

Karma: Do-Undo, Wandering Karma and Coherent (yogic) Karma

Karma-Fruit: Rational and Mysterious

Throughout our lives we are striving to accomplish some task. The task may be to be healthy, to get a University degree, to have a good relationship, to make friends,... To accomplish any task we need action or *karma*. We each have some idea of the relation between an effort and the fruit it gives. Our parents, our teachers, our politicians, our religious leaders, all try to guide us about this relation. Karma-fruit relationship is sought by scientists and philosophers. Religions are, in essence, an explanation of the karma-fruit relation.

We can identify two kinds of karma-fruit relations. Some fruits can be traced directly back to an action or karma. Scientific studies or common sense is used to establish such relations. These we will call ***rational karma-fruit***. Then there are karma-fruit relations that are a complete mystery. These we will call ***mystery karma-fruit***. For example, if you do yoga regularly your body becomes supple and strong. There is a direct link. If you eat junk food, and a lot of it, your health suffers. If you smoke you may have lung problems. If you insult your friends or are undependable you will have unsatisfactory friendships. These are rational karma-fruit relations. Then there are instances where an earthquake or a flood kills many innocent children. Or a person who has led an exemplary life is robbed and beaten. There is no clear reason for the fruit. Often people try to provide a reason for such things, but it is usually clear that they are only displaying ignorance. After the massive hurricane Katrina hit New Orleans in 2005 some religious leaders attributed the disaster to the sins committed by the city. Similar explanations have been offered for the earthquake-related disaster in Haiti in 2010. In such mysterious karma-fruit occurrences it may be best to be humble and accept that we don't know why some things happen.

As advances in science (especially medicine) and in civil society continue to grow, a greater part of our life falls under the rational category. *Thus the share of karma-fruit that*

is rational is continually increasing, while the share of the mystery karma-fruit is decreasing. A thousand years ago many diseases that are now easily cured by simple hygiene, vaccines, or other medicines were linked to punishments from gods or to curses from other people. If you examine ancient scriptures from almost any religion you can see that all sorts of explanations and remedies are given for karma-fruit that at that time was mysterious. There are explanations for various diseases and disorders afflicting humans. There are explanations for eclipses, floods, drought, etc. Now those same explanations and remedies seem strange at best and hurtful at worst. Many people still cling to those old karma-fruit relations, since they have cultural attachment to their scriptures. However, rational explanations have undoubtedly caused an erosion of the hold of religions. However, it is hard to expect that even with all the advancement of science all of our life's events can be linked to karma in a rational and linear way. For example we will still fall in love, give up our lives for others, and innocent children will still die in earthquakes or accidents. In fact many of the profound aspects of our lives and death are still mysterious and need explanations that are more faith-based.

In this chapter we will discuss the karma of the type where action and fruit are well-linked, i.e., rational karma-fruit. ***The rational karma or action fall in three categories:***

- i) ***Do-Undo actions*** that take us round and round in circles using up our energy and time with no uplifting accomplishments; This kind of karma is essential for children, as this is how they learn to do things. Even for adults a little *do-undo* is fine. But if this karma becomes ingrained in our approach to life and becomes an addiction there is a serious problem. Often we have to unlearn things we have learnt to get out of a do-undo cycle.
- ii) ***Wandering or incoherent*** where each karma is more or less independent and unrelated to the previous karma. Such karma can form the basis of our creative endeavors and can lead to new discoveries into our self and into the outside world. In terms of getting a result this category of karma is very inefficient. So if you know what you want this is not an optimum karma style.
- iii) ***Coherent actions*** lead to the most efficient path to our goal. This is the *yogic* path. To develop an ability to be in coherent karma one needs to use the concept of *ashtang*. If one wants the karma to create holistic outcomes one needs to also use *Ik Onkar* so the emphasis is on the whole, not on a small part.

Traffic Flow: An example of Incoherent and Coherent Karma

If you have driven a car in Los Angeles or Tokyo or Mexico City during rush hour you have witnessed incoherent karma at work. If you have taken a high-speed train in Europe or Asia you have seen coherent karma in operation. While stuck in traffic at 5 miles per hour, you wonder why, with higher numbers of cars, it becomes impossible to move at 70 miles per hour. The high-speed train engine pulling 20 or 30 carriages with hundreds of people can move at 200 mph with no problem.

The reason for the traffic jam is quite simple: Each driver is in incoherence with the neighboring driver. You don't know if the driver in front of you will suddenly slam his brakes or change a lane or swerve to avoid a box in the road. So you have to leave a minimum length between two cars. Typically, at 10 mph a car moves about 15 feet in a second and for most drivers it takes a second or so to react (the reaction time could be faster, but most people are not driving with total alertness), so one must give a space of one or two car lengths per 10 mph of speed. At 70 mph you give a space of a dozen or so car lengths. If the number of cars becomes large you have to slow down, since you cannot give the needed space between cars. If the density of cars becomes high you are in a traffic jam. You are burning gas, but not getting anywhere. Your car may be able to give 50 miles per gallon, but in a traffic jam it will give you 5 miles per gallon. You are spending resources but not accomplishing much.

No one wants to go slow. Since one driver is unable to know what the other driver may do in heavy traffic a jam is inevitable. The amount of time wasted in traffic jams in a big city could be up to an hour everyday for commuters. In a train a single driver runs the train and the spacing between carriages can remain the same (say a yard) regardless of speed.

In our own lives if one karma is disconnected from the previous karma the amount of time and effort needed to accomplish a task can be enormous. For example, if you want to become physically fit and you perform an hour of exercise, but then eat an unhealthy meal and get only two hours of sleep, it will take you a long time to get fit. ***In coherent karma every action reinforces the previous action.***

Coherent Karma and Sustainability

Coherent karma allows you to accomplish enormous tasks with minimal effort. If there were a lot of resources and you had a lot of time to do things you could follow incoherent karma and have little problem. In the example of drivers on a road, if there were very few cars on the road, we could all go as fast as we want.

Coherent karma becomes especially important when the resources are few and you want to accomplish a lot efficiently. In today's global and wired world the importance of coherent karma is quite critical. On a global level, the world is facing challenges that are quite unique in human history. The rise of countries like China, India and Brazil where till 20 years ago most people were living in hand-to-mouth existence has placed enormous challenges for environmental sustainability. The rise of feminism in many countries and the assertion of lower class and indigenous people in some countries are challenging the existing hierarchy. Economic and financial upheavals in highly developed countries have shaken the faith people had in capital markets. On an individual level, loss of cohesive families and a lack of purposeful connection to the society is a challenge. All these issues coming together has made yogic karma critical, since it offers unique solutions to individuals, businesses, societies, countries, and the world, and allows tasks to be accomplished with minimal time and energy. Just as travel by superfast trains helps traffic jams, yogic karma can help conserve resources and time.

Most of the actions taken by us are incoherent or fall in the do-undo mode. In the presence of abundance this was not an issue. However, when resources are limited yogic karma offers the only solution to sustainability challenges.

Creating Yogic Karma: Mathematics of Yogic Karma

If you have spent some time around oceans you have observed waves surging. Some beaches are known for *sleeper waves*. Sleeper waves are produced when two waves (or more) combine together and land on the shore. The new wave produced by the joining of two harmless waves can create death and destruction because it can sweep up unsuspecting beachgoers. The sleeper wave is a coherent combination of two small waves. The effect is a wave that has force and energy many times more than what the two waves would produce. Imagine if a hundred small waves combined to create a giant

wave! That is reflected in a Tsunami. While the Tsunami creates destruction it reflects the power of coherence.

In life we deal with two kinds of quantities: *scalars and vectors*. Scalars are quantities that are just described by their value. For example, things like weight, our salary, value of our car,... are scalars. Then there are quantities that are described by their value *and direction*. These are vectors. For example, the velocity of wind, the force with which you kick a soccer ball, the force of gravity,... are all vectors. When scalars are added the math for addition is very simple. In scalars $1+1$ is always 2. However, in vectors, $1+1$ can be *effectively* as low as 0 or as high as 4. This is the basis of coherent phenomenon.

Consider the following question:

Two people with equal abilities work together on a project. What is the outcome of their coupling? The outcome could be any of the following:

1. The output is twice as much as would have been if the two people worked separately;
2. The output is zero—as if nobody worked. One person made something and the other dismantled it!
3. The output is four times as much as would have been if the two people worked separately.

Random Addition

In the first situation of two equally endowed people working together, it is easy to see what happens in the first example. Each person does his/her work with no interaction with the other person. At the end of the day the total output is just twice what each one working independently would have produced. In this case there is no synergy in the two workers.

Destructive Addition

In the second case the two workers fight with each other on every issue. One nails a piece of wood, the other says, “No, that’s not how it should be done,” and pulls the nail out. There is non-stop bickering and at the end of the day nothing is produced. Most likely all of us have had the experience of such a pairing.

Coherent Addition of Action

In the third case the two workers are so in tune with each other that one holds the tool and the other knows just what pieces should be positioned, etc. The two work in complete harmony. It is often noted in American business that Ford was the first to recognize the benefits of such coherent work. He created coherence through the use of assembly lines in his automobile factories. The placement of machines and the sequence of tasks were so chosen that workers had to work in harmony, even if they didn't like each other. What happens with two or more people working in coherence also happens in our own lives. Our actions in time and space can reinforce the previous actions or destroy them. If there is reinforcement of actions everything becomes enormously efficient and easy.

This is how coherent karma adds in effectiveness:

- $1+1 \Rightarrow 4$
- $1+1+1 \Rightarrow 9$
- $1+1+1+1 \Rightarrow 16$
- $1+1+1+1+1 \Rightarrow 25$
- $1+1+1+1+1+1 \Rightarrow 36$
- $1+1+1+1+1+1+1 \Rightarrow 49$, etc.

So the rule for coherent (constructive) addition is:

$1+1+1 \dots N$ times is equivalent to N^2 . So if 100 people work coherently the result is equivalent to 10,000 people working independently. If 1,000 people work coherently the result is what a million people would produce independently! Imagine a country of a million people working coherently! The result would be what a trillion people would produce! What people can do working coherently an individual can do when his or her individual karmas work in harmony. In other words, ***every action reinforces the previous actions.***

Coherent action is seen in families where there is harmony. Relationships thrive, children are able to nurture their talents, there are few crises. In businesses where there is coherence, employees feel respected and are able to be creative. When you see someone who seems to do massive projects almost effortlessly, the person is using *coherent* math.

In our body we have over 600 muscles. Imagine if all of these muscles worked coherently. Imagine if our organs and nervous system worked in harmony. Our mind and body worked in coherence. And if we worked in harmony with our friends!

ACHIEVING COHERENCE

How is coherence achieved? If coherence can produce such amazing results why doesn't everyone use it? Why don't businesses use it all the time? Why don't individuals use it? Why don't families and social groups use it? Why don't countries use it? Businesses, of course, know the benefits of coherence, but they may not know how to create coherence among the workers. Arrogance and ego usually get in the way of coherence. The concept of *Ik Onkar*, or the recognition that there is oneness in every worker, requires humility that is essential to creating coherence.

To achieve coherence or *yogic karma* we can use the *ashtang* or eight limbs of coherence. These are

- 1) **Yam**: Understand the rules governing the action;
- 2) **Niyam**: Establish a setoff guidelines or best practices that will be followed;
- 3) **Asan**: Challenge yourself to ensure that stresses don't take you off the yogic journey;
- 4) **Pranayam**: Nourish the journey; *Pranayama* (literally meaning rules of life) is a metaphor for nutrition in all its forms. For individuals the pranayam is breath and food, a nurturing envelope of being in Nature, touch and love. For a business pranayam represents capital to run the show, creative energies of the workers, fellowship where everyone feels valued.
- 5) **Pratyahaar**: Respect your innate talents so the journey is conducive to your growth;
- 6) **Dharan**: Be aware of outside challenges and opportunities;
- 7) **Dhyan**: Maintain focus so you can restore the journey if there is any deviation; The concept of *dhyan* or mental focus ensures the coupling of diverse karma. The mind is then so engaged (at a meditative level, requiring no thought) that karma reinforces previous karma.
- 8) **Samadhi**: Release any stresses and accept the outcome even if things don't work out.

The most important ingredient in creating coherence on any large scale is the presence of a **common purpose and trust**. If two of us are trying to push a car stuck in deep snow, we need to at least agree which way to push. The concept of *Ik Onkar*, or oneness in all

being, represents this concept. In a coherent action, the whole is of importance. So in physical fitness all the muscles are nurtured. In family fitness all members of the family are respected and allowed to develop. In businesses the focus is not on fear and intimidation, but on respect and space to contribute.

THE KARMA-FRUIT RELATIONSHIP: THE OPTIMUM POINT

Let's say that we are able to bring coherence in our actions. What is the fruit of these actions? The actions could be to build monetary wealth (through savings, investment, etc.), build our own health (exercise, healthy habits), build social wealth (nurturing our friendships) or for any other purpose. The actions bring fruit and if we increase our actions we gain more fruit. How does the relation between action and fruit look? Figure 1 below shows a general relationship between coherent effort (yogic karma) and fruit. To understand the relationship shown, let us use the example of *healthy calories eaten as karma and the resulting health as fruit*. There are four regions in the karma-fruit relation as shown:

(1) *Lossy Region*: If the caloric intake is below, say, a thousand calories a day, we will simply be starving. The question of healthy feeling will just not arise. We will be in a famished state. We won't feel like running, riding a bike, playing sports, etc. Our mood will be sour and our friends will not like us. This is the state of an anorexic person.

(2) *Threshold-Up or the zone*: Once our intake reaches a minimum threshold which for most adults appears to be around 1500-2000 calories, our sense of well being suddenly changes for the better. We feel really energetic, want to run on the beach, chase each other, etc. We are in the *coherent zone* now.

(3) *Saturation Region*: If our intake continues beyond two thousand calories our state of health does not improve much. We become a little heavier and our body gets stronger, but our agility decreases. By and large our overall health doesn't improve or degrade much if we increase our food intake above the threshold-up region.

(4) *Threshold-Down or failure region*: Finally if we consume more than, say, 5,000 calories, unless we do hard labor all day or are professional athletes, we become obese. The effects of obesity on humans and animals is now well documented.

Till recently obesity was rarely a problem for humanity. There was so little food available for most people. It was hard enough to get into region 2. However, an explosion in food

manufacturing technologies and distribution channels have now made obesity a big problem for most of the developed societies and even many developing societies. Health organizations around the world are now alarmed at the increase in diabetes, heart disease, blood pressure and many other diseases related to obesity. It is predicted that within a generation obesity will be more deadly than starvation to world health.

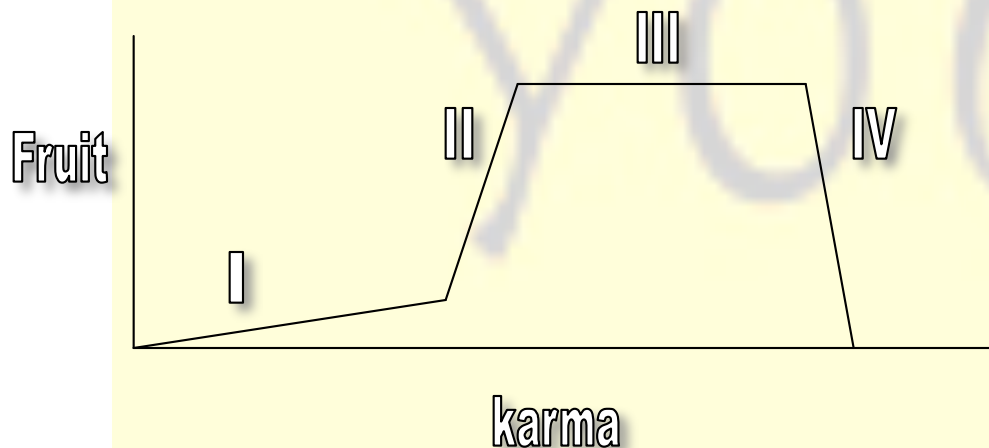


Figure 1: A typical plot of fruit versus effort or karma. The karma is all coherent. In the text we use this universal relationship in the case of calories eaten and health produced. Ideally we want to be in the region II where the fruit is very high for the minimal effort. As metaphors region I represents *anorexia* and region IV represents *obesity*.

Obesity arising from food consumption has been the first *visible* area where we see a clear catastrophic failure arising from over consumption. The action-fruit relation shown above is quite universal for any action. It is seen not only for humans, but in technologies ranging from lasers to radar systems. From traffic systems to urban planning. There is always a threshold-up point beyond which the fruit suddenly increases rapidly and a threshold-down point beyond which there is failure.

The threshold behavior is seen in athletes who use the term *ZONE* for the region 2 where everything seems to fit perfectly and effortlessly. The basketball players, sprinters, swimmers...even the less gifted athletes find 'the zone.' Any less effort or any more effort takes them out of the zone and their performance drops.

When should we back away from karma; where is the limit?

We often hear stories of workaholics who lost their families and health. Of businessmen and women who devoted so much time and effort in building highly successful businesses and then had a massive heart attack or had a stroke. How do we know where the limit starts beyond which saturation of fruit returned occurs? More importantly how do we know where the limit is when catastrophic failure is about to start?

Unfortunately it is very difficult for us to figure these points out, since we are so involved in the whole process of action and reward. Often by the time we figure out that we are in the catastrophic regime it becomes too late. On the other hand, we can very easily see if *someone else* is in the saturation or catastrophic state. We can advise others on what may be wrong in their lives and sometimes help them see their problems. However, when it comes to our own status we are blinded. To see where we are in the karma-reward curve we need to be in the ***involved-detached*** state. We need to be involved in the action otherwise we will not be able to see and enjoy the reward. But if we are too involved and cannot step back and see that the reward return is decreasing even when we use more action we will not be able to judge our status. To be able to stay involved and experience the delight of the reward and yet step away and observe ourselves dispassionately is not an easy task. One can use an approach based on meditation, yogic exercises and through the guidance of a mentor or teacher.

Meditative Exercises: The practice of meditation is a powerful set of techniques that allows one to develop the involved-detached state. Also in the practice of yoga one tries to achieve the meditative state while doing something physical. In the yogic practice the yogi attempts to be highly involved in a challenging exercise (say a yoga-asana or posture, or a chant or complex breathing patterns) and slowly learn to detach ones mind from the act. This allows one to be very mindful of all karmas. The self-awareness that results allows one to monitor ourselves very accurately.

Guide: It is very difficult to judge one's own state although as mentioned above it can be done. An outside person is therefore very valuable. A person who can help is a Guru. A true Guru can help us see our state in the karma-reward curve very effectively. The Guru has to be *egoless* before he or she can provide this help. By being egoless the Guru has only your well being in mind. The Guru is not interested in you as a means for his or her own gratification. The egoless Guru who by definition is a wise, Universal being, can see

our situation and advise us without his or her personal self interest causing any error. The difficulty lies in finding such a person. In many cultures societies have nurtured such people but in most modern societies the only person fulfilling this role may be a therapist who will guide you for a sum of money. Of course this can also be very valuable especially if the therapist has no involvement of his or her ego in the situation.

In the field of human health it is now well established that over consumption of food relative to human activity has led to a growing epidemic of obesity. Obesity growth is empirically linked to technical and market advances. There is little doubt that in every area of personal gratification it is becoming possible to reach the regime of catastrophic failure – thanks to advances in market technologies. There was a time when an overweight person may have been looked upon with a sense of envy – no longer. The day is not too far that this will be the fate of people owning ten thousand square foot homes, personal jets, personal cosmetic surgeons, ... Already advocates of global warming and nature preservations are targeting over consumers. But just as acceptance and realization of problems of obesity has not led to any real solutions, recognition of the downside of over consumption is unlikely to have much impact on people's lifestyle. Only a small fraction will find alternatives to high consumption and find choices that give as much pleasure as consumption.

People consume because consumption gives enormous pleasure, especially when one goes past the threshold point. It is very difficult to give up the pleasure of fruit without other replacements. Therefore one needs to find other activities that one can take up to substitute for what is being given up. It is important to have a *diverse set of activities* so when one type of activity reaches saturation we can pursue another one.

Wandering Karma: Benefits

We have focused on coherent karma so far. ***Should we always pursue coherent karma or are there times where we need other kinds of karma?*** We need to note that efficiency is not the only purpose of human life. If you are clear about what you need to do, yogic karma is the best way to move forward. But what if you don't know what to do? In this case the wandering karma or even do-undo karma is important.

In the wandering karma we ignore the *ashtang* or eight rules described above for coherence or yogic karma. This makes accomplishing tasks very time- and resource-

consuming. But it does have an important benefit. As noted above, the coherent path is excellent if you already know what you want to do. But it does not lead to any *creative output*. You don't discover new pathways, since you are focused on increasing the efficiency of a known fruit. But sometimes there is a need of finding new pathways and discarding old pathways. So there is a need to search for new paths and expend the extra energy even if the outcome is not clear.

Regarding the example of the traffic jam: could there be benefits to a traffic jam? Perhaps while idling in your car you lock eyes with your future love and exchange numbers!

In science and technologies discoveries come from wandering paths. In any technology company there are Research and Development groups. The researchers are largely using wandering karma to make new discoveries without which the company will decay. A lot of resources often lead to nothing. But that is acceptable, since there is a potential of a breakthrough outcome. The development groups are the coherent karma group who are trying to make products with greater efficiency. Without the development groups there are no products to sell.

So how much of the resources should be spent on incoherent karma and how much on coherent karma? The effort-split often used by successful and innovative companies is 10% for wandering karma (research) and 90% for coherent karma (development). That may be a good choice for individuals as well.

Do-Undo Karma: Breaking the Cycle

For children the do-undo karma is essential, since that is how they learn and master their skills. Some do-undo karma in our lives even as adults is needed to have fun. However, do-undo cycle can become the source or reflection of an addiction. Whether the cycle involves alcohol or tobacco or drugs or being a workaholic or something else, once the cycle is set in and is rigid, it is extremely difficult to break. Experts trained in addiction are needed to break the cycle and an individual should use these resources, especially if the addiction has become acute and requires medical intervention. It is important to recognize that addictions go beyond the grip of will power. The brain is so used to the pleasure provided by the do-undo karma that one cannot simply abandon the pleasure. It is important to find alternative pleasures. The concept of *pratyahaar* is needed to figure out alternative healthy activities that resonate with the person and pursue them. One can benefit from the following techniques:

- Replace the pleasure of the do-undo addiction with other pleasures that are less damaging. For example, if one can learn to enjoy physical activity that does not lead to injury (eg., a well-designed yogic session) this pleasure can compensate for the addiction pleasure. Yogic breathing, asans, etc., can create a deep sense of pleasure without the chance of injury.
- Develop *niyams* or disciplines that keep you from the do-undo activities. For example, if you want to break the habit of eating snacks at night after dinner, you could set up the *niyam* of spending 10 minutes flossing and cleaning your teeth, doing several minutes of yogic breathing, etc. You could also ensure there are no snacks around even if you have to shop everyday. Search for *niyams* that keep you away from the karma that is addictive in a creative and doable way.
- Use the *slow and small* concept: If you have an eating habit you want to break, learn to eat very slowly and eat small portions. This change will slowly make you more aware of what you are doing and help you decide to help you make alterations in your lifestyle.

