

'FOUNDRIES & FARMS'

Two Different Pots

(APPARENTLY POLES APART!!!... YET SIMILAR)

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ABSTRACT:

Dear fellow Foundrymen: Let us journey you through to prove the point of a FOUNDRYMAN being very much in similar situation as a FARMER and he also merits all the considerations for easy and assured availability of RESOURCES AND RESPECTS. To justify this, we have deliberated closely on similarities between the two different practices adopted by them with a moment of hilarity in otherwise a dry routine of challenges we face every day in our life (May look funny to some) and hope it cheers you up. Please read each and every word of the text to enjoy fully.

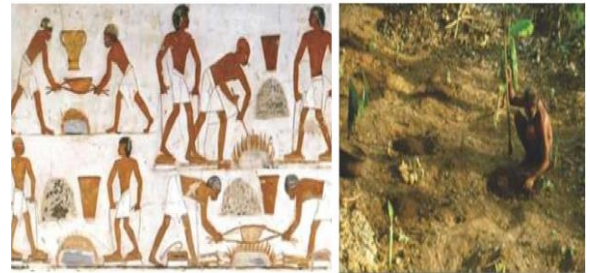
"The Human who hurled an insult instead of stone was the Founder of Civilization." Sigmund Freud

THE SIMILARITIES:

1. ENTRY INTO THE WORLD

Motivated by Need - Farming got motivated by need to meet hunger of LIVING BEINGS and Founding motivated by need to create FODDER FOR INDUSTRIALISED SOCIETY. Farming had its inception since civilisation. The wandering man, an aboriginal, could not fill his belly with naturally grown fruits and vegetables alone or by killing the animals. So, he went for cultivation to get produces from mother earth in an organised manner (Farming) to fill the belly and then to satisfy his taste buds. He developed ways to produce varieties exploiting the regenerative

potential of mother earth and developed a knack of it.



Founding, on the other hand has its root followed by vertical growth in seeking comforts of life that led to the start of Industrialisation to produce implements, tools, machines, transportation means and luxury items/housing — shelter for all weathers, health care — aids to reduce human efforts, also to be one up in combat warfare means...which had taken place as an offshoot for showing supremacy over others. As such both are the early need-based innovations in "their entry into the world".

2. A NEW PRODUCT SHAPE



Output has no resemblance to Input - Both Techniques create a totally new shape out of Inputs used. The Produce is totally different from their original source. The Farming Produce is different from the stem coming out of the seed while the Founding Produce (Castings) is different from the Solid Metal and Alloying Products, its basic Raw Material. The Molten Metal is given a raw shape of the new desired shape by pouring the metal into the Mould/Die having a negative replica of the desired Casting.

ALSO, PRODUCT GETTING DEVELOPED OUT OF SIGHT & UNTOUCHED:

Unseen happening - In Farming, the ultimate product gets developed under the care of Nature out of Oxygen from Air and Nutrients from the ground Earth dissolved in Water. While different stages in the development of the Farm produce can be watched, but the internal process of the transformation remains untouched and unseen. It becomes a topic of an unending scientific investigation. In a similar manner, Founding of the Casting in the mould/die remains unseen and untouched with the logic of the molten metal filling the blank space provided in the mould/die and solidification taking place in situ creating a cast shape. Any infirmity in the cast shape becomes finger crossed guess, as the solidification takes place out of sight and untouched.

3. HARVEST/CASTINGS: Output has a Brand

In Farming the product is the Harvest. The Farmer keeps a watch on the progress of the Harvest and values his effort on the quality and quantity of the Harvest. If the Harvest is good, he is happy otherwise goes into indebtedness and depression. In the similar manner, the Foundryman looks at the Cast Product at Knock out stage. A preliminary investigation and finding of any undesirable infirmity in the Casting is looked upon seriously and action plan is drawn out to avoid its recurrence in next batch of production. Volume of operation plays a big role in both cases for their viability. More

acreage in Farming and more tonnage per unit of time improve the Economics.



"Earth there is so kind, that you just



tickle her with a hoe, she laughs with a Harvest." -Douglas Lenard

4. WEATHER DEPENDANT

Nature playing a major role — Both the Techniques are vulnerable to climatic changes. The Foundries need a dry weather and environment, while the Farming needs a good rainfall associated with good sunshine after the stems have cut of the earth.

There is no control of anybody over nature's wraths and both, Foundries and Farms, keep on looking at the sky and atmosphere outside all the time when their operations are on. Any abnormality in weather conditions plays havoc in the quality of their produce and the players in these fields keep on praying for a good weather conducive to their operations.

5. INCONSISTENCY AND UNPREDICTABILITY

Glorious Uncertainties



Both the Techniques have a dominating feature of inconsistency and unpredictability in achieving success. This is due to a bucketful of variables, a good number of them being independent to each other. While analysing the mishaps and failures, one can easily get to the root cause of what went wrong and what remedial action got ignored somehow or was it totally incomprehensible. However, the damage has been done and any corrective action can be made applicable in next batch of production only.

6. PRODUCT QUALITY REQUIREMENTS

Needed or not needed - While some of the Quality requirements of the products as specified are reasonable and justifiable for the characteristics they must possess for their application and use in the next stage of their respective supply chains. However, there are innumerable cases of the requirements on the products which go totally irrelevant in their use and imposed by the buyers — WE MAY DARE PUT ALL- on some illogical, ignorant and whimsical attitudes.

Examples can be quoted — one goes for a round smooth potatoes when buying them, though for its use in majority of the cases they are cut into pieces before use and roundness and smoothness have no relevance in their use.

Similarly in case of Castings instances of high-quality requirements like very high dimensional tolerances close to even rough machined surfaces which may not be needed in their use, making the castings costlier.

Some of the Radiographic tests and acceptable parameters, not contributing towards their usage and applications, are imposed upon the Foundries by the buyers. These conditions are attainable at a cost and the buyer and producer must get into a dialogue to firm up the real minimum requirements.



"What is a weed? A plant, whose, virtues have not yet been discovered."
-Ralph W. Emerson

7. PRODUCT YIELD

Measurement of Output - Most important parameter for both the techniques is YIELD. In farming, the Harvest is measured as Tons per unit area and in Foundries it is measured as the percentage of metal going in the Casting out of all the Metallics used in its production. There are other productivity parameters which are also measured but the yield is



the maximum contributing factor in the Viability calculations.

8. KNOWLEDGE DEPENDENCE

Key to success - The science and technology applicable, though quite advanced, still remains unclear despite all the research and trials going in so

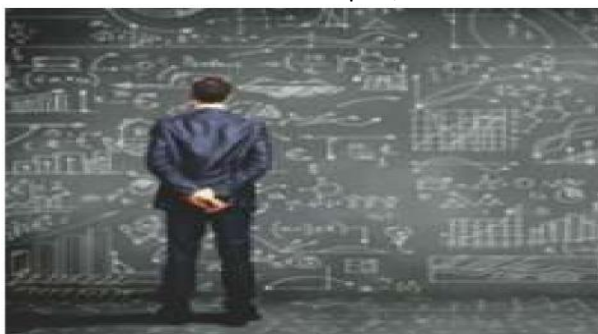
far since the start of these techniques. This has led to a situation where, one who knows the intricacies involved, their effects on quality and productivity in respective fields will prove to be better off and is the true winner. The techniques apparently to an outsider looking simple to practice, gives one an impression that anybody or his uncle can do cultivation or casting, or can do it better. But, in reality, people who have the knowledge of where, what and how things can go out of plan or go wrong are the Master. Those who have this knowledge or take help of knowledgeable people (Advisors) have done better and gained substantially. Spending money for Scientific and Technical knowledge is



always a wise and sustainable investment with quick and finite results.

9. BLURRED KNOWLEDGE

Fuzzy Logic - Both the Techniques, unfortunately, have yet to come out with an accurate Scientific and Technical Knowledge and Solutions. In spite of extensive research, logical reasoning and standardization over a pretty long period since introduction of these techniques, the stakeholders



have to live with approximation, something similar to Fuzzy Logic. To illustrate; while calculating two plus two, instead of getting a perfect four, one gets something close to four and this approximate value becomes the rule of the game.

A stage of reaching a perfect enduring solution is yet to be achieved in both these techniques. The efforts to get a perfect solution are continuing but it cannot be predicted when such a perfect solution to the issues involved gets established.

10. HUMAN FACTOR

Human dependence - Both the Technologies have to engage a big labour force to complete operations. Over a period of time, however, since the inception of Technologies, industrialization and Modernization; they kept on focusing towards creating ways and means for reducing the labour content. It has helped in reduction of Labour part, but to a limited extent and both will remain labour intensive. The systems which were viable and acceptable by owners/users are semi mechanised. Fully automatic Technologies, even if created, cannot be made financially viable at all due to present low wage structure in India. It is only in developed countries where labour cost is pretty high; these modernisations could find some relevance. Due to high engagement of labour force, there are chances of human mistakes. A major part of Management action is related to avoid these mistakes and focus is to keep them to bare minimum.

11. LOWEST END OF SUPPLY CHAIN



Prime Producers but Last in Consideration - The produce in its raw form in both cases is at the lowest end of their respective supply chains. The Farm produce is at the lowest end of food supply chain. In the same manner, Castings can also be seen at the lowest end of Industrial supply chain.

In a majority of the cases, the products of both the techniques cannot be used in their raw form. They are to be processed further, may be in different steps in the supply chain before use and can be made really useful and ready for utilization. Such operations do go for a value addition but the Foundries and Farms do not get any advantage in this value addition exercise.

12. LOW & UNCERTAIN RETURNS

Risk of being Unviable - Being at the lowest end of their respective supply chains, the products become vulnerable of low realization. This affects the Viability of their business activity. There is a very low contribution prevailing upon in both the techniques. In farming, their product however has a mass consumption and increase in prices will affect the society. To avoid this, for this by and large, world over government subsidies are an accepted norm. But for Foundries there is no such solace and survival for the fittest rules. For this they and even Farming has to fall upon focused Technical and Management skills to get a sustained Viability.



The one recourse for both of them is to go for forward and backward integration, but the output of any individual unit is much lower than the viable volume of such integration operations. Some sort of cooperative sharing facilities or giving them on contract as job work to the owners of the viable facilities of forward and backward set ups can be considered as workable propositions.

"There is nothing new under the Sun from thousands of years ago. The

difference will be in how each owner approaches the challenge."
King Solomon

THE ROAD AHEAD

All said and done, with continuous improvements in these two techniques, they have all focused on:

- Better and Higher Productivity with least labour engagement.
- Output increase — be it per unit area in farming and per unit metallics in castings in founding.
- Higher produce out of the available resources and infrastructure.
- Waste Control, keeping as low as possible and possible ways of reuse or other applications.

Each of the areas above has always remained under serious discussions over a period of time and with all the Stakeholders contributing about their advancements, has improved the Benchmarks and Industry norms. Being at the lowest end of the supply chain resulting into non remunerative realisations the ROAD AHEAD is not a smooth drive and is full of potholes, even ditches and gorges.

It is either "Perish or Survive, sometimes a limping survival" and all innovative ideas have to be carried over in house, rather than waiting for remedial actions or help coming from outside.

However, guidance of experts in the field is abundantly available. The actions are to be initiated at operation level. A bend in the road, does not mean end of the road. An African proverb needs to be quoted-"There is no way out of desert except through it". A focused outlook with watchful eyes for the latest in the field is absolutely necessary with a progressive mind to see the possibility of adopting them to their advantage. The expert guidance is always cost effective on account of gains out beating the compensation being paid for the advice.

"Grow CROPS if you are planning for a year, plant TREES if you're planning for 10 years and start TEACHING if you are planning for 100 years and beyond." - Confucius

CONCLUDING

The deliberations have been made with an attempt to pinpoint the similarities between two important practices adopted by the Human Fraternity since the time of advent of civilization —one Farming for his daily feed and diet and the other Founding for feeding the Industrial requirements. There can be many more similarities if more effort in this direction is made. However, one thing is clear that these two techniques took their birth during the start of coming out of stone age and kept on prospering, got newer and newer dimensions and shapes over time and will continue as the need of their respective product will remain and continue, may be in their different Avatars, as long as human beings live in this universe. This, of course, is heartening for the Farmers and even Foundrymen like us. But the tragedy is the low realization and viability which deprives them of enjoying the fruits reaped by them inspite of sweating and all hard labour they undergo. They continue living with limited means and resources. Any back of the envelope calculation will indicate that in the present scenario the Viability of the Foundries is not there and even if it is there, it is too low and in trickles. In this game one should keep in mind that to ensure his identity and place he has to be a Marathon Runner, not one who runs a 100 Meter race.



However, the Farmer has at least a shoulder to cry upon, THE GOVERNMENT. Because of their VOTE BANK potential, they manage to get minimum support price, subsidies in Inputs — Seeds, Fertilizer, free or cheap rate Electricity, Fuel and Low Interest Loans etc. Unfortunately for the FOUNDRYMAN, there is no such shoulder to cry upon. For him, when the going is bad and unviable, no help comes forward and he has to put his own Oar into the Stream, whatever it may cost him to remain in Business. The saying, "if you want to join a Golf Club, you must know how to play Golf," applies to him fully. **THERE IS NO FREE LUNCH FOR THE FOUNDRYMAN AND NOR IS GOING TO BE IN THE FUTURE.**

"A recession is when your neighbour loses his job; a depression is when you lose your job too." -Ronald Reagan

**FINALLY ON BEHALF OF BOTH FOUNDRMEN
& FARMERS WE SUBMIT:**

***"The Woods are dark and deep;
But I have promises to keep,
And miles to go before, I sleep."
-Robert Frost***