

Summary of Chapter 11  
in the  
Geometry of Enlightenment

by  
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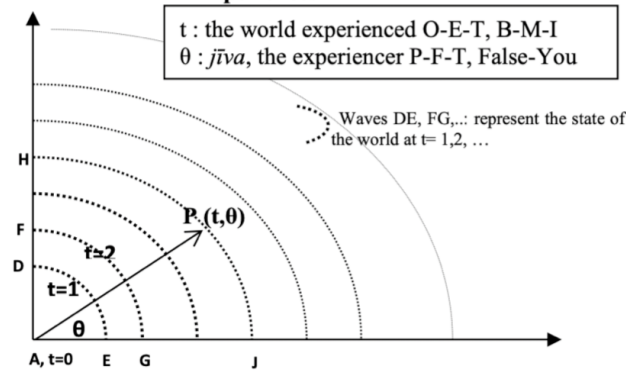
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Version of February 14, 2025

## Recapitulation of the variables

It would be helpful to assemble all of the many variables seen so far into one place for reference and to refresh our memories. Some of these variables need to be explained in detail, so I have copied over the relevant text from my previous synopsis. The following is the basic diagram of the journey of the jiva through its field of experiences.

**FIG. 3.1: Polar Coordinate Designation of  $\mathcal{M}$  the Field of Experiences**



A given arc or 'wave' is labeled by a time  $t$ , which denotes both the time elapsed since the beginning of the cosmos, as well as the *state of the world* at a given time as experienced by the jiva. Note that any point on a given arc represents the same state. What varies along a given arc is  $\theta$ , which indicates the spiritual state of the jiva at time  $t$ . This spiritual state is determined by the *detachment* of the jiva with respect to the world, which includes both external and mental objects, i.e. the OET (Objects, Emotions, Thoughts) of Swami Chinmayananda [p. 22].

The outcome of the contact of the jiva with an object  $k$  is determined primarily by the latent tendencies of the jiva called *vasanas*, denoted by  $V'$ . These vasanas can also be considered the 'psychological personality' of the jiva. They influence how the jiva perceives the objects and also how it acts in response to them [p. 27].

Another important factor in how the jiva reacts to the world is the influence (or perturbation) of the objects on the vasanas. This is represented by a *perturbation function*  $W_k$ , where the subscript denotes a particular object  $k$  [p. 28].

The purpose of spiritual practice is to gain sufficient willpower to override the tendency of the mind to identify with the objects or BMI. Freedom from the tangled web of objects enables us to realize our true nature as pure consciousness, which leads to ultimate bliss. This willpower is denoted by the variable  $\omega$ , which is a function of time like  $V'$  and  $W_k$ . (These three functions relate to the causal and subtle bodies of the jiva and are not part of the 'seer-you' which witnesses the objects.) [p.29]

The next variable to consider is  $\Omega$ , which is a measure of the jiva's *sentiency*. An analogy in Vedanta is sunlight on a mirror. The sunlight is the all-pervading Light of Consciousness and a clean mirror is the Pure Intellect. The amount of incident light is determined by the size of the mirror, which corresponds to  $\Omega$ . [p. 33]

However, the mirror may be dirty, so we need another variable  $R$ , which is the *reflectivity* of the pure intellect. The intellect must reflect the light of consciousness in order to illuminate the objects and perceive them. If the mirror is clean, then  $R$  is near to 1, and the jiva is alert and aware of the objects, as during the waking state. If the mirror is dirty, then  $R$  is near 0, as in deep sleep, and the intellect is unaware of the objects and so cannot be influenced by them. [p. 33]

Next we consider the variable  $I$ , which denotes the degree of alertness and hence of *perceptivity* of the mind. It can also be viewed as the mental energy of the jiva at a given time. It depends of the sentiency  $\Omega$  as well as the receptivity  $R$ . It is simply given by the product of the two: [p. 34]

$$I = \Omega \cdot R \dots \text{Eq. (4.1)}$$

To each *vasana*  $v$  is associated a variable  $x$ , which is the *conditional probability* that the jiva will stay in the seer mode (the desirable state of detachment) given that it is under the influence of that particular *vasana*. For *vasanas* near the tamasic end of the spectrum,  $x$  has a value near 0, since a jiva under the influence of a tamasic *vasana* is less likely to stay in the seer state. On the other hand, for *vasanas* near the satvic end of the spectrum,  $x$  has a value near 1. [p. 41]

With this background, we may now provide a list of the variables for reference:

$t$  : time

$\theta$  : spiritual state of the jiva at time  $t$

$k$  : the index denoting an object in the jagat or world

$V'$  : the *vasanas*, i.e. the latent tendencies of the jiva

$W_k$  : the *perturbation function*, i.e. the influence of the object on the jiva

$\omega$  : the *willpower* of the jiva, which enables detachment from the objects

$\Omega$  : a measure of the jiva's *sentiency*, compared to a mirror

$R$  : the *reflectivity* of the mirror — 0 for a dirty and 1 for a clean mirror

$I = \Omega R$  : the degree of *alertness* and hence of *perceptivity* of the mind

$x$  : the *conditional probability* that the jiva will stay in the seer mode

$V'(x, t)$  : the *vasana function* or probability that the jiva is influenced by  $V'$

So there are two probabilities: the probability  $V'$  that the jiva is under the influence of the associated vasana and  $x$ , the probability that the jiva will

**The General Equations:** “Given the variables  $\Omega$ ,  $\omega$ ,  $R$ ,  $V'(x)$ ,  $W_k(x)$  pertaining to an object  $k$  and given the constant  $\varepsilon$ , there is a probability  $q(k,\omega)$  that the jīva will suffer due to identification with the non-Self and a probability  $p(k,\omega)$  that it will identify with the Self and enjoy the peace and bliss.

The level of suffering  $S$  is given by  
 $S = I.D$  {experienced with probability  $q(k,\omega)$ }

and the level of bliss  $B$  by  
 $B = \Omega.L$  {experienced with probability  $p(k,\omega)$ }

where

- 1)  $I = \Omega.R$  is the mental energy available
- 2)  $D = 1 - I_k/I$  is a measure of the pleasure or pain associated with object  $k$ ; if  $D > 0$ , the object is pleasant for the jīva; if  $D < 0$  it is unpleasant; and if  $D = 0$  then the object is viewed by the jīva as neutral.
- 3)  $I_k = I \int_0^1 W_k(x) V'(x) dx$
- 4)  $L = \omega + (1-\omega) L_0$  where  $L_0 = (I/I_k)^{1-\varepsilon} \int_0^1 W_k(x) V'(x) dx$
- 5)  $\sin^2\theta(k) = (I/I_k) \int_0^1 x W_k(x) V'(x) dx$
- 6)  $p(k,\omega) = \sin^2\theta(k,\omega) = \omega (1-\varepsilon/2) + (1-\omega) \sin^2\theta(k)$ , and
- 7)  $q(k,\omega) = 1 - p(k,\omega)$ ”.

remain in the seer state when under the influence of that vasana.

A further variable is  $V(x, t) = I(t) V'(x, t)$  : the *vasana intensity function*, which is the product of mental alertness and the vasana function. (The vasana function tells us how this energy is spread over the vasanas.) This product is the *absolute energy level* of vasana  $x$  at time  $t$ , which can be considered the *pressure* that the vasana exerts on the mind.

We now have an expression for  $E'_{in}(t)$ , which measures how likely the jiva is to remain in the detached seer state while under the influence of all vasanas active at time  $t$ :

$$E'_{in}(t) = \int_0^1 x V'(x, t) dx \dots\dots\dots \text{Eq. (5.8)}$$

Likewise, there is a complementary probability that the jiva will not remain in the seer state but 'flow out' to the objects:

$$E'_o(t) = \int_0^1 (1 - x)V'(x, t) dx \dots \text{Eq. (5.7)}$$

There are corresponding quantities  $I(t)E'_{in}(t)$  and  $I(t)E'_o(t)$  that represent the mental energy directed inward and outward at time  $t$ .

Jumping over a lengthy discussion in the book (and in my previous synopsis), we can present the *general equations* prior to chapter 11 (see next page). The variables  $\Omega, \omega, R, V'(x)$  and  $W_k(x)$  have been defined above. The constant  $\epsilon$  is a small quantity related to a gap between a jiva that is almost fully liberated and one who is fully liberated. The index  $k$  denotes an object, as usual. The other variables in the box are expressed in terms of known variables. Their derivation requires a detailed mathematical discussion as presented in the book and in my synopsis.

As summarized on page 88:

The various mathematical ideas and results presented in the previous pages boil down to seven equations among the five variables  $\Omega, \omega, R, V'(x)$  and  $W_k(x)$  and the constant  $\epsilon$ . The five variables are all functions of time  $t$ , though for sake of convenience, this is not made explicit in the equations used below. The equations apply to all jīvas save the fully realized jīva (-see Section 9.5).

At any given time, a jīva has two options: a) stay in the false-you mode and suffer the joys and sorrows of the world or, alternatively, b) stay in the seer-you mode and enjoy the bliss of the witnessing self. In the following statement and discussions, we use the terms “identifying with the Non-Self” and “identifying with the Self” for the first and second options, respectively.

## Summary of Chapter 11

Now we can move on to Chapter 11. Using the equations derived above, this chapter describes the evolution of the jiva's spiritual life over time, as determined by the detachment  $\theta(t)$ . The spiritual life is distinguished from the material life. The latter is *what* the jiva encounters in the world of objects; the spiritual life is *how* it reacts to the objects. The goal of vedanta is to become detached from the influence of the objects, in order to realize the bliss of the Self, which is its true nature.

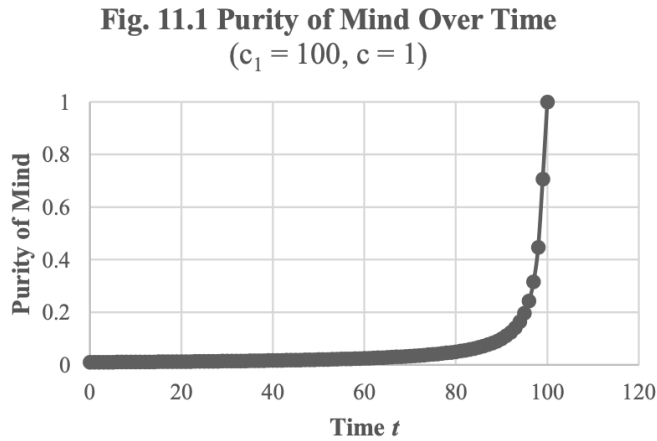
Thus, whenever the jiva encounters an object it has to choose between identifying with the object, or otherwise being influenced by it, and remaining detached in the *saksi* or witnessing state. As shown in the box above, the probability that the jiva will identify with the self is  $p(k, \omega) = \sin^2 \theta(k, \omega)$ , where  $k$  indicates the object and  $\omega$  the jiva's willpower. Likewise,  $q(k, \omega) = \cos^2 \theta(k, \omega)$  is the probability that the jiva identifies with the object and suffers.

The material life is decided by God's will, while the spiritual life is decided, to a great extent, by the jiva's willpower. Interestingly, despite the huge differences in our external lives, it turns out the the spritual life of all jivas follows a similar path, as this chapter will show. This result arises from the Chinmaya Model analyzed in this book.

The key is the detachment  $\theta(t)$ . The previous analysis showed that the purity of mind is  $\sin \theta(t)$ , and the likelihood of staying in the witness mode is  $\sin^2 \theta(t)$ . Therefore, the higher  $\theta(t)$ , the more likely the jiva is to make spiritual progress, according to the equation  $d\theta(t)/dt = c \sin^2 \theta(t)$ , where  $c$  is a constant of proportionality (in radians/time). We can already glean some important information. If  $\theta(t) = 0$ , then no spiritual progress is possible. However, if  $\theta(t) > 0$ , then the jiva can only progress forward, and the more it progresses, the faster it progresses.

The solution to the equation is  $\theta(t) = \cot^{-1}(c_1 - ct)$ , where  $c_1$  is a constant of integration. The constants  $c$  and  $c_1$  are different for different jivas. They are determined by Ishwara or God acting in the world. To ensure that  $\theta(t)$  remains in the first quadrant, we must have  $c_1 \gg c > 0$ . The solution shows that  $\theta(t)$  is an increasing function of time, growing from  $t = 0$  to  $t^* = c_1/c$ , where it achieves realization at  $\theta(t^*) = \cot^{-1}(0) = \pi/2$ . The jiva's spiritual life is entirely determined by the constants  $c$  and  $c_1$ .

One happy consequence of the equations derived so far is that the spiritual progress of the jiva accelerates as he makes progress. That is, the more he makes progress, the faster he makes it. The following figure illustrates this phenomenon for the specific set of parameters  $c_1 = 100$  and  $c = 1$ :

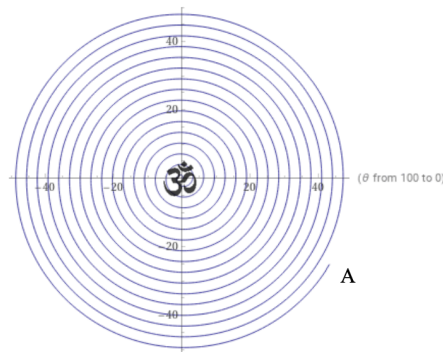


Notice a general characteristic: The growth is slow for a long time and then takes off quickly. Thus, we should never give up hope: our painful past does not foretell our more fortunate future. The equations also show us that the progress is even more rapid if plotted against experienced time, which is what actually matters to the jiva. Also, even if the jiva experiences unpleasant events in the later stage, they do not affect his mind nearly as much. He can withstand them far more easily.



As mentioned, the parameters  $c$  and  $c_1$  completely determine the spiritual path of the jiva.  $c_1$  could be called the 'load of ignorance' that the jiva starts out with, and  $c$  is the rate at which the jiva exhausts this load. For instance, the sage Sukadev was born with little ego and a pure mind, and he lived only one lifetime before realization, so that he could impart the spiritually purifying message of the Mahabharata to humanity. Any jiva's fate is determined by Ishwara's choice of these parameters.

The progress of the jiva can be given a beautiful geometry in terms of a spiral path to realization, as shown in the following figure:



**Fig. 11.2 Polar Graph of  $r = (1/c)\phi$  for  $c_1=100$ ,  $c=2$**

The graph is plotted in terms of new variables  $\phi = (c_1 - ct)$  and  $r = (1/c)\phi$ . In polar coordinates,  $r$  is the radius and  $\phi$  is the angle with respect to the x-axis. Each lifetime or *janma* of the jiva corresponds to one circulation of  $\phi = 2\pi$  until realization is reached at the center. The number of lives is  $c_1/2\pi$ . The variable  $\phi$  is the 'residual ignorance' at time  $t$ , and  $r$  is the time remaining for realization. (In this case,  $\phi$  is not limited to a maximum of  $2\pi$ , as in some math books.) Interestingly, this graph resembles the circumambulation of devotees around a temple.