत्यक्षविरोधेनापोद्यते । प्रत्यक्षाद्यगोचरे तु ब्रह्मणि विशेषणभेदप्रयुक्तो विशेष्यभेदः केन वार्यते ? तस्मात्सत्यादिवाक्यमखण्डैकरसमेव ब्रह्म प्रतिपादयतीति ॥

अत्र प्रतिविधीयते—सत्यादिवाक्यं सत्यत्वादिगुणविशिष्टमेव ब्रह्म प्रतिपादयति । 'नीलमुत्पलम्' इत्यादिषु समानाधिकरणवाक्येषु अनेकविशेषणविशिष्टैकार्थपरत्वव्युत्पत्तेः । सत्यादिवाक्यस्य समानाधिकरणत्वाच्च । तथा च सामानाधिकरण्यलक्षणं 'भिन्नप्रवृत्तिनिमित्तानां' इत्यादिनोक्तं शार्वकैरिति प्रदर्शितम् । तत्र यदुक्तं—सामानाधिकरण्यस्यैकार्थपरत्वव्युत्पत्तेरैकार्थ्यस्य च पदानां विशेषणमात्रपरत्वे विशिष्टपरत्वे चासिद्धेः स्वरूपमात्रैक्यपरत्वं सत्यादिसमानाधिकरणपदानामास्थेयमिति । तन्नोपपद्यते ; त्वदुक्तविकल्पदूषणयोः त्वत्यक्षेऽपि प्रसङ्गात् । तथाहि—सत्यादिपदानि किं विरोधिमात्रपराणि ? यद्वा स्वरूपमात्रपराणि ? किं वा विरोध्यवच्छिन्नस्वरूपपराणि ? न तावद्विरोधिमात्रपराणि ; तेषामनेकत्वेनैकार्थत्वासिद्धेः । नापि स्वरूपमात्रपराणि ; तथा सति पदानां पर्यायत्वप्रसङ्गात् ; एकेनैव पदेन स्वरूपं प्रतिपन्नमिति पदान्तरप्रयोगवैयर्थ्याच्च । नापि तदवच्छिन्नस्वरूपपराणि ; विकल्पासहत्वात् । किं वा विरोधिनां स्वरूपावच्छेदकत्वमुपलक्षणतया ? विशेषणतया वा ? न तावदाद्यः कल्पः ; एकेनोपलक्षणेन स्वरूपं प्रतिपन्नमिति उपलक्षणान्तरवैयर्थ्यात् । 'उपलक्ष्याद्बहिर्भूत उपलक्ष्यप्रतीत्युपायो धर्म उपलक्षणम्' इति ह्युपलक्षणविदः । तथा च शाखादिषु दृश्यते । कथं तर्हि भवत्यक्षे जन्मादिवहूपलक्षणवत्वमेकस्यैव ब्रह्मणोऽभ्युपगम्यत इति चेत् । उच्यते—तत्र ह्युपलक्ष्यस्य धर्मिणो ब्रह्मण एकत्वेऽपि प्रत्युपलक्षणमुपलक्ष्यधर्मभेदोऽस्माभिरभ्युपगम्यते । अन्यथा तत्राप्यनेकोपलक्षणवैयर्थ्यं प्रसज्यत एव । त्वत्यक्षे त्वनेकोपलक्षणोपलक्ष्यधर्मभेदानभ्युपगमादुक्तदोषो दुर्वारः । तदभ्युपगमे हि ब्रह्मणस्सविशेषत्वप्रसङ्गः । नापि द्वितीयः ; विशेषणभूतानां विरोधिनामनेकत्वेनैकार्थत्वासिद्धेः । विशेष्यान्तर्भूतो विशेष्यप्रतीत्युपायो धर्मो हि विशेषणम् । विशेष्यान्तर्भावो नाम ज्ञाप्यान्तर्भावः । विशेषणभूतार्थभेदेऽपि विशेष्यभूतप्रधानार्थैक्यादैकार्थ्यसिद्धिरिति चेत्, तत्सखण्डवाक्यार्थवादिनोऽपि समानम् । कस्तर्हि विशेष आवयोरिति चेत्, अयमेव विशेषः यदेकस्य मते पदानां लाक्षणिकत्वम् ; इतरस्य तु तेषां मुख्यत्वमिति ।

EDITED WITH TRANSLATION AND NOTES

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॥ श्रीः ॥

॥ श्रीमते हयवदनपरब्रह्मणे नमः ॥

॥ श्रीमते रामानुजाय नमः ॥

॥ श्रीमते निगमान्तमहादेशिकाय नमः ॥

श्रीमान् वेङ्कटनाथार्यः कवितार्किककेसरी ।
वेदान्ताचार्यवर्यो मे सन्निधत्तां सदा हृदि ॥

॥ न्यायपरिशुद्धिः ॥

॥ प्रत्यक्षाध्यायः ॥

पत्युस्संयमिनां प्रणम्य चरणौ तत्पादकोटीरयोः
संबन्धेन समिध्यमानविभवान् धन्यास्तथान्यान् गुरुन् ।

॥ श्रीः ॥

॥ श्रीमते निगमान्तमहादेशिकाय नमः ॥

वन्देऽद्वन्द्वं द्वन्द्वं श्रितपरतन्त्रं निदानमखिलानाम् ।

दशरथजनकापत्यं स्थिरवाणीमौलिभूषणं किमपि ॥

वकुलभूषणपादसरोरुहप्रवणमानससंयमिशेखरम् ।

कलयतो निगमान्तगुरोः पदे कृतधिये गुरवे करवै नमः ॥

श्रीश्रीनिवासयोगीन्द्रचरणाम्भोजमाश्रये ।

कटाक्षान्वीक्षते यस्य रक्षितुं सर्वरक्षकः ॥

लक्ष्मीकुमारतातयदेशिकवंश्येन कृष्णतातेन ।

न्यायपरिशुद्धिटीका क्रियते सन्न्यायदोषिकाभिरुया ॥

काचार्यपादसूक्तिः क च मे स्थूला मितम्पचा बुद्धिः ।

श्रीसूक्तिभक्तिकलितं साहसमेतद् बुधोत्तमैस्सह्यम् ॥

प्रारिप्सितग्रन्थाविघ्नपरिसमाप्तिप्रचयगमनादिप्रयोजनाय विरचितं गुरुनमस्काररूपं मङ्गलं शिष्यशिक्षायै शिष्याणामनुषङ्गतो मङ्गलसिद्धये च ग्रन्थतो निवृत्तं चिकीर्षितं प्रतिजानीते—पत्युरिति । यद्यपि मङ्गलविरहेऽपि नास्तिकादिग्रन्थेषु समाप्तिर्दृश्यत इति न समाप्तिं प्रति मङ्गलस्य कारणत्वं संभवति ; तथापि विघ्नध्वंसद्वारा क्वचित्प्रयोजकत्वमुपपद्यत एव ; समाप्तिप्रतिबन्धकदुरितविशेषरूपविघ्ननाशं प्रति मङ्गलस्य कारणत्वात् । स्मर्यते हि—

“ मङ्गलाचारयुक्तानां नित्यं च प्रयतात्मनाम् ।

जपतां जुहतां चैव विनिपातो न विद्यते ॥” इति ।

नास्तिकादिग्रन्थेषु तु स्वतस्सिद्धविघ्नविरहादेव समाप्त्युपपत्तिः । आस्तिकाग्रेसरैस्तु विघ्नशङ्कया कुग्रन्थत्वपरिहाराय च मङ्गलाचरणमित्यन्यत्र विस्तरः । तत्पादकोटीरयोः—संय-
मिपतिचरणमस्तकयोः । संबन्धेनेति । चरणसंबन्धः शिष्यप्रशिष्यत्वादिः ; मस्तकसंबन्धः
आचार्यप्राचार्यत्वादिः । समिध्यमानविभवान्—सम्यक्प्रकाशमानज्ञानादिसंपत्तीन् । शिष्य-
प्रशिष्यादीनां संयमिपत्युपदेशानुग्राहीनां ज्ञानादिसंपत् । आचार्यप्राचार्यादीनां ज्ञानादि-
संपत्तिस्तु उक्तसंबन्धेन ज्ञाप्यमाना सती अधिकं प्रकाशत इति भावः । तथा च समिध्य-
मानेत्यनेनाभिवर्धमानत्वप्रकाशमानत्वान्यतरवत्त्वमेव विवक्षितम् । धन्यानि । धनलाभवत
इत्यर्थः । ‘ धनगणं लब्धा ’ इति यत्प्रत्ययः । तत्पादकोटीरयोः संबन्धेनेत्यनुषज्यते । धनं
पुरुषार्थसाधनं पुरुषार्थो वा । पुरुषार्थसाधनपरत्वे अभेदस्तुतीयार्थः । पुरुषार्थपरत्वे तु

शुद्धं संश्रितबादरायणतनोर्नारायणस्योक्तिभिः

श्रीमान् वेङ्कटनायकः स्थितिपदं निर्माति नीतेऽशुभम् ॥ १ ॥

जन्यत्वम् । पुरुषार्थश्च शिष्यादीनां मोक्षरूपः ; आचार्यादीनां भगवत्प्रीत्यतिशयरूपः ।
तथेति । उक्ताकारद्वयवत्तथेत्यर्थः । उक्ताकारद्वयरूपोत्कर्षानुसन्धानपूर्वकमिति यावत् ।
अन्यान् गुरुन्, प्रणम्येत्यनुषङ्गेनान्वयः । संश्रितेत्यादि । संश्रिता-शक्तिविशेषेणाधिष्ठिता,
बादरायणतनुः—व्यासस्य तनुः, व्यासरूपा तनुर्वा येन तस्येति बहुव्रीहिः ।

“ सङ्कीर्णबुद्धयो देवा ब्रह्मरुद्रपुरस्सराः ।

शरण्यं शरणं जम्मुर्नारायणमनामयम् ॥

तैर्विज्ञापितकार्यस्तु भगवान्पुरुषोत्तमः ।

अवतीर्णो महायोगी सत्यवत्यां पराशरात् ॥

कृष्णद्वैपायनं व्यासं विद्धि नारायणं प्रभुम् ।

को ह्यन्यो भुवि मैत्रेय ! महाभारतकृद्भवेत् ॥”

इत्यादिकमिह भाव्यम् । उक्तिभिः । ब्रह्मसूत्रादिभिरिति भावः । शुद्धम्—श्रुत्याद्यविरुद्धम् ।
श्रुत्याद्यविरोधः ब्रह्मसूत्रादिसंवादादेव ज्ञायत इति । उक्तिभिरिति ज्ञापकहेतौ तृतीया ।
नीतेः । प्रमाणतत्परिकरतदनुग्राहकतर्करूपन्यायस्य—स्थितिपदं—मर्यादारक्षकं मर्यादालक्षण-
प्रतिपादकं वा ग्रन्थम् । ‘ स्थानमर्यादयोः स्थितिः ’ इति, ‘ पदं व्यवसितत्राणस्थान-
लक्ष्माङ्घ्रिवस्तुषु ’ इति च नैघण्टुकाः । शुभं—श्रेयस्साधनम् । अत्र च गौतमीयन्याय-
विस्तरबहिष्कारपक्षे शुद्धमित्यनेन तद्व्यावृत्तिरभिप्रेता । तथा च गौतमीयन्यायविस्तरस्य
श्रुत्यादिविरुद्धतया तमनादस्य श्रुत्याद्याविरुद्धमन्यं निर्मातीत्युक्तं भवति ।

अत्र पक्षे न्यायपरिशुद्धिरिति ग्रन्थनाम्ना परिशुद्धन्यायप्रतिपादकत्वं बोध्यते ।
न्यायस्य परिशुद्धिः यस्मिन्निति विग्रहवाक्यस्य यत्प्रतिपाद्यन्यायस्य परिशुद्धिरित्यर्थाङ्गीका-

विद्यास्थानेषु धर्म्येषु गण्यते न्यायविस्तरः ।

स च विष्ठावितस्तैस्तैस्ततोऽत्र परिशोध्यते ॥ २ ॥

रात्तादृशार्थलाभः । न्यायशब्देन च प्रमाणतत्परिकरादिकं विवक्षितम् । स्वीकारपक्षे तु नीतेः स्थितिपदं गौतमीयन्यायविस्तरं शुद्धं निर्माति श्रुत्याद्यविरुद्धार्थकतया करोतीत्यर्थः । ग्रन्थनाम्ना तु गौतमीयन्यायविस्तरस्य श्रुत्याद्यविरुद्धार्थकत्वप्रतिपादकत्वं बोध्यते । न्यायस्य गौतमीय-न्यायविस्तरस्य परिशुद्धिः यद्ग्रन्थप्रतिपाद्येति विग्रहवाक्यार्थाङ्गीकारात् । तृतीयपक्षेऽप्ययमेवान्वयक्रमः । परं तु शुद्धमित्यस्य विरुद्धार्थकसूत्रसंबन्धरहितमित्यर्थः । ग्रन्थनाम्नि परिशुद्धिशब्देनाप्ययमेवार्थो बोध्यते । ननु

“पुराणन्यायमीमांसाधर्मशास्त्राङ्गमिश्रिताः ।

वेदाः स्थानानि विद्यानां धर्मस्य च चतुर्दश ॥

अङ्गानि वेदाश्चत्वारो मीमांसा न्यायविस्तरः ।

पुराणं धर्मशास्त्रञ्च विद्या द्वेताश्चतुर्दश ॥”

इत्यादिभिः न्यायविस्तरस्यापि पुराणादिवत् धर्म्यत्वेन परिगणनात् कथं तस्य बहिष्कारसंभव-
तीत्यभिप्रायेण शङ्कते—विद्यास्थानेष्विति । पुरुषार्थसाधनज्ञानहेतुष्वित्यर्थः । यद्यपीत्यादिः ।
धर्म्येषु—धर्मादनपेतेषु ; धर्महेतुभूतवेदार्थनिर्णयप्रयोजकेष्विति यावत् । ‘धर्मपदार्थन्याया-
दनपेते’ इति यत्प्रत्ययः । स चेति । तथापीत्यादिः । विष्ठावितः—श्रुत्यादिविरुद्धार्थकतां
नीतः । तैस्तैः—कणादपक्षिणादिभिः । परिशोध्यत इति । परिशुद्धिप्रयोजकव्यापारः क्रियत
इत्यर्थः । अत्र परिशुद्धग्रन्थान्तरकरणस्यापि अधिकं त्वित्यादिन्यायेन विशेषणीभूतपरिशुद्धिप्रयोज-
कत्वानपायात्तत्सङ्ग्रहो बोध्यः । अयं भावः—पुराणन्यायेत्यादिषु न्यायशब्देन न्यायविस्तर-
शब्देन च वेदार्थनिर्णयोपयोगिप्रमाणादिप्रतिपादकग्रन्थस्यैव विवक्षिततया वेदविरुद्धार्थकस्य
बहिष्कारे न दोष इति । अङ्गीकारपक्षे तु बौद्धादिग्रन्थवत् श्रुत्यादिविरुद्धार्थकस्य गौतमीय-
न्यायविस्तरस्यात्यन्तबहिष्कार्यतया किमर्थं तच्छोधनमित्याशङ्कापरिहारकतया उक्तश्लोकावतारो

॥ गौतमसूत्रबहिष्कारपक्षः ॥

यद्यपि कथञ्चिदाक्षपादं सत्पक्षे निक्षेप्तुं शक्यम् ; न च कण-
भक्षपक्षनिक्षेपवत् क्लेशः ; नापि तत्कर्ता गौतमस्तामसेषु परि-
पठ्यते ; नापि च विप्रलम्भकत्वख्यातिः ; तथापि ब्रह्मसूत्रकारादि-
बहिष्कृतत्वान्नातीव वयमाद्रियामहे । न खल्वार्षत्वादिभिस्तदादरः ;
अतिप्रसङ्गात् ।

बोध्यः । तैस्तैरिति । न तु ग्रन्थकर्तृविरुद्धार्थतात्पर्यमिति भावः । तत इति । धर्म्यत्वाद्विष्ठा-
वितत्वाच्चेत्यर्थः । अत्र—अस्मिन्ग्रन्थे । परिशोध्यत इति । श्रुत्याद्यविरुद्धार्थकतया व्याख्यायत
इत्यर्थः, न तु बहिष्क्रियत इति भावः ।

अविरोधेन व्याख्यानसंभवात् कुतो बहिष्क्रियत इति शङ्कते—यद्यपीति । कथञ्चिदिति ।

श्रुत्यादिविरुद्धार्थकतया भासमानानां सूत्राणां वक्ष्यमाणरोत्या अविरुद्धार्थकतया व्याख्याने-
नेत्यर्थः । आक्षपादम्—अक्षपादेन गौतमेन प्रोक्तं न्यायविस्तराख्यं शास्त्रम्—सत्पक्षे—श्रुत्याद्य-
विरुद्धपक्षे ; सतां वेदान्तिनां पक्षे वा । ननु तर्हि कणादादिपक्षस्यापि तथाङ्गीकारप्रसङ्ग
इत्यतस्तद्वैषम्यमाह—न चेति । कणभक्षः—कणादः । निक्षेपवत्—निक्षेपस्येव । ‘तत्र तस्येव’ इति
वतिः । क्लेश इति । अशक्यतेत्यर्थः । यथा वायुपरमाण्वाकाशनित्यत्वादिप्रतिपादकानां
‘अद्रव्यत्वेन नित्यत्वमुक्तम्’ ‘द्रव्यत्वनित्यत्वे वायुना व्याख्याते’ इत्यादिकणादसूत्राणां
श्रुत्याद्यविरुद्धार्थकरणमशक्यम्, तथा गौतमसूत्रस्य कस्यापि तादृशार्थकरणं नाशक्यम् ।
तामसेषु परिपठ्यत इति । शाक्यादय इवेति भावः । अनेन शाक्यादिपक्षवैषम्यमुक्तं भवति ।
विप्रलम्भकत्वख्यातिरिति । ‘त्वं हि रुद्र महाबाहो मोहशास्त्राणि कारय’ इत्यादिषु रुद्रादीनामिवेति
भावः । अनेन पाशुपतादिपक्षवैषम्यमुक्तं भवति । ब्रह्मसूत्रकारादीति । आदिना नाथ-
मुनिप्रभृतयः परिगृह्यन्ते । आर्षत्वादीत्यादिना प्राज्ञप्रणीतत्वप्राज्ञपरिगृहीतत्वादयो गृह्यन्ते ।
अतिप्रसङ्गादिति । चार्वाकमतप्रभृतीनामप्यादरणीयत्वप्रसङ्गादित्यर्थः ।

प्राज्ञानां प्रथमेनैव गुरुणा हि स्वयं पुरा ।

लोकायतमतं प्रोक्तं लोकविप्लवकारणम् ॥ ३ ॥

अथवा—पितामह एवात्र प्रमाणम्, य इन्द्रविरोचनयोश्चार्वा-
कमतमुपदिष्टवान् । तथा गौतमोऽपि संभाव्यते । अथापि—

तदेवोपपादयति—प्राज्ञानामिति । गुरुणा—बृहस्पतिना । लोकायतमतं—चार्वाकमतम् ।
प्रोक्तमिति । तथोक्तं हरिवंशे षड्विंशोऽध्याये—

“ एतेषां बुद्धिसंमोहमकरोद् बुद्धिसंमतः ।

नास्तिवादार्थशास्त्रं हि धर्मविद्वेषणं परम् ॥

परमं तर्कशास्त्राणामसतां तन्मनोरमम् ।

न हि धर्मप्रधानानां रोचते वै कथान्तरे ॥

ते तं बृहस्पतिकृतं शास्त्रं श्रुत्वाल्पचेतसः ।

पूर्वोक्तधर्मशास्त्राणामभवन् द्वेषिणस्तथा ॥

प्रचक्रुर्न्यायरहितं तन्मतं बहुमेनिरे ॥” इति ।

पितामहः—प्रजापतिः । अत्र—विप्रलिप्सया श्रुत्यादिविरुद्धार्थोपदेशे । चार्वाकमतमुपदिष्टवा-
निति । छान्दोग्ये अष्टमाध्याये स्पष्टमेतत् । संभाव्यत इति । विप्रलिप्सया शास्त्रप्रवर्तकत्व-
प्रतिपादकपुराणाद्यभावेऽपि श्रुत्यादिविरुद्धस्य इन्द्रियभौतिकत्वादेः प्रतिपादनाद्भ्रमप्रमादशक्त्य-
भावनिश्चयाच्च तथा संभाव्यत इति भावः । संभावना—उत्कटैकतरकोटिकस्संशयः । वक्ष्य-
माणरीत्या अविरुद्धार्थपरतया व्याख्यानसंभवात् निश्चीयते इति नोक्तम् । शङ्कते—अथापीति ।

“ काणादशाक्यपाषण्डैस्त्रयीधर्मो विलोपितः ।

त्रिदण्डधारिणा पूर्वं विष्णुना रक्षिता त्रयी ॥”

इति स्मृतेः,

“ बहवः पुरुषा राजन् सांख्ययोगविचारिणः ।

नैत इच्छन्ति पुरुषमेकं कुरुकुलोद्भव ! ॥

समासेन तु तद्व्यासः पुरुषैकात्म्यमुक्तवान् ॥”

इति महाभारतोक्तेश्च युक्तं तत्तद्विहिष्कारः । इह तु न तथेति चेन्न;

काणादेति । काणादाः—काणादमतानुयायिनः वैशेषिकाः । शाक्याः—बौद्धाः । पाषण्डाः
शैवादयः । त्रयीधर्मो विलोपित इति । ननु वैशेषिकैर्वैदोक्तधर्माभ्युपगमात् कथं
तेषामपि तद्विलोपकत्ववचनमुपपद्यते ? अनुगृहीतं हि ‘सांख्या वैशेषिकाश्च श्रुति-
परिपठितं धर्ममैच्छन् तत्त्वम्’ इति चेन्न; श्रुत्युक्तधर्माणां तत्तद्देवतान्तर्यामिभगवदारा-
धनरूपत्वाद्यनुपगमेन विलोपकत्ववचनोपपत्तेः । न चैवं सति साङ्ख्यानमपि विलोपकत्वं
स्यादिति वाच्यम् ; इष्टत्वात् । अत एव हि तुल्यन्यायतया वचनस्योपलक्षणार्थत्वमभिधीयते ।
त्रिदण्डधारिणेति । दत्तात्रेयरूपतया अवतीर्णेनेत्यर्थः । पुरुषाः—कपिलपतञ्जलिप्रभृतयः । एकं
पुरुषं—सर्वसाधारणमात्मानम् ; स्वेतरसमस्तवस्तुशरीरकमीश्वरमिति यावत् । नेच्छन्तीति ।
निरीश्वरसाङ्ख्यमते ईश्वरस्यैवानुपगमात् । सेश्वरसाङ्ख्ययोगमतयोरीश्वराभ्युपगमेऽपि तस्य सर्व-
शरीरकत्वानुपगमादिति भावः । समासेनेति । व्यासस्तु तत्—श्रुत्यादिप्रसिद्धं, पुरुषैकात्म्यं
संक्षेपेण प्रतिपादितवान् । पुरुषैकात्म्यं—पुरुषस्य विष्णोः ऐकात्म्यं सर्वसाधारणात्मकत्वम् ;
सर्वशरीरकत्वमिति यावत् । एकः आत्मा यस्य चिदचिदात्मकप्रपञ्चस्य स एकात्मा, तस्य
भावः, ऐकात्म्यम् । पुरुषेण विष्णुना ऐकात्म्यं पुरुषैकात्म्यमित्यपि वदन्ति । इहेति । गौतम-
विषय इत्यर्थः । न तथेति । न वाचनिको बहिष्कार इत्यर्थः । तथा च तद्विहिष्कारो न युक्तः

तुल्यन्यायतया वचनस्योपलक्षणार्थत्वात् । न खलु तद्वा तादृग्वेति कश्चिद्विशेषः । यद्यपि काशकुशावलम्बनन्यायेन पक्षान्तरादाधिक्यमस्य पक्षस्य, अथापि न तद्वेदान्तसन्निधौ ; न खलु मशकाद्वलिष्ठोऽपि मातङ्गः कण्ठीरवमुपरुणद्धि ॥

“ यदक्षपादः प्रवरो मुनीनां शमाय शास्त्रं जगतो जगाद ।
कुतार्किकाज्ञाननिवृत्तिहेतुः करिष्यते तस्य मया निबन्धः ॥”

इति वाक्यमक्षपादपक्षपातेनोक्तमित्यनास्थेयम् ॥ उक्तं च पूर्वाचार्यैः—

“ काणादमाक्षपादं वा कापिलं तन्त्रमेव वा ।
तन्त्राण्येतानि सर्वाणि न तन्त्राण्यात्मनिर्णये ॥” इति ॥

इति भावः । तुल्यन्यायतयेति । बहिष्कार्येतानियामकस्य श्रुत्यादिविरुद्धार्थप्रतिपादनपरत्वस्यात्रापि सत्त्वादिति भावः । उपलक्षणार्थत्वादिति । अन्येषामपि संग्रहार्थत्वादिति भावः । काकेभ्यो दधि रक्ष्यतामित्यत्र काकशब्दस्य दध्युपघातकत्वावच्छिन्न इव काणाद इत्यादेः श्रुत्यादिविरुद्धार्थप्रतिपादकत्वावच्छिन्ने लाक्षणिकतेति भावः । काशकुशावलम्बनन्यायेनेति । बह्वर्थसंवादात्पार्थिवविरोधादिरूपदुर्बल्युत्पन्नवर्तनेत्यर्थः । मुख्यकल्पासंभवेऽनुकल्पावलंबनन्यायेनेति वा । अयं भावः—वेदप्रामाण्यवादिमतान्तरमवलम्ब्य बौद्धादिमतनिरसने प्रसक्ते नैयायिकमतमेव तत्राभ्यर्हितत्वेन स्वीक्रियते, न तु साङ्ख्यदिमतम् । ततश्च वेदान्तमतं मुख्यकल्पत्वेन, नैयायिकमतमनुकल्पत्वेनेति । न तद्वेदान्तसन्निधौ इति । वेदान्तशास्त्रादाधिक्येन तत्तुल्यतया वा परिग्राह्यतायां न तदुपयोगीत्यर्थः । इममेवार्थं दृष्टान्तेन विशदयति—
न खल्विति । शमायेति । आत्यन्तिकदुःखनिवृत्तिरूपमोक्षायेत्यर्थः । आक्षपादबहिष्कारे पूर्वचार्यसंवादमाह—उक्तं चेति । तन्त्राणि शास्त्राणि । आत्मनिर्णये—यथावस्थितात्मस्वरूपनिर्णये । न तन्त्राणीति । न कारणानीत्यर्थः । ‘तन्त्रं कुटुम्बकृत्ये स्यात्कारणे च परिच्छदे । शास्त्रे प्रधानसिद्धान्ते’ इति विश्वः ।

AVACCHEDAKATĀSARA

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॥ अवच्छेदकतासरः ॥

महामहोपाध्यायकृष्णताताचार्यैः

विरचितः



अण्णामलैविश्वविद्यालयन्यायाध्यापकेन

वे. सुब्रह्मण्यशास्त्रिणा

प्रकाशितः

1940

॥ श्रीगुरुभ्यो नमः ॥

। भूमिका ।

न्यायमहारण्यनव्यमार्गप्रतिष्ठापकाः श्रीमन्तः गङ्गेशोपाध्यायाः तत्त्वचिन्तामणौ ‘यद्विषयकत्वेन लिङ्गज्ञानस्यानुमितिप्रतिबन्धकत्वं तत्त्वं हेत्वाभासत्वम्’ इत्यादरेण हेत्वाभासं लक्षयामासुः । तच्च ग्रन्थं व्याचक्षाणाः शिरोमणिभट्टाचार्याः यद्विषयकत्वेनेति तृतीयया स्वरूपसंबन्धरूपावच्छेदकत्वविवक्षणं दोषैकदेशे बह्व्यभावादावतिव्यासिसंपादकमिति मन्यमानाः ‘अवच्छेदकत्वञ्चेहानतिरिक्तवृत्तित्वम्’ इति प्रत्यपादयन् । तद्ग्रन्थविवरणावसरे लक्षणे सामान्यपदपूर्णेनोपक्षिप्तं स्वरूपसंबन्धरूपावच्छेदकताघटितपरिष्कारं अन्ते असाधारण्याव्यासिदोषेण दूषयित्वा शिरोमण्यभिमतं अनतिरिक्तवृत्तित्वरूपावच्छेदकत्वपक्षं अपूपुषन् श्रीमद्गदाधरभट्टाचार्यचक्रवर्तिनः ।

भट्टाचार्योदीरितदोषपरिहारेण स्वरूपसंबन्धरूपावच्छेदकत्वघटितमेव हेत्वाभाससामान्यलक्षणं, असाधारण्यविषयित्वावच्छिन्नप्रतियोगित्वज्ञानवैशिष्ट्यानवच्छिन्नप्रतिबन्धकत्वविरोध्यनुमितिजनकत्वसमूहालम्बनानुमितिप्रतिबन्धित्वान्यतमे अवच्छेदकतासंबन्धेन यद्विरूपावच्छिन्ननिरूपकताकविषयितात्वव्यापकत्वं निवेश्य परिष्क्रियते अत्रावच्छेदकतासराभिधे निबन्धे । नातिविस्तृतया नातिसंक्षिप्तया अध्येतृजनव्युत्पत्तिदायिन्या भट्टाचार्यसरण्या दुरुहानंशान् व्युत्पादयन्नयं ग्रन्थः अध्यापकानामध्येतृणाञ्च बहूपकरोतीत्यत्र नास्ति संशयलेशोऽपि । अपरोऽप्ययं विशेषः यदत्र विदुषां हृदयङ्गमा अनुगमपद्धतिरपि वितता वर्तते ।

एतद्ग्रन्थस्य प्रणेतारः तिरुप्पक्कुलि अप्पावैयङ्गारिति प्रसिद्धाः महामहोपाध्याय-कृष्णताताचार्याः मार्को पञ्चाशतः वत्सरेभ्यः पूर्वं काञ्चीमण्डलमलञ्चक्रुः । एभिर्विरचिताः (१) शतकोटिखण्डनम् (२) सत्प्रतिपक्षखण्डनम् (३) मण्डनम् (४) सत्प्रतिपक्षविचारः (५) सामान्यनिरुक्तेः कापि व्याख्या (६) वादकल्पाभिधं तत्पत्रम् (७) अवच्छेदकतासरः इत्येते न्यायग्रन्थाः नैयायिकतिलकानानन्दतुन्दिलयन्ति ।

दिगन्तविश्रान्तयशोभिः गोश्रीदेशाभिजनैः (Cochin State) नैयायिकतिलकैः
मान्दिदृ कुञ्जुनम्बूदिरीति विश्रुतैः ब्रह्मश्रीयुतशास्त्रशर्मभिः पूर्णत्रयीशालये (Trippuni-
thura) स्वेनैव शोधितस्वीयादर्शप्रदानपूर्वकं प्रोत्साहितोऽहमेतद्ग्रन्थप्रकाशने प्रावर्तिषि ।
एतैश्चास्मिन् निरमायि विषमस्थलटिप्पणी यस्यां दुरुहानुगमविषमग्रन्थानां तात्पर्यं विवृ-
तम् । विना एतादृशीं टिप्पणीं तादृशपरिष्कारणमैदम्पर्यं नावधारयितुं पार्यते इत्यवचन-
सिद्धमेव तत्परिशीलिनां विदुषाम् । अतोऽत्र सापि संयोजिता ।

एतद्ग्रन्थप्रकाशनाय शोधितस्वीयादर्शदानेन बहु उपकृतवतां ब्रह्मश्रीयुतशास्त्रशर्म-
णां (कुञ्जुनम्बूदिरीमहाशयानां) प्रत्युपकारं कमपि कर्तुमशक्तोऽहं कृतज्ञतामेव केवलं निवे-
दयामि ।

तथा एतद्ग्रन्थमुद्रणे बहु आनुकूल्यं दर्शितवत्सु अण्णामलैविश्वविद्यालयाधिकृतेषु
अधमणोऽहमस्मीति शम् ।

अण्णामलैनगरम्
10—11—'40

वे. सुब्रह्मण्यशास्त्री
प्रकाशकः

॥ श्रीः ॥

॥ अवच्छेदकतासरः ॥

॥ हरिः ॥

॥ श्रीगणपतये नमः ॥

॥ अविघ्नमस्तु ॥

अनाहार्यज्ञानवृत्तित्वविशिष्टद्रूपावच्छिन्ननिरूपकताकविषयितात्वव्यापकं प्रकृतानु-
मितिप्रतिबन्धकतानिरूपितस्वरूपसंबन्धरूपावच्छेदकत्वं तद्रूपावच्छिन्नत्वं दोषत्वमिति कल्पे
पाषाणमयत्ववत्पर्वते अतिव्याप्तिः, प्रतिबन्धकतायां ज्ञानवैशिष्ट्यानवच्छिन्नत्वनिवेशे च
प्रतिहेतुव्यापकसाध्याभावसमानाधिकरणप्रतिहेतुमत्पक्षे अव्याप्तिः, तस्य प्रकृतानुमितिप्रति-
बन्धकतानुपयुक्तपदार्थघटिततया अलक्ष्यत्वाङ्गीकारेऽपि असाधारण्ये अव्याप्तिरित्युक्तम् ।

अत्र पक्षधर्मत्वाविषयकज्ञानवैशिष्ट्यानवच्छिन्नत्वस्य प्रतिबन्धकतायां निवेशे
नासाधारण्यव्याप्तिः ॥ १ ॥

नचैवं सति हृदो वह्निमान् जलादित्यत्र 'सरिज्जलव्यापकवह्न्यभावे अतिव्याप्तिः
सरिज्जलवान् हृदः इति ज्ञानस्य पक्षधर्मताविषयकत्वात् । यदि च प्रकृतपक्षतावच्छेदका-
वच्छिन्नविशेष्यतानिरूपितप्रकृतहेतुतावच्छेदकतापर्याप्त्यधिकरणधर्मपर्याप्तावच्छेदकताप्र-
कारत्वनिरूपकत्वमेव पक्षधर्मत्वाविषयकत्वमिति नोक्तदोषावसरः इत्युच्यते । तदा हृदो
वह्निमान् काञ्चनमयजलादित्यत्र असाधारण्ये अव्याप्तिः तन्निश्चयीयप्रतिबन्धकतायाः
जलवान् हृदः इति ज्ञानवैशिष्ट्यावच्छिन्नत्वात् तादृशज्ञानस्य उक्तपक्षधर्मत्वाविषयकत्वादिति
वाच्यम् ॥ २ ॥

पक्षधर्मताज्ञानवृत्तिभेदप्रतियोगितावच्छेदकत्वज्ञानवैशिष्ट्यावच्छिन्नत्वोभयाभावस्यैव
प्रतिबन्धकतायां निवेशात् । अवच्छेदकता च अवच्छेदकतासंबन्धावच्छिन्ना । तथाच

काञ्चनमयजलवान् हृदः इति ज्ञानस्यापि जलवद्भूतनिश्चयत्वेन असाधारण्यनिश्चयीप्रतिबन्धकतायामवच्छेदकत्वान्नाव्याप्तिः, न वा सरिजलव्यापकवह्न्यभावे अतिव्याप्तिः जलवान् हृदः इति ज्ञानस्य तन्निश्चयीप्रतिबन्धकतायामनवच्छेदकत्वात् ॥ ३ ॥

न चैवं सत्यसाधारण्ये अव्याप्तिः तन्निश्चयासमानकालिके पक्षधर्मताज्ञाने प्रतिबन्धकतावच्छेदकत्वविरहात् । यदि च स्वावच्छिन्नविषयकनिश्चयविशिष्टपक्षधर्मताज्ञाननिष्ठभेदप्रतियोगितावच्छेदकत्वस्यैव निवेशान्नायं दोषः । निश्चयवैशिष्ट्यं सामानाधिकरण्यकालिकविशेषणत्वोभयसंबन्धेनेत्युच्यते । तदा स्वरूपासिद्धाव्याप्तिः, तन्निश्चयविशिष्टानाहार्यपक्षधर्मताज्ञानाप्रसिद्धेरिति वाच्यम् ॥ ४ ॥

पक्षधर्मताज्ञाननिष्ठभेदप्रतियोगितावच्छेदकत्वमित्यत्रावच्छेदकतायाः स्वावच्छेदकतावच्छेदकविषयतासंबन्धावच्छिन्नाया एव विवक्षणीयत्वात्, असाधारण्यविषयकज्ञानासमानकालीनपक्षधर्मताज्ञानस्यापि स्वावच्छेदकतावच्छेदकविषयतासंबन्धेन प्रतिबन्धकतावत्त्वसंभवेन उक्तानुपपत्तिविरहात् ॥ ५ ॥

नचैवं सति जलवान् हृदो वह्निमान् धूमात्, हृदो वह्निमान् जलवद्भूतकालीनधूमादित्यादौ वह्न्यपकीभूताभावप्रतियोगिजलजलव्यापकवह्न्यभावादावतिव्याप्तिः । एवं हृदो वह्निमान् वह्न्यभाववज्जलवत्कालीनधूमादित्यादौ जलवद्भूदे अतिव्याप्तिः पक्षधर्मताज्ञाने तदज्ञानीयप्रतिबन्धकतावच्छेदकतावच्छेदकविषयतासत्त्वनियमात् । यद्यपीयमित्यतिव्याप्तिः अनतिरिक्तवृत्तिस्वरूपेऽप्यस्ति असाधारण्यसंग्रहाय विवक्षणीयस्य प्रकृतानुमित्यप्रतिबन्धकत्वपक्षधर्मताज्ञानकालीनत्वोभयाभावे यादृशविशिष्टविषयकत्वव्यापकत्वस्याक्षतेः । तथापि तत्कल्पे पक्षधर्मताज्ञाने अनाहार्यत्वमनिवेश्य असाधारण्यविषयकज्ञाननिष्ठपक्षधर्मताज्ञानकालीनत्वप्रकृतानुमित्यप्रतिबन्धकत्वोभयाभावे, असाधारण्यविषयत्वप्रकृतानुमित्यप्रतिबन्धकत्वोभयाभाव एव वा यादृशविशिष्टविषयकत्वव्यापकत्वस्य निवेशनीयतया न दोषः इति वाच्यम् ॥ ६ ॥

ज्ञानवैशिष्ट्यावच्छिन्नत्वासाधारण्यविषयित्वानवच्छिन्नत्वोभयाभावस्यैव प्रतिबन्धकतायां निवेश्यत्वात् ॥ ७ ॥

नचैवं सति हृदो वह्निमान् जलादित्यत्र जलवद्भूदे अतिव्याप्तिः वह्न्यपकीभूताभावप्रतियोगिजलविषयकनिश्चयविशिष्टजलवद्भूदविषयकनिश्चयत्वावच्छिन्नप्रतिबन्धकतायां अवच्छेदककोटिप्रविष्टासाधारण्यविषयिताया अप्यवच्छेदकत्वात् । यदि च अवच्छेदककोटिप्रविष्टानामवच्छेदकत्वमप्रामाणिकं प्रतिबन्धकादिविशेषणस्यैव प्रतिबन्धकतावच्छेदकत्वादिति विभाव्यते । तदापि हृदवृत्तिजलेऽतिव्याप्तिः, वह्न्यपकीभूताभावप्रतियोगि जलं हृदवृत्ति इति ज्ञानीयहृदवृत्तिजलविषयितायाः असाधारण्यविषयितारूपतया तदवच्छिन्नप्रतिबन्धकतायामुभयाभावसत्त्वादिति वाच्यम् ॥ ८ ॥

असाधारण्यविषयितावृत्तिभेदप्रतियोगितावच्छेदकत्वस्यैव असाधारण्यविषयित्वानवच्छिन्नत्वपदेन विवक्षितत्वात् । अवच्छेदकता च अवच्छेदकत्वसंबन्धेन । तथा च केवलासाधारण्यविषयितायां हृदवृत्तिजलनिश्चयत्वावच्छिन्नप्रतिबन्धकतायाः अवच्छेदकतासंबन्धेनासत्त्वान्न दोषः ॥ ९ ॥

नच तथापि हृदो वह्निमान् द्रव्यत्वाभाववज्जलादित्यत्र प्रतियोगित्ववज्जले अतिव्याप्तिः । प्रतियोगित्वावच्छेदेन द्रव्यत्वावगाहिनिश्चयसहितस्य वह्न्यपकीभूताभावप्रतियोगिजलरूपासाधारण्यनिश्चयस्य प्रतियोगित्वरूपावच्छेदकधर्मदर्शनमुद्रया प्रतिबन्धकत्वात् समानाकारकज्ञानीयविषयतानामैक्यात् केवलासाधारण्यविषयकज्ञानीयविषयताया अवच्छेदकत्वाक्षतेरिति वाच्यम् ॥ १० ॥

असाधारण्यविषयितावृत्तिभेदप्रतियोगितानवच्छेदकत्वपक्षसाध्यवैशिष्ट्यावगाहिबुद्धित्वावच्छिन्नप्रतिबन्धतानिरूपितत्वोभयाभावस्यैव असाधारण्यविषयित्वानवच्छिन्नपदार्थत्वात्, उक्तप्रतिबन्धकतायां तदक्षतेः ॥ ११ ॥

न च तथापि जलं वह्निमत् जलादित्यादौ प्रतियोगित्ववज्जले अतिव्याप्तिः, प्रतियोगित्वावच्छेदेन वह्न्यभावावगाहिनिश्चयसहितस्य असाधारण्यनिश्चयस्य अवच्छेदकधर्मदर्शनमुद्रया प्रतिबन्धकतायां पक्षसाध्यवैशिष्ट्यावगाहिबुद्धित्वावच्छिन्नप्रतिबन्धतानिरूपितत्वस्यापि सत्त्वादिति वाच्यम् ॥ १२ ॥

असाधारण्यविषयकभ्रमभिन्नज्ञानवृत्तित्वस्यैव असाधारण्यविषयित्वानवच्छिन्नत्वे-
त्यनेन विवक्षितत्वात् ॥ १३ ॥

न चैवं धूमवान् हृदो वह्निमान् जलादित्यत्र वह्निव्यापकीभूताभावप्रतियोगिजल-
वद्भूदे अतिव्याप्तिः, धूमाभावावच्छेदकत्वेन गृहीततादृशजलवद्भूदनिश्चये अवच्छेदकधर्मदर्श-
नविधया प्रतिबन्धकतायाः असाधारण्यविषयकभ्रमभिन्नज्ञानावृत्तित्वादिति वाच्यम् ॥ १४ ॥

असाधारण्यविषयकभ्रमभिन्नज्ञानावृत्तित्वासाधारण्यविषयितात्वव्यापकत्वोभयाभाव-
स्यैव असाधारण्यविषयित्वानवच्छिन्नत्वपदार्थत्वात् । व्यापकता च अवच्छेदकतासं-
बन्धावच्छिन्ना । असाधारण्यविषयित्वेत्यनेन तादृशनिरूप्यनिरूपकभावापन्नविषयिताया
एव विवक्षिततया, हृदो वह्निमान् धूमादित्यादौ असाधारण्याप्रसिद्ध्या अव्याप्तिः, प्राति-
स्विकरूपेण नानाविधासाधारण्यविषयितानां निवेशे गौरवमिति तु न शङ्क्यम् । अनति-
रिक्तवृत्तित्वकल्पेऽपि तादृशविषयितानिवेशावश्यकतायाः प्रागुक्तत्वात् ॥ १५ ॥

न च तथापि वह्निव्यापकीभूताभावप्रतियोगि जलम् जलवान् हृदः, तादृशं
शैवालम् शैवालवान् हृदः इत्यादिसकलनिश्चयानां एकरूपेणैव प्रतिबन्धकतया असाधार-
ण्याव्याप्तिर्दुर्वारा । तथाहि ज्ञानविशिष्टज्ञानत्वेन प्रतिबन्धकता । वैशिष्ट्यम् स्वीयवह्नि-
व्यापकीभूताभावप्रतियोगित्वप्रकारताविशिष्टप्रकारतानिरूपितहृदत्वावच्छिन्नविशेष्यतानिरूप-
कत्वसामानाधिकरण्यकालिकविशेषणत्वैतत्तत्तयसंबन्धेन । प्रकारतावैशिष्ट्यञ्च स्ववृत्ति-
संबन्धावच्छिन्नत्वस्वनिरूपितविशेष्यतावच्छेदकावच्छिन्नत्वोभयसंबन्धेन । स्ववृत्तित्वं स्वनिष्ठ-
प्रकारतानिरूपितावच्छिन्नत्वप्रकारतानिरूपितत्वसंबन्धेन । इत्थञ्च असाधारण्यविषयकभ्रम-
भिन्नज्ञानेऽपि असाधारण्यप्रतिबन्धकतासत्त्वेनाव्याप्तिरित्यतो नेदं युक्तमिति वाच्यम् ॥ १६ ॥

असाधारण्यविषयकज्ञानेत्यनेन असाधारण्यविषयित्वाव्यापकविषयिताशून्यासा-
धारण्यविषयकज्ञानस्यैव विवक्षणीयतया दोषाभावात् । १वस्तुतस्तु निरूप्यनिरूपक-

टि.—१. हृदो वह्निमान् वह्निव्यापकीभूताभावप्रतियोगिशैवालकालीनजलादित्यत्र असा-
धारण्ये अव्याप्तिः अतः वस्तुत इति ।

भावापन्नासाधारण्यविषयितात्वपर्याप्तावच्छेदकताकावच्छेदकत्वाभावज्ञानवैशिष्ट्यावच्छिन्नत्वो-
भयाभाव एव प्रतिबन्धकतायां निवेशनीयः इति न प्रागुक्तप्रतियोगित्ववज्जलेऽतिव्या-
प्तिः, न वा असाधारण्ये अव्याप्तिः । उक्तानुगतप्रतिबन्धकतायां तद्विषयितायाः प्रतिबन्ध-
कविशेषणत्वविरहेऽपि प्रतिबन्धकतावच्छेदकतावच्छेदकसंबन्धघटकत्वात् अवच्छेदककोटि-
प्रविष्टानामवच्छेदकत्वाङ्गीकारात् । अथवा उक्तसंबन्धावच्छिन्नज्ञानत्वावच्छिन्नावच्छेदकत्वा-
भावस्यैव असाधारण्यविषयित्वानवच्छिन्नपदार्थत्वान्न दोषः ॥ १७ ॥

नचैवं सति हृदो वह्निमान् जलादित्यत्र वह्निव्यापकीभूताभावप्रतियोगिशैवालेऽति-
व्याप्तिरिति वाच्यम् ॥ १८ ॥

ज्ञानवैशिष्ट्यावच्छिन्नप्रतिबन्धकतावच्छेदकत्वासाधारण्यविषयिताभिन्नत्वोभयाभाव-
स्यैव यदूपावच्छिन्ननिरूपकताकविषयितात्वव्यापकतया विवक्षणीयत्वात् ॥ १९ ॥

नचैवं सति वह्न्यभाववद्भूदादावपि लक्षणगमनासंभवः धूमाभावावच्छेदकत्वेन
वह्न्यभावावगाहिज्ञानवैशिष्ट्यावच्छिन्नप्रतिबन्धकतायां वह्न्यभाववद्भूदविषयिताया अपि
अवच्छेदकत्वसंभवात् । यदि च अवच्छेदकधर्मदर्शनीयप्रतिबन्धकतायां न विषयिताया
अवच्छेदकत्वं संभवति । सकलावच्छेदकधर्मदर्शनानुरोधेन ज्ञानविशिष्टज्ञानत्वावच्छिन्नाया
अनुगतायास्तस्या वाच्यतया विषयितायाः प्रतिबन्धकविशेषणत्वविरहात् । तथाहि स्वीयधू-
माभावत्वावच्छिन्नकिञ्चिद्धर्मव्यापकत्वविशेषितस्वरूपसंबन्धावच्छिन्नप्रकारतानिरूपितविशेष्य-
तावच्छेदकताविशिष्टप्रकारतानिरूपितहृदत्वावच्छिन्नविशेष्यताकत्वसामानाधिकरण्यकालिक-
विशेषणत्वैतत्तत्तयसंबन्धेन । अवच्छेदकतावैशिष्ट्यं स्वावच्छेदकसंबन्धावच्छिन्नत्वस्वा-
वच्छेदकावच्छिन्नत्वोभयसंबन्धेन । इत्थञ्च कथं वह्न्यभाववद्भूदाद्यसंग्रहः इत्युच्यते । तदा
पाषाणमयत्ववत्पर्वतादावतिव्याप्तिरिति वाच्यम् ॥ २० ॥

ज्ञानवैशिष्ट्यानवच्छिन्नप्रतिबन्धकतानवच्छेदकत्वासाधारण्यविषयिताभिन्नत्वोभयाभा-
वस्यैव व्यापकत्वविवक्षणात् ॥ २१ ॥

नच पर्वतो वह्निमानित्यादौ घटत्वावच्छिन्नेऽतिव्याप्तिः घटप्रकारकप्रत्यक्षेच्छाविशिष्ट-
तादृशप्रत्यक्षसामग्र्याः पर्वतो वह्निमानित्यनुमितिप्रतिबन्धकत्वात् तस्याश्च घटचक्षुस्संयोग-

सहितघटज्ञानरूपत्वात् । अनतिरिक्तवृत्तित्वनिवेशे तु तादृशेच्छाद्यसमवहितज्ञाने प्रतिबन्ध-
कत्वासत्त्वेनानुपपत्तिविरहादिति वाच्यम् ॥ २२ ॥

ज्ञानवैशिष्ट्यानवच्छिन्नेत्यनेन समवायद्वयघटितसामानाधिकरण्यसंबन्धावच्छिन्नाव-
च्छेदकताकान्यत्वस्यैव विवक्षिततया दोषविरहात् ॥ २३ ॥

न च इष्टसाधनपाकत्वावच्छिन्नेऽतिव्याप्तिः इच्छासामग्र्या अनुमितिप्रतिबन्धकत्वात्
तस्याश्च कृतिसाध्यताज्ञानसहितसिद्धत्वज्ञानाभावसहितपाकधर्मिकेष्टसाधनताज्ञानरूपत्वादिति
वाच्यम् ॥ २४ ॥

अवच्छेदककोटिप्रविष्टानामवच्छेदकत्वे दोषविरहात् । कृतिसाध्यताज्ञानादौ फले-
च्छावैशिष्ट्यस्यापि सामग्र्यन्तर्भावात् । अवच्छेदककोटिप्रविष्टानामवच्छेदकत्वानुपगमे तु
प्रतिबन्धयतायां अनुमितित्वानवच्छिन्नत्वं ज्ञानत्वावच्छिन्नत्वं वा निवेश्य उक्तानुपपत्तिर्वा-
रणीया । अत एव सिद्धिविषयेऽपि नातिव्याप्तिः । अनुमितेर्बाधादिज्ञानप्रतिबन्धत्वं
अनाहार्यज्ञानत्वेनैवेत्यन्यत्र स्थापितम् ॥ २५ ॥

न च तथापि पर्वतो वह्निमानित्यत्र वह्निमत्पर्वते अतिव्याप्तिः । वह्न्यभावप्रकार-
कपर्वतविशेष्यकनिश्चयस्य वह्नित्वावच्छिन्नप्रकारतानिरूपितपर्वतत्वावच्छिन्नविशेष्यतानि-
रूपकत्वाभावविशिष्टवह्न्यभावप्रकारकपर्वतविशेष्यकज्ञानत्वेनैव प्रतिबन्धकत्वात् अवच्छेदक-
कोटिप्रविष्टानामवच्छेदकत्वपक्षे वह्निमत्पर्वतविषयिताया अपि अवच्छेदकत्वादिति
वाच्यम् ॥ २६ ॥

स्वरूपसंबन्धावच्छिन्नावच्छेदकत्वस्यैव निवेश्यत्वात् । यदि च तादृशविशेष्यता-
निरूपकभेदोऽपि विनिगमनाविरहेण प्रतिबन्धकतावच्छेदक इति तत्र विषयितायाः स्वरूप-
संबन्धेनापि अवच्छेदकत्वमस्त्येवेति विभाव्यते । तदा प्रतिबन्धकताविशिष्टावच्छेदकत्वमेव
निवेश्यम् । वैशिष्ट्यं स्वसमानाधिकरणवृत्तित्वस्वनिरूपितत्वोभयसंबन्धेन ॥ २७ ॥

न च तथापि हृदो वह्निमानित्यत्र अवच्छेदकावच्छेदेन बाधाव्याप्तिः तत्र हृदत्व-
व्यापकत्वविशिष्टवह्न्यभावप्रतियोगिकस्वरूपत्वावच्छिन्नसांसर्गिकविषयतानिरूपकनिश्चयत्वेनैव

प्रतिबन्धकत्वात् । अन्यधर्मावच्छिन्नविशेष्यकज्ञाने हृदत्वव्यापकतायाः संसर्गतावच्छे-
दकतया भानविरहादेवातिप्रसङ्गभङ्गादिति वाच्यम् ॥ २८ ॥

संसर्गांशे हृदत्वादिना पदार्थान्तरावगाहिज्ञानसाधारण्यानुरोधेन निरूप्यनिरूपक-
भावापन्नविषयताया एव प्रतिबन्धकतावच्छेदकघटकतया तत्र वृत्तिविषयतायां हृदत्वाव-
च्छिन्नसांसर्गिकविषयतानिरूपितत्वस्य स्वरूपत्वावच्छिन्नसांसर्गिकविषयतायां हृदत्वावच्छि-
न्नविशेष्यतानिरूपितत्वस्य वा निवेशः इत्यत्र विनिगमनाविरहेण हृदत्वावच्छिन्नविशेष्यतायाः
प्रतिबन्धकतावच्छेदकत्वाक्षतेः ॥ २९ ॥

न च तथापि घटो वृत्तित्वसामान्याभाववानित्यत्र घटवति बाधे अव्याप्तिः घटत्वा-
वच्छिन्नप्रकारताशालिज्ञानत्वेनैव प्रतिबन्धकतया घटवत्त्वावच्छिन्ननिरूपकताकविषयितायाः
प्रतिबन्धकतावच्छेदकत्वविरहादिति वाच्यम् ॥ ३० ॥

प्रतिबन्धकतावच्छेदकतेत्यनेन प्रतिबन्धकतावच्छेदकविषयित्वावच्छिन्नत्वस्य विव-
क्षितत्वात् प्रतिबन्धकतावच्छेदकीभूतप्रकारित्वावच्छिन्नत्वस्य तत्र सत्त्वात् ॥ ३१ ॥

न च तथापि वृक्षः कपिसंयोगी इत्यत्र कपिसंयोगाभाववद्वृक्षे अतिव्याप्तिः ।
केवलस्वरूपसंसर्गकस्यापि अव्याप्यवृत्तित्वग्रहविरहावच्छिन्नस्य कपिसंयोगाभाववत्तानिश्चयस्य
प्रतिबन्धकतायाः भट्टाचार्यैरसकृदुक्तत्वात् । अनतिरिक्तवृत्तित्वनिवेशे तु अव्याप्यवृत्तित्व-
ग्रहद्वयमध्यपतितज्ञाने प्रतिबन्धकताया विरहान्न दोषः । हृदो वह्निमानित्यादौ तु अनव-
च्छिन्नविशेषणतया वह्न्यभाववद्वृक्षादेरेव दोषत्वं बाधग्रन्थे भट्टाचार्येणाभिहितमिति न
तत्राव्याप्तिः । अव्याप्यवृत्तित्वग्रहकाले अनवच्छिन्नविशेषणतया वह्न्यभावप्रकारकज्ञाना-
संभवात् । ये तु केवलविशेषणतया वह्न्यभाववद्वृक्षादेरपि दोषत्वमिच्छन्ति ते अव्याप्य-
वृत्तित्वभ्रमाभाववैशिष्ट्यं निश्चये निवेश्य लक्षणं संगमयन्तः गुणः कपिसंयोगी इत्यत्र गुणे
कपिसंयोगाभावः अव्याप्यवृत्तिरिति ज्ञानस्य उत्तेजकतां स्वीकृत्य कपिसंयोगाभाववद्गुणे
लक्षणमुपपादयन्ति । अतः न अनतिरिक्तवृत्तित्वनिवेशकरूपे दोषः इति वाच्यम् ॥ ३२ ॥

भ्रमभिन्नावृत्तित्वस्य संसर्गतात्वविशिष्टत्वपर्यवसितस्य प्रकृतानुमितित्वव्यापकप्रति-
बन्धयतायां निवेशनीयतया दोषविरहात् । अन्यथा यादृशस्थलविशेषे अव्याप्यवृत्तित्वज्ञान-

द्वयमध्ये पक्षे साध्याभावज्ञानं कदापि नासीत् तत्रातिव्याप्तेर्दुर्वारत्वात् । संसर्गतात्ववैशिष्ट्यं स्वनिष्ठावच्छेदकताकप्रतियोगिताकभेदवत्त्वसंबन्धेन । स्वनिष्ठावच्छेदकता स्वनिष्ठावच्छेदकताकप्रतियोगिताकभेदवत्त्वसंबन्धावच्छिन्ना । स्वनिष्ठावच्छेदकता स्वविशिष्टप्रकारतानिरूपकत्वसंबन्धावच्छिन्ना । प्रकारतायां स्ववैशिष्ट्यं स्वनिष्ठावच्छेदकताकप्रतियोगिताकभेदवत्त्वसंबन्धेन । स्वनिष्ठावच्छेदकता स्वाश्रयविशिष्टत्वसंबन्धावच्छिन्ना । वैशिष्ट्यं स्वरूपितत्वस्वाश्रयविशिष्टत्वोभयसंबन्धेन । वैशिष्ट्यं स्वप्रतियोगिनिष्ठत्वस्वानुयोगिनिष्ठविशेष्यतानिरूपितत्वोभयसंबन्धेन । हदो वह्निमानित्यादौ केवलस्वरूपसंबन्धेन बह्व्यभाववद्भूदावतिव्याप्तिरिति तु न । तस्य लक्ष्यत्वाभ्युपगमसंभवात् । बाधग्रन्थे पक्षान्तरे तस्य लक्ष्यताया अभिहितत्वात् । अत एव एतत्समानयोगक्षेमस्य प्रतियोगिव्यधिकरणबह्व्यभावाभाववदवृत्तिमद्भूदस्यापि लक्ष्यत्वाभ्युपगमसंभवात् न तत्रातिव्याप्तिशङ्का । कथमन्यथा अव्याप्यवृत्तिवशून्यजात्यभावकालीनः अभावः जातिमानित्यत्र केवलस्वरूपसंबन्धेन जात्यभाववत्तादृशाभावे प्रतियोगिव्यधिकरणजात्यभावाभाववदवृत्तिमत्तादृशाभावे चातिव्याप्तिशङ्कावारणम् । एतेषां दोषत्वेऽपि अव्याप्यवृत्तिसाध्यकसद्भेदौ उक्तरीत्या दोषाप्रसक्तेः ॥ ३३ ॥

न चैवमपि प्रतिहेतुव्यापकसाध्याभावसमानाधिकरणप्रतिहेतुमत्पक्षरूपसत्प्रतिपक्षे अव्याप्तिः तदीयविषयितायाः ज्ञानवैशिष्ट्यानवच्छिन्नप्रतिबन्धकतावच्छेदकत्वविरहात् । यदि च ज्ञानवैशिष्ट्यानवच्छिन्नेत्यनेन ज्ञानवैशिष्ट्यावच्छिन्नत्वसत्प्रतिपक्षविषयित्वानवच्छिन्नत्वोभयाभावस्यैव विवक्षणीयतया न सत्प्रतिपक्षाव्याप्तिरित्युच्यते । तदा प्रतिहेतुमत्पक्षातिव्याप्तिरिति वाच्यम् ॥ ३४ ॥

ज्ञानवैशिष्ट्यानवच्छिन्नप्रतिबन्धकतानवच्छेदकत्वासाधारण्यविषयिताभिन्नत्वसत्प्रतिपक्षविषयिताभिन्नत्वैतत्तत्ताभावे यद्रूपावच्छिन्ननिरूपकताकविषयितात्वव्यापकत्वस्य निवेश्यत्वात् ॥ ३५ ॥

न चैवमपि हदो वह्निमान् धूमादित्यत्र जलव्यापकधूमाभावसमानाधिकरणजलवद्भूदधूमाभावाभावव्यापकीभूताभावप्रतियोगिजलवद्भूदाव्याप्तिः । बाधसत्प्रतिपक्षभिन्नाः

ये हेत्वाभासाः तद्व्याप्यानामपि तन्मध्ये एवान्तर्भूततया तस्य स्वरूपासिद्धिरूपत्वादिति वाच्यम् ॥ ३६ ॥

सत्प्रतिपक्षविषयिताभिन्नत्वस्थाने तादृशसमूहालम्बनानुमितिविरोध्यनुमितिजनकतानवच्छेदकत्वस्य निवेशनीयत्वात् । अनतिरिक्तवृत्तित्वनिवेशकरूपे विशिष्टद्वयाघटितत्वशरीरे एतन्निवेशावश्यकतया अत्र करूपे गौरवाप्रसक्तेः । यद्यप्येवं सति मेयत्वविशिष्टव्यभिचारादिवारणाय निवेशितस्य विशिष्टान्तराघटितत्वस्य विशेषगुणवद्धटादिसंग्रहाय विशिष्टान्तरविषयितात्वाव्यापकत्वपर्यवसानेऽपि तद्दोषतादवस्थ्यम् । उक्तत्रितयाभावस्य विशेषगुणवद्धटविषयितायां गुणवद्धटविषयितायाश्च वर्तमानस्य एकत्वात् तादृशाभावे विशिष्टान्तरविषयितात्वाव्यापकत्वासत्त्वात् । तथापि असाधारण्यविषयित्वावच्छिन्नप्रतियोगित्वज्ञानवैशिष्ट्यानवच्छिन्नप्रतिबन्धकत्वविरोध्यनुमितिजनकत्वान्यतमे यद्रूपावच्छिन्ननिरूपकताकविषयितात्वव्यापकत्वं विशिष्टान्तरविषयितात्वाव्यापकत्वञ्च निवेश्यम् । व्यापकता च अवच्छेदकतासंबन्धेनेति न दोषः इति ॥ ३७ ॥

नचैवं सति बह्व्यभावव्याप्यव्याप्यवद्भूदे अतिव्याप्तिरिति वाच्यम् ॥ ३८ ॥

तादृशानुमितिप्रतिबन्ध्यानुमितिजनकताया एव विवक्षितत्वात् ॥ ३९ ॥

नचैवं सति हदो वह्निव्याप्यवानित्यत्र बह्व्यभावव्याप्यवद्भूदेऽतिव्याप्तिः । बह्व्यभाववत्तानुमितेः वह्निव्याप्यवत्तानुमितिप्रतिबन्धत्वादिति वाच्यम् ॥ ४० ॥

प्रकृतपरामर्शप्रतिबन्ध्यानुमितिजनकताया विवक्षितत्वात् । बह्व्यभाववत्तानुमितेः वह्निव्याप्यव्याप्यवत्तानिश्चयात्मकपरामर्शप्रतिबन्धतया दर्शितदोषानवकाशात् ॥ ४१ ॥

नचैवं हदो जलवान् वह्निव्याप्यादित्यत्र बह्व्यभावव्याप्यवद्भूदे अतिव्याप्तिः । अनुमितौ प्रकृतपरामर्शप्रतिबन्धकताया अपि निवेशे सत्प्रतिपक्षाव्याप्तिः बाधज्ञानस्य परामर्शप्रतिबन्धकत्वादिति वाच्यम् ॥ ४२ ॥

तादृशानुमितित्वव्यापकप्रतिबन्धताविशिष्टजनकताया एव विरोध्यनुमितिजनकतापदेन विवक्षितत्वात् । वैशिष्ट्यं स्वावच्छेदकावच्छिन्नप्रतिबन्धतानिरूपितप्रतिबन्धकतावृत्ति-

भेदप्रतियोगितावच्छेदकत्वस्वनिरूपितप्रतिबन्धकतावच्छेदकविषयित्वावच्छिन्नानुमितिनिष्ठजन्यतानिरूपितत्वोभयसंबन्धेन । भेदप्रतियोगितावच्छेदकता स्वसमानाधिकरणभेदप्रतियोगितावच्छेदकतासंबन्धेन । तथाच वह्यभावानुमितिजनकताया अतथात्वान्न दोषः ॥ ४३ ॥

नचैवमपि वह्यभावव्याप्यव्याप्यवह्यभाववद्भूते अतिव्याप्तिः व्यापकसमानाधिकरणरूपव्याप्यवगाहितदज्ञानीयानुमितिजनकतायाः प्रतिबन्धकताव्याप्यत्वात् । अनतिरिक्तवृत्तित्वनिवेशकल्पे तु विशिष्टान्तराघटितत्वविरहान्न दोषः इति वाच्यम् ॥ ४४ ॥

एकरूपेण जनकताभ्युपगमेन घटाभावव्यापकवह्यभावव्याप्यसमानाधिकरणघटाभाववानिति ज्ञानसाधारणजनकतायाः प्रतिबन्धकताव्याप्यत्वात् । एकरूपश्च धर्मविशिष्टाभावत्वावच्छिन्नप्रकारतानिरूपितद्वयवच्छिन्नविशेष्यताशालिनिश्चयत्वम् । प्रकारतायां धर्मवैशिष्ट्यं स्वावच्छिन्नप्रतियोगित्वसंबन्धावच्छिन्नप्रकारतानिरूपिताभावत्वावच्छिन्नप्रकारतानिरूपितव्यापकत्वप्रकारतानिरूपितवह्यभावव्याप्यत्वावच्छिन्नप्रकारतानिरूपितसमानाधिकरणप्रकारतानिरूपितत्वस्वावच्छिन्नप्रतियोगितासंबन्धावच्छिन्नप्रकारतानिरूपितत्वोभयसंबन्धेन । यद्यपि प्रतियोगिवैयधिकरणघटिततदघटितव्याप्तिज्ञानयोः सिद्धान्तलक्षणे व्याप्यनुगमोक्तरीत्या एकरूपेण जनकत्वे जनकतायां प्रतिबन्धकताव्याप्यत्वं न संभवति । प्रतियोगिवैयधिकरणघटितव्याप्यवगाहिज्ञानप्रतिबन्धकतायां अव्याप्यवृत्तित्वज्ञानस्योत्तेजकतया प्रतिबन्धकताभेदात् कस्या अपि प्रतिबन्धकतायाः जनकताव्यापकत्वासंभवात् । तथापि अव्याप्यवृत्तित्वमहविरहावच्छिन्नप्रतिबन्धकतानवच्छेदकीभूतस्वावच्छेदकाभावत्वावच्छिन्नविषयताविशिष्टाश्रयतासंबन्धेन जनकतायां व्याप्यत्वस्य निवेशनीयतया न दोषः । अथवा स्वरूपसंबन्धेन जनकतां प्रति स्वावच्छेदकावच्छिन्नप्रतिबन्धतानिरूपितप्रतिबन्धकताविशिष्टत्वसंबन्धेन प्रतिबन्धताया व्यापकत्वविवक्षया न दोषः । वैशिष्ट्यं स्वरूपस्वावच्छेदकीभूताभावप्रतियोग्युपहितत्वान्यतरसंबन्धेन ॥ ४५ ॥

नच तथापि गगनाभाववदाधेयवत्कालीनगगनसाध्यके तादृशगगनाभावव्याप्यव्या-

टि.—१. प्रतियोगिवैयधिकरणघटितव्याप्यवगाहिज्ञानप्रतिबन्धकतावच्छेदकविषयितावस्थेनानुगमः ।

प्यवत्पक्षे अतिव्याप्तिः । व्यापकसमानाधिकरणरूपव्याप्यवगाहिनिखिलज्ञानानामेव गगनाभाववच्छेदकत्वेन गृहीताधेयवत्तानिश्चयीयप्रतिबन्धकतावत्तया जनकतायाः प्रतिबन्धताव्याप्यत्वात् । अनतिरिक्तवृत्तित्वकल्पे तु विशिष्टान्तरविषयित्वाव्यापकत्वस्य प्रतिबन्धतायामसत्त्वेन न दोषः इति वाच्यम् ॥ ४६ ॥

स्वनिरूपितजन्यतावच्छेदकावच्छिन्नजन्यतानिरूपितजनकतासंबन्धेन जनकताया व्याप्यत्वविवक्षणात् व्याप्यन्तरावगाहिज्ञानेऽपि उक्तसंबन्धेन उक्तजनकतावत्त्वेन तत्रोक्तप्रतिबन्धकताविरहेण दोषविरहात् ॥ ४७ ॥

नच तथापि गगनाभाववत्प्रतियोगित्वाकालीनगगनाभाववदभावविशिष्टवत्कालीनगगनाभाववदभाववन्निरूपिताधेयताविशिष्टवत्कालीनगगनसाध्यके तादृशगगनाभावव्याप्यभावव्याप्यवत्पक्षे अतिव्याप्तिः । पक्षे गगनात्मकसाध्यसमानाधिकरणहेत्ववगाहिपरामर्शस्यापि प्रतिबन्धकत्वात् आधेयतायां अभाववन्निरूपितत्वोपादानमिति वाच्यम् ॥ ४८ ॥

साध्याभावव्यापकहेत्वभावप्रतियोगिहेतुमान्पक्षः इति ज्ञानस्य अनुमितिजनकतायां अवच्छेदककोटौ निरूप्यनिरूपकभावापन्नविषयताशालिनिश्चयत्वेन जनकतानिर्माणाय प्रतियोगित्वविषयताया अन्तर्भावोऽपि तादृशविषयतायां प्रतियोगितावच्छिन्नत्वनिवेशे प्रयोजनविरहेण तदनिवेशात् साध्याभावव्यापकहेत्वभावाधिकरणहेतुमान्, तादृशहेत्वभाववृत्तिहेतुमान्, तादृशहेत्वभावविषयहेतुमान् इत्यादिज्ञानानामपि जनकत्वसत्त्वात् तत्र प्रतिबन्धकताविरहेणानुपपत्त्यभावात् ॥ ४९ ॥

नच तथापि आधेयत्वं गगनाभाववदभाववन्निरूपितत्ववत्कालीनगगनवदित्यादौ तादृशगगनाभावव्याप्यभावव्याप्यवदाधेयत्वे अतिव्याप्तिरिति वाच्यम् ॥ ५० ॥

तादृशानुमितित्वव्यापकप्रतिबन्धताविशिष्टजनकताया एव विरोध्यनुमितिजनकतयेनेन विवक्षितत्वात् । वैशिष्ट्यं, स्ववृत्तिभेदप्रतियोगितावच्छेदकत्वस्वनिरूपितप्रतिबन्धकतावच्छेदकविषयित्वावच्छिन्नानुमितिनिष्ठजन्यतानिरूपितत्वोभयसंबन्धेन । भेदप्रतियो-

टि.—१. व्यप्यश्चासौ अभावश्चेति विग्रहः ।

गितावच्छेदकता स्वसमानाधिकरणभेदप्रतियोगितावच्छेदकत्वसंबन्धावच्छिन्ना । स्वाधिकरणत्वं स्वनिरूपितजन्यतावच्छेदकीभूतप्रकारताविशिष्टनिश्चयत्वसंबन्धेन । भेदप्रतियोगितावच्छेदकता स्वावच्छेदकावच्छिन्नप्रतिबध्यतानिरूपितप्रतिबन्धकतासंबन्धेन । निश्चये प्रकारतावैशिष्ट्यं स्वनिरूपिताधिकरणताविशिष्टत्वसंबन्धेन । अधिकरणता स्वविशिष्टप्रकारतानिरूपिताभावत्वावच्छिन्नप्रकारतानिरूपितनिरूपितत्वसंबन्धावच्छिन्नप्रकारतानिरूपितवृत्तित्वत्वावच्छिन्नप्रतियोगितासंबन्धावच्छिन्नप्रकारतात्वसंबन्धावच्छिन्ना । स्ववैशिष्ट्यं स्वावच्छेदकावच्छिन्नत्वस्वावच्छेदकसंबन्धावच्छिन्नप्रतियोगितासंबन्धावच्छिन्नत्वोभयसंबन्धेन । अधिकरणतावैशिष्ट्यं स्वाश्रयनिरूपकनिश्चयविशिष्टत्वस्वविशिष्टप्रकारतानिरूपकत्वोभयसंबन्धेन । निश्चयवैशिष्ट्यं सामानाधिकरण्यकालिकविशेषणत्वोभयसंबन्धेन । प्रकारतायां स्ववैशिष्ट्यं स्वाश्रयविशिष्टत्वस्वनिरूपकप्रकारतानिरूपितविशेष्यतावच्छेदकावच्छिन्नविशेष्यतानिरूपितत्वोभयसंबन्धेन । स्वाश्रयवैशिष्ट्यं स्वनिरूपिताभावत्वावच्छिन्नप्रकारतानिरूपितविशेष्यतावच्छेदकावच्छिन्नत्वस्ववृत्तिसंबन्धावच्छिन्नत्वोभयसंबन्धेन । वृत्तिश्च स्वनिष्ठप्रकारतानिरूपितावच्छिन्नत्वप्रकारतानिरूपितत्वसंबन्धेन । तथाच तादृगगनाभावव्याप्याभावाभावदवृत्तित्वेन गृहीतधर्मवतानिश्चयस्याप्रतिबन्धकतया नोक्तदोषावसरः इति ॥ ५१ ॥

न च तथापि जलवद्भूदो वह्निमानित्यत्र वह्न्यभावव्याप्यजलव्याप्यवज्जलवद्भूदे अतिव्याप्तिरिति वाच्यम् ॥ ५२ ॥

स्वनिरूपितप्रतिबन्धकतावच्छेदकविषयित्वावच्छिन्नानुमितिनिष्ठजन्यतानिरूपितत्वस्य स्वविशिष्टजन्यतानिरूपितत्वरूपस्य निवेश्यत्वात् । वैशिष्ट्यं स्वनिरूपितप्रतिबन्धकतावच्छेदकविषयित्वावच्छिन्नत्वस्वविशिष्टानुमितिनिष्ठत्वोभयसंबन्धेन । स्ववैशिष्ट्यं स्वनिष्ठावच्छेदकताप्रतियोगिताकभेदवत्त्वसंबन्धेन । स्वनिष्ठावच्छेदकता स्वविशिष्टविषयितासंबन्धेन । विषयितायां स्ववैशिष्ट्यं स्वनिष्ठावच्छेदकताप्रतियोगिताकभेदवत्त्वसंबन्धेन । स्वनिष्ठावच्छेदकता स्वावच्छेदकावच्छिन्नप्रतिबन्धकतानिरूपितप्रतिबध्यतावच्छेदकत्वसंबन्धेन ।

टि.—१. हृदो वह्निमानित्यादौ सप्रतिपक्षे लक्षणसमन्वयकाले निरुक्तसंबन्धेन जनकताधिकरणत्वं वह्न्यभावाभावदवृत्तिजलमिति निश्चयविशिष्टे जलवाद्भूदः इति निश्चये बोध्यम् ।

न्धेन । तथा च वह्न्यभावव्याप्यजलवत्ताज्ञानस्य वह्निमत्तानिश्चयाप्रतिबध्यत्वाच्च दोषः ॥ ५३ ॥

न चैवमपि तत्रैव वह्न्यभावव्याप्यजलभावव्याप्यवह्निकालीनत्वस्यापि पक्षविशेषणत्वे वह्न्यभावव्याप्यजलव्याप्यवत्तादृशपक्षे अतिव्याप्तिरिति वाच्यम् ॥ ५४ ॥

स्वनिरूपितप्रतिबन्धकतावच्छेदकविषयित्वावच्छिन्नपक्षतावच्छेदकविशिष्टानुमितिनिष्ठजन्यतानिरूपितत्वस्यैव निवेश्यत्वात् । अनुमितौ पक्षतावच्छेदकवैशिष्ट्यं स्वनिष्ठावच्छेदकताप्रतियोगिताकभेदवत्त्वसंबन्धेन । स्वनिष्ठावच्छेदकता स्वविशिष्टविषयितासंबन्धावच्छिन्ना । विषयितायां स्ववैशिष्ट्यं स्वनिष्ठावच्छेदकताप्रतियोगिताकभेदवत्त्वसंबन्धेन । स्वनिष्ठावच्छेदकता स्वविशिष्टभेदप्रतियोगितावच्छेदकत्वसंबन्धावच्छिन्ना । भेदे स्ववैशिष्ट्यं स्वविशिष्टप्रकारताविशिष्टत्वसंबन्धेन । प्रकारतायां स्ववैशिष्ट्यं स्वसमानाधिकरणेत्यादिभेदवत्त्वसंबन्धेन । स्वाधिकरणत्वं स्वावच्छिन्नविशेष्यतानिरूपितसाध्यतावच्छेदकावच्छिन्नप्रकारत्वसाध्यव्याप्यहेतुतावच्छेदकावच्छिन्नप्रकारत्वोभयनिरूपकत्वसंबन्धेन । भेदप्रतियोगितावच्छेदकता स्वविशिष्टविशेष्यतानिरूपकत्वसंबन्धेन । विशेष्यतायां स्ववैशिष्ट्यं स्वनिरूपितविशेष्यतावच्छेदकावच्छिन्नत्वस्वविशिष्टप्रकारतानिरूपितत्वोभयसंबन्धेन । स्ववैशिष्ट्यं स्वावच्छेदकावच्छिन्नत्वस्वावच्छेदकसंबन्धावच्छिन्नत्वोभयसंबन्धेन । स्वविशिष्टप्रकारताविशिष्टेत्यत्र प्रकारतावैशिष्ट्यं स्वविशिष्टप्रकारताविशिष्टत्वसंबन्धेन । प्रकारतावैशिष्ट्यं स्वावच्छिन्नप्रतियोगिताकत्वसंबन्धेन । स्ववैशिष्ट्यं स्वनिरूपितविशेष्यतावच्छेदकावच्छिन्नविशेष्यतानिरूपितत्वस्वनिष्ठावच्छेदकताप्रतियोगिताकभेदवत्त्वोभयसंबन्धेन । स्वनिष्ठावच्छेदकता स्वसमानाधिकरणभेदप्रतियोगितावच्छेदकत्वसंबन्धेन । स्वाधिकरणता स्वविशिष्टप्रकारतानिरूपितविशेष्यतावच्छेदकतानिरूपकत्वसंबन्धेन । प्रकारतायां स्ववैशिष्ट्यं स्वावच्छेदकसंबन्धावच्छिन्नत्वस्वावच्छेदकावच्छिन्नत्वोभयसंबन्धेन । भेदप्रतियोगितावच्छेदकता स्वविशिष्टप्रकारताविशिष्टप्रतिबध्यतानिरूपितप्रतिबन्धकतासंबन्धेन । स्ववैशिष्ट्यं स्वावच्छेदकधर्मसंबन्धावच्छिन्नत्वसंबन्धेन । प्रतिबध्यतायां प्रकारतावैशिष्ट्यं स्वसमानाधिकरणेत्यादिभेदवत्त्वसंबन्धेन । स्वाधिकरणता भेदप्रतियोगितावच्छे-

दकता च स्वरूपसंबन्धेन । तथाच घटो वह्निमान् पटो वह्निमानित्यादिज्ञानानां घटो वह्न्यभावव्याप्यजलवानिति ज्ञानप्रतिबन्धकतया नोक्तदोषावसरः इति ॥ ५५ ॥

न च तथापि जलवद्बुद्धः वह्न्यभावव्याप्याभावव्याप्यवह्निमान् इत्यत्र वह्न्यभाव-
व्याप्यजलव्याप्यवज्जलवद्बुद्धे अतिव्याप्तिरिति वाच्यम् ॥ ५६ ॥

संबन्धघटकप्रतिबन्धकतायां ज्ञानवैशिष्ट्यानवच्छिन्नत्वनिवेशात् । यत्तु घटः अभाव-
व्यापकीभूताभावप्रतियोगिगगनवानित्यत्र साध्याभाववत्ताबुद्धौ साध्यवत्ताज्ञानस्य ज्ञानविशिष्ट-
ज्ञानत्वेनैव प्रतिबन्धकतया सत्प्रतिपक्षाव्याप्तिरिति । तत्र । यतः अभाववत्ताबुद्धौ अभावाभा-
ववत्तानिश्चयस्येव अभावाभावव्याप्यवत्तानिश्चयस्यापि न प्रतिबन्धकता विषयविरोधविरहात् ।
ततश्च अभावाभावव्याप्तिनिश्चयविशेषरूपस्य अभावव्यापकीभूताभावप्रतियोगिगगनवत्ता-
निश्चयस्य नाभाववत्ताज्ञानप्रतिबन्धकतेति तादृशगगनाभावबुद्धौ तादृशगगनवत्तानिश्चयस्य
पृथगेव प्रतिबन्धकताया आवश्यकतया नोक्तदोषावकाशः इति दिक् ॥ ५७ ॥

नच तथापि घटो गगनाभाववदभाववत्कालीनगगनवानित्यत्र तादृशगगनाभाववद्वट-
रूपबाधाव्याप्तिः । तत्र क्लृप्तज्ञानवैशिष्ट्यावच्छिन्नप्रतिबन्धकतयैवोपपत्तौ तदनवच्छिन्नप्रति-
बन्धकतान्तरे मानाभावात् । यत्तु अभाववति गगनाभावो व्याप्यवृत्तिरिति ज्ञानकालेऽपि
विशिष्टगगनाभाववत्तानिश्चयस्य प्रतिबन्धकत्वानुरोधेन ज्ञानवैशिष्ट्यानवच्छिन्नप्रतिबन्धकत्व-
स्याप्यावश्यकतया नोक्तदोषावकाश इति । तत्र । अभावव्यापकत्वस्य प्रतियोगिवैयधिक-
रण्याघटितस्य संसर्गघटकत्वे अव्याप्यवृत्तित्वज्ञानस्य तत्रानुत्तेजकतया तत्र प्रतिबन्धकान्तर-
विरहेण इहाव्याप्तिसत्त्वादिति वाच्यम् ॥ ५८ ॥

तादृशसमूहालम्बनानुमितित्वव्यापकप्रतिबन्धकतानिरूपितप्रतिबन्धत्वघटितान्यतमे
यद्रूपावच्छिन्ननिरूपकताकविषयितात्वव्यापकत्वस्य निवेश्यत्वात् । यद्यप्येवं सति वह्न्यव्या-

टि.—१. अनुगमतात्पर्यम्—पक्षतावच्छेदकव्यापिका या प्रकारता इदो वह्निमानिति
ज्ञानीयवह्निप्रकारता तन्निरूपितविशेष्यतावच्छेदकावच्छिन्नविशेष्यतानिरूपिता तद्व्यापिका च या
प्रकारता इदो वह्न्यभाववानिति ज्ञानीया तदवच्छिन्नभेदप्रतियोगितावच्छेदकविषयिताद्यन्वयमिति ।

प्यसाध्यके वह्न्यभाववत्पक्षे अतिव्याप्तिः । तथापि तादृशप्रतिबन्धकताविशिष्टप्रतिबन्धताया
एव निवेशनीयतया न दोषः । प्रतिबन्धकतावैशिष्ट्यं स्वावच्छेदकावच्छिन्नप्रतिबन्धतानि-
रूपितप्रतिबन्धकतावच्छेदकविषयित्वावच्छिन्नत्वस्वनिरूपितत्वोभयसंबन्धेन । तथा च
वह्न्यव्याप्यवत्ताज्ञाने वह्न्यभाववत्ताज्ञानस्याप्रतिबन्धकतया न दोषः ॥ ५९ ॥

न च स्वावच्छेदकावच्छिन्नत्वं यदि स्वावच्छेदकतापर्याप्त्यधिकरणपर्या-
प्तावच्छेदकताकत्वं तदा असंभवः । यदि स्वावच्छेदकनिष्ठावच्छेदकताकत्वरूपं तदा
तादृशज्ञानत्वावच्छिन्नत्वस्य सार्वत्रिकतया अव्यावर्तकता । स्वावच्छेदकविषयित्वावच्छिन्न-
त्वरूपत्वेऽपि वह्न्यव्याप्यवह्निमानिति ज्ञानीयविषयितामादाय वह्न्यभाववद्बुद्धातिव्याप्ति-
तादवस्थमिति वाच्यम् ॥ ६० ॥

स्वाश्रयानुमितित्वव्यापकप्रतिबन्धतानिरूपितप्रतिबन्धकताव्याप्यत्वस्वनिरूपितत्वोभ-
यसंबन्धेन प्रतिबन्धकतावैशिष्ट्यस्य निवेश्यत्वात् । वह्न्यव्याप्याभाववद्वह्न्यभाववत्का-
लीनहृदपक्षके वह्न्यव्याप्यसाध्यके वह्न्यभाववत्तादृशहृदे अतिव्याप्तिस्तु पक्षद्वयेऽपि
समाना । यद्वा पक्षतावच्छेदकविशिष्टप्रतिबन्धतानिवेशान्न दोषः । पक्षतावच्छेदकवैशिष्ट्यं
स्वविशिष्टप्रकारताविशिष्टत्वसंबन्धेन । प्रकारतायां स्ववैशिष्ट्यं स्वसमानाधिकरणेत्यादि-
भेदवत्त्वसंबन्धेन । स्वाधिकरणत्वं स्वावच्छिन्नविशेष्यतेत्याद्युभयनिरूपकत्वसंबन्धेन । भेद-
प्रतियोगितावच्छेदकता प्रागुक्तस्वविशिष्टविशेष्यतानिरूपकत्वसंबन्धेन । प्रकारतावैशिष्ट्यं
स्वविशिष्टप्रतिबन्धकतानिरूपकत्वस्ववृत्तिभेदप्रतियोगितावच्छेदकत्वोभयसंबन्धेन । वैशिष्ट्यं
स्वसमानाधिकरणेत्यादिभेदवत्त्वसंबन्धेन । स्वाधिकरणता निरूपकतासंबन्धेन । भेदप्रति-
योगितावच्छेदकता स्वरूपसंबन्धेन । स्ववृत्तिभेदप्रतियोगितावच्छेदकता स्वसमानाधि-
करणभेदप्रतियोगितावच्छेदकतासंबन्धेन । स्वाधिकरणता स्वरूपसंबन्धेन । भेदप्रतियोगि-
तावच्छेदकता स्वविशिष्टविशेष्यतानिरूपकत्वसंबन्धेन । विशेष्यतायां वैशिष्ट्यं स्वनि-

टि.—१. अनतिरिक्तवृत्तित्वनिवेशपक्षे विशिष्टद्वयाघटितत्वशरीरे बाधविशेषाव्याप्तिवारणाय
प्रकृतानुमितिप्रतिबन्धतानवच्छेदकत्वस्य विशिष्टद्वयविषयितायां निवेशावश्यकतया तुल्योऽयं
दोषपरिहारः ।

रूपितविशेष्यतावच्छेदकावच्छिन्नत्वस्ववृत्तिभेदप्रतियोगितावच्छेदकप्रकारतानिरूपितत्वोभय-
संबन्धेन । अवच्छेदकता स्वसमानाधिकरणभेदप्रतियोगितावच्छेदकतासंबन्धेन । स्वाधि-
करणता स्वविशिष्टप्रकारतानिरूपितविशेष्यतावच्छेदकतानिरूपकनिश्चयत्वसंबन्धेन । भेद-
प्रतियोगितावच्छेदकता स्वविशिष्टप्रकारताविशिष्टप्रतिबध्यतानिरूपितप्रतिबन्धकतासंबन्धेन ।
प्रकारतायां स्ववैशिष्ट्यं स्वावच्छेदकधर्मसंबन्धावच्छिन्नत्वसंबन्धेन । प्रकारतावैशिष्ट्यं व्या-
पकतासंबन्धेन ॥ ६१ ॥

न च तथापि हृदो बहुयभाववज्जलवद्वृत्तिजलाभावव्याप्यवह्निमानित्यत्र बहुयभाव-
वज्जलवद्वृत्तिजलवद्भूदे अतिव्याप्तिरिति वाच्यम् ॥ ६२ ॥

स्वविशिष्टप्रतिबन्धकतानिरूपितत्वस्ववृत्तिभेदप्रतियोगितावच्छेदकत्वोभयसंबन्धे अन्त-
र्गतस्ववैशिष्ट्यस्य स्वव्याप्यत्वरूपतया दोषविरहात् । शेषं विशिष्टद्वयाघटितत्वविचाररीत्या
अवधेयमिति दिक् ॥ ६३ ॥

॥ इति अवच्छेदकतासरः समाप्तः ॥

University Notes

FOUNDER'S DAY:

The Eleventh Founder's Day was celebrated on the 12th October, 1940. Sir R. K. Shanmukham Chettiar, Dewan of Cochin, delivered the address.

CONVOCATION:

The Tenth Annual Convocation was held on Saturday the 16th November, 1940. His Excellency Captain the Hon. Sir Arthur Oswald James Hope, Chancellor of the University, presided. Sir Lionel Leach, Chief Justice of the Madras High Court, delivered the address to the graduates of the year.

ENDOWMENTS:

1. Our Pro-Chancellor, Raja Sir Annamalai Chettiar, Kt., L.L.D. Raja of Chettinad, announced a gift of Rs. 12,500 to be utilised in the form of prizes. Of this Rs. 10,000 is to be set apart for the encouragement of Composition of Tamil Poems. The rest of the money is to be utilised for giving prizes in the names of (1) His Excellency Sir Arthur Hope, (2) Sir Lionel Leach, (3) Sir R. K. Shanmukham Chettiar and (4) Sir K. V. Reddi Naidu Garu. Apart from the original contribution he made to this institution by handing over three collegiate institutions and a handsome donation of Rs. 20 lakhs to form the nucleus of this University, our founder has been generous in giving various endowments from time to time. We are deeply grateful to him for his great munificence and generosity.

2. The Raja Raja Abhaya Kulasekara Chola Maharaja Memorial Endowment by His Holiness Srila Sri Kasivasi Swaminatha Thambiran Swamigal Avergal: (Thevara Tirumurai Prize and Publication of works of Tamil Literature and Grammar. Present Annual income Rs. 550+Rs. 1,250).

The object of the Endowment is to foster the growth of the Science of Tamil Music in the Thevara Tirumurais and publish works of Tamil Literature and Grammar.

This endowment was founded by His Holiness Srila Sri Kasivasi Swaminatha Thambiran Swamigal Avergal of Tiruppanandal to per-

petuate the memory of Raja Raja Abhaya Kulasehara Chola Maharaja Avergal, due to whose solicitude the Thevara Tirumurais have been preserved to the world.

The Endowment consists of 114.3 acres of wet and 4.72 acres of Dry land (i.e.) 118 acres 75 cents, in Kayalur, Melasethi, forming parts of vattoms 21 and 23 of Sirugudi and Kilmarudur of Kumbakonam Taluk, Tanjore District, now in the sole enjoyment of His Holiness. The present value of the property is Rs. 75,000 and the net annual income is Rs. 1,750 at present market rates. Rs. 500 out of this sum shall be set apart for a Prize and the rest shall be utilised for publication of Tamil Works of Literature and grammar.

ACKNOWLEDGMENTS

Brown University, Rhode Island :

Selected topics in function theory of a complex variable by Otto Syasz.

Theory of abstract spaces by David Tamarkin

The Service

Lingnan Science Journal, Vol. 19, No. 1.

The Modern Student

The Empire Times

Madras Y.M.C.A. Bulletin

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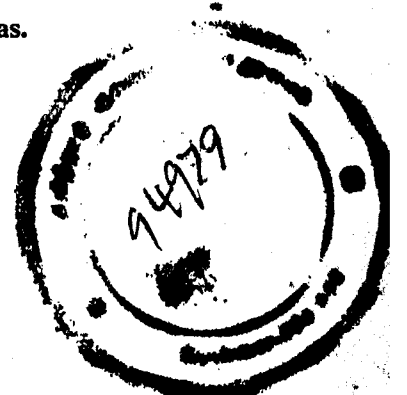
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