For Whom The Bell Tolls

anyarch@rediffmail.com

The objective of this article is to see how we can produce architecture that is worthy of our muse. I hope it would excite enough of you to use the thoughts here to articulate those of your own. I also hope to gather together enough of your individual thoughts so that a larger collective is formed, akin to the way an ant-hill is built. That collective should *emerge* from the concerted actions and thoughts emanating from each of us. Even though each ant may be a puny animal, the *emergent* property of a concerted collective can be quite potent indeed. I shall talk about *emergence* more at the end of this article.

I believe that we are at the verge of a grass-roots movement in architecture. Let me not dwell too much on the recent happenings that has shaken much of the world. Not only has there been momentous events at a global scale, but when I look around the corner of the road, I find flaws and fallacies that undermine the processes which are responsible for the products that we lay at the feet of our muse. I do not want to dwell on the specifics of such products. It would only distract from our purpose here. Instead, I'll concentrate on the processes.

Let me approach our final goal in the reverse logical order, as they sometimes do in mathematics. Let me assume we have reached the final goal and we do have some appropriate methods of producing good architecture. If so, then each and every one of those methods can be examined for its validity. What makes a method valid? When it is based on a sound principle. And how does one know whether a principle is correct? When it is built on the foundation of a more basic set of principles – each of which are known to be sound! In short, we should walk backwards through the entire daisy-chain of methods and the principles behind those methods and reach the core around which our working methods are built. If we peep into that core, we should see some fundamentally sound principles at work.

If we see any invalid principles in the core or elsewhere in that daisy-chain, then the mathematicians would say we have reached a "reductio ad absurdum"[1]. It basically means that our initial premise that we did achieve our goal was wrong (absurd proved by reduction) and we should start all over again with another set of working methods. Each one of us will need to repeat this exercise till he/she is sure the core is correct. Once we have arrived at the core without encountering any invalid principles on the way or in the core, then we can safely assume we have a useful working method with us.

The advantage of doing this investigation in this manner is that I need not introduce my personal biases on what construes to be good working methods. I am certain there would be several. And all of them should be accommodated into our grass-roots movement.

I shall therefore highlight just four questions that I feel ought to be asked when we look at the core of our practice. I am certain that more learned peers than me should be able to highlight a few more.

---

1   http://www.utm.edu/research/iep/r/reductio.htm

1. Is it fair?

This question can be answered if we understand the **principles of natural justice** [2].

These principles are basically two in number:

1) No man can be judge in his own cause. 2) No man shall be condemned unheard. There are more principles which fall under this category, but those are finer interpretations that are useful for legal discourses.

The principles of natural justice can be explained using an example from our daily life: It can simply mean that if you are annoyed with somebody; tell him or her on his/her face and then stand back to patiently hear the other party's evidence before arriving at any conclusion. Do not hide your annoyance from the other party because if you do then you would be guilty of breaking the first part of the principle. Similarly, if you know that someone is annoyed with you, it would be a violation of the principles of natural justice if you do not take steps to investigate the matter. However, I know that most of us often put our annoyance under the wraps of politeness.

When you indulge in gratuitous politeness and do not entertain further discussion on the matter, you are in fact sitting in judgement on something that affects both parties (i.e. you would be guilty of arriving at a one-sided conclusion). Some believe the fact that you were polite may have made the atmosphere more congenial. I personally do not believe so; but even if it does, then it is a secondary benefit and even then you would be as guilty as any chap who may be frothing from the corners of his lips in anger.

There are many who believe that the "goodness factor" of their politeness should be used to offset the violation of this principle. Politeness simply has nothing to do with this principle. In fact, I have found real scoundrels who violate the principle of natural justice, hoodwinking gullible people around them by being polite.

The second clause of these principles states that after having precipitated a discussion you should allow the other person to produce evidence in his/her favour.

Why should these principles be at the core of our introspection? This question actually need not be asked. The principles of natural justice are at the core of many things we do in society – not just architectural practice. Juries everywhere, not just in architectural competitions, have to strictly adhere by the principles of natural justice.

Nevertheless, let me highlight how these principles are relevant to the process of creating architecture by an architect. When I step back from my design desk, after having just fleshed out a design I am most vulnerable to the violation of these principles. Because, at that point in time I can stand in judgement of my own work and come to a conclusion that my design is a nice one and, yes, it can now be given over to execution. That is precisely the moment when I need someone from outside; completely unbiased, to come to next to

---

2 http://www.citcindia.org/itr/july01/nmranka.pdf

me and judge on the design. Unfortunately, that is also precisely the moment when I am most intimate with my design and most unreceptive to anyone who wants to pass an opinion on my design; unless of course it supports my own point of view. Involuntarily, I break the first of the principles of natural justice as I become "a man judging his own cause". At that point, I may often commit injustice to the end user.

When the end user is in actually known to me and hovers in front of my drawing board then much of the ill effects are worn down by demands that are placed on me by the user. Invariably, I would then be forced to iterate through several rounds of the design cycle. Often the design may turn out acceptable due to those iterations. That is when many architects, caught in similar situations, erroneously feel that they've got the process right. But no. The process is still wrong because in the aforementioned core of the process, we have not really respected the principles of natural justice. It was only due to the sheer iterative process that was demanded by the end user that the design turned out all right. That process often (but not always) produces acceptable architecture. But it can never produce great architecture. Because the extra fillip due to an outside critical eye, that can spin the design process to a higher orbit is absent.

Whereas the quality of the design may be acceptable (though not great) when the user is a known to the architect, there is a tremendous loss in quality when the user is unknown and the architect insists on only an introspective process to criticize the design. Say, in a public housing scheme where the actual users are unknown even to the clients who are financing the scheme. Unfortunately, the effects of this violation is often not felt by the architect because the victims of our mistakes are one or several steps removed from us. And even more unfortunate: there are no real mechanisms where architects go out there in the field and seek real feedback from real people. Instead, we move around in our own coterie, mutually back slapping or back stabbing each other. In those cosy gatherings, how many of us really open out our design to fellow critics? More often than not, architects indulge in mouthing design *intentions (*uttering statements like: "I designed this space to feel intimate") without first checking whether those *intentions* actually *materialized* in the real world (i.e. did the world actually *experience* that space as being intimate, etc.)

Ouch. Did that hurt? I know some of you would protest and say that your moral stance is so impeccable, and your introspective capability so strong that you can really judge the good from the bad. I must politely and calmly say no. Such stances remind me of an example that a friend of mine (a doctor) who told me about a lecture he often gives to fellow doctors. He would ask "How many of you believe that you are wrongly influenced by the freebies that medical representatives hand out to you?" and invariably no hands would be raised. Then he would ask "How many of you believe that there are *others* who are wrongly influenced by freebies that medical representatives hand out to them? and invariably there would be quite a few hands raised. Why should there be a difference? This is because we lose sight of our own feet when we get the paunch of our self assessment in between.

Now I may be a bit harsh in my above conclusions, because there could be simpler explanations. For example, many of us may feel that pointing out mistakes in others is not

really a nice thing to do. Or we may be embarrassed about exposing our own stupidities that we've only managed to learn from hindsight. Or we may think that once the results of a competition is out, the matter is no longer in our hands, and hence we need not bother with it any more (which is where the collective emergence starts breaking down. More on that later). All those are simplistic rationalizations. Whatever maybe the case, the fact still remains that the first principle of the principles of natural justice would stand broken when our designs are not subjected to external references. Period. Winning or losing or embarrassment or anger or in fact, any of the emotions have nothing to do with it. Period, once again.

Part of the problem is a technical one: Architecture never had a representation system to expose design intentions accurately to unbiased critics. Whatever representations of architecture we do (using models, drawings, CAD, etc.), they invariably move through *subjective* interpretations before they can be criticized. And using the grey area of subjectivity in those interpretations, many a clever speaker have enthralled many a jury to capture many a project (with many a flaw in the designs!). If we can only agree on a common representation system, a large and important part of the problem can be addressed. But apart from the technical issue of representing architecture correctly before it materializes, there is the human issue of a collective will and empathy that needs to be instilled.

Here is a example that shows how it can work: Part of the reason why the open source movement in software is producing results of a very high quality is that the *source* of the software is truly being opened out. When one software engineer puts the source-code out there for others to see, he or she is fully respecting the first principle of the principles of natural justice. The source code can never mouth empty design *intentions* because those *intentions* can easily be checked out. The computer language used to write the source code is the commonly agreed framework (i.e. the representation system) which ensures that objectivity is maintained.

A software designer can never get away by making vacuous statements of intention like "My software will do such and such blah blah blah " and then get away with it by obfuscating the matter with some ill thought philosophies that no one can fully agree upon. (Not that software designers are always beyond blame. Closed source software or proprietary software designers have often tried the same tricks that many architects do, and when they do such obfuscation they get roundly laughed at) In the open source movement, where the *source* of a software is opened up, there can be no confusion because not only is the *representation* objective (i.e. without going through a subjective layer of interpretation) but there is also a *cooperative will* to improve the process and let the process naturally generate the right product.

The representation problem in architecture on the other hand is a humongous one with too many theories and too little coherence. So let me not digress into that issue right now. Apart from getting architecture representations right, what is needed is a will that has to emerge collectively to respect the principles of natural justice.

I have talked enough about the violation of the first of the principles of natural justice.

What about violation of the second one? *No man shall be condemned unheard.* In fact, violation of this rule happens much more than the first one. As Victor Papanek had implied in *Design for the Real World*[3], it is designers who have cordoned off and usurped the field of designing to themselves. We need to step from our high horses and include the mass of people who could contribute to designing, whose voices we have not been hearing.

I believe architecture is not privy to just architects. Papanek had pointed out an obvious fact that many tend to gloss over: Humans are the only animals that change the environment when faced with environment problems. The rest of the animal kingdom, by and large, change themselves (by growing fur, or migrating to other places, etc.) to handle outside forces. So like it or not: Every human is an architect. I can grant someone who may argue that the layperson may not have the skill-set to express architecture. But that does not destroy the core premise that all humans are architects even if some of them are unable to articulate their understanding of architecture.

On the other hand, when have architects themselves managed to represent architecture in a uniform manner, agreeable to by everyone? That has yet to happen. Unfortunately for the human kingdom, only an elite few has bestowed themselves the term of "architect", learnt some special skills, mistook those skills for knowledge and went around suppressing the inputs from other fellow human beings.

Once again I may be guilty of being excessively harsh with my colleagues. Because in the middle of all this, I know for sure that there are trained architects who are modest and are not interested in the previously mentioned exclusion game and *do* take in proper feedback from the real world. The violation of the second principle of natural justice also happens to them. How many of us really speak about architecture that melts into the crowd? Most of the time we are more interested in posing, postures and personalities mouthing empty philosophies. Everything else is usually condemned unheard.

2. Is it valid?
George Orwell had said in his book, *Animal Farm*[4]: "All animals are equal. But some are more equal than others". Similarly, some work of architecture is more valid than the other. There is a large scale of *validity* for architectural works and each one of us need to know where on that scale, each of our works of architecture lie. It will allow us to prioritize our time and energy so that we can spend time contributing to the field of architecture productively. This is where Pareto's law comes handy.

Vilfredo Pareto was an Italian economist (he was also a civil engineer) who found out that 20% of a population earns 80% of its income. He found that the distribution of incomes and wealth in society is not random, but exhibits a consistent logarithmic pattern. This relationship can be charted in a similar shape, regardless of the time period or country studied. This 80/20 rule as it is sometimes known is now known to be applicable in many areas, not just for explaining the distribution of wealth.

---

3 http://www.amazon.com/exec/obidos/tg/detail/-/0897331532/102-6097912-9820163?v=glance
4 http://www.amazon.com/exec/obidos/ASIN/0451526341/

On the Internet there are several websites[5] that gives the actual maths behind the law and also the following examples: *Today, "Pareto analysis" is a commonly-used method of separating the major causes (the "vital few") of a problem, from the minor ones (the "trivial many"). It helps prioritize and focus resources where they are most needed by showing where initial effort should be placed to produce the most gain. It also helps measure the impact of an improvement by comparing before and after conditions.*

So how does Pareto explain the *validity* of architecture? Assuming that an architect puts in the same effort consistently and has a large amount of samples to test the law with, 20% of that architects work would be destined to be recognized, while 80% will fall on the wayside, labelled mediocre. What constitutes those 20% works?, one may ask. They are the same ones which I had referred to in the previous section – those projects where the end user drives the iterations of the design cycles and forces the architect to hone the design finer till a satisfactory product comes out. Remember that Pareto's law was first seen in wealth distribution. There too, the 20% people were those who *had the power to* force the iterations of policies made by the decision makers (the economic designers), to lean in their favour.

If we use the above definition, there is a simple way to differentiate the 20% from the 80%: If the end user is known to the architect, then the project is definitely a 20% kind of project. Especially, if the user has can wield some influence and/or can participate in the design cycles done by the architect.

Therefore, most housing projects fall in the 80% category as the architect invariably can never know who is going to purchase the apartments they design. All private residences, some institutional work (like private offices) and all interior-designs fall in the 20% area. I would consider esoteric and *monumental* one-off works of architecture to be in the 20% side – even though the audience cannot be fully pin pointed. It is because they have no comparisons, and therefore nobody can *really* know how to judge them.

Then, what constitutes a valid piece of architecture? Did you say the 20% part? I am sorry to disappoint you. That part is not really the valid part. Before someone flushes my argument down a loo, let me explain:

I do agree that the 20% part has a certain amount of allure. If everyone thought that the 20% part is the one that is alluring then what happens to the 80% kind of projects? Nobody would want them in the first place – so the people who would be actually taking those up are those who are not really in it for any love for the muse of architecture. They would be doing them just as routine jobs to be done. Hard cash to be earned. Nothing much more than that. There is quite a nasty bunch of so-called architects who are in that business. In this article, when I mention that there should be real architects in that 80% area, I mean those architects *who truly respect their muse*. Not those who merely act as agents for the builders they work for.

Now take a step back and see the holistic of the entire 100%. What has happened now is that the 80% would be so pathetically mediocre that the 20% turns out to be something

5   http://www.bently.com/articles/999pareto.asp

just about acceptable (or a shade better than acceptable ... to use the same terminology that I used in section 1) rather than any great architecture. If you really need great architecture, then architects would have no choice but to step into the "dirty" area of ordinary architecture and improve that lot also.

If you think that my argument is a bit contrived, I'll put it in economic terms. Lets say there was an island community of 100 people. As per Pareto's law, 80 of them would be poor and 20 would be rich (I am using loose definitions here for the sake of simplicity). Now if the 80 did not have much economic strength in absolute terms, then the 20 would be richer than the 80 alright but not really very rich. Let us call this situation (a) Now, let us imagine that something happened at the island (say they found gold in one of their rivers - situation (b)) and the life of the entire island community was improved. Then, by Pareto's law, the 20% who were rich would be much, much more richer than the rich people caught in situation (a). Similarly, the 80% would have also become richer by a proportionate amount.

Pareto's law has indicated that the rich people in situation (a) can never reach the same level of absolute wealth as those in situation (b) In exactly the same fashion, when there is too much mediocrity in ordinary architecture (the 80% part), the 20% part can never really be anything but just something equal to or barely above the acceptable quality. Rarely would it reach great heights.

If we open our eyes and look at great works of architecture all over the world, we will find that every great piece of architecture would be couched in the context of ordinary architecture of fairly acceptable quality that is not too far away in terms of great quality. It would be because that the 80% is chasing the 20%, that the 20% of the architecture (in that context) would have become great.

I have my personal biases against esoteric projects. I believe there are no real design challenges there. I do not particularly relish people attempting to drive my design cycles by standing in front of my drawing board. In the end, I really do not know whether I had contributed anything much to the design.

I find it more stimulating and appropriate to spend my intelligence to design for the unknown user. Herman Hertzberger had said in an article[6] *"Designing is to do with shoes that fit and not pinch"*. What he had meant was that *everyone's feet* should be examined individually – there is nothing called an *average* user. And when those shoes are to be put for individuals in an audience who are not present to voice their opinion at the time of designing, then the architect really has a worthy design challenge.

The task is often beyond me and many times I cannot rise up to the demands. It is likely that I would be spending a lot more years before I get good at it. Many of my works do get thrown on the wayside and don't make it into the glossies. However I am quite certain that the strategy is not wrong. On the other hand, designing for this kind of projects is my *personal* preference. There can be other ways of running an office too. There is much learning to be done from all kinds of architecture.

6   By their own design – Edited by Abbey Suckle

However, when I see architects making a beeline ONLY for the 20% kind of projects (institutional works, bungalows, interior designs – those projects where the end user is known and/or is right there gnawing at you in front of the drawing board) and reject all other commissions; I feel sad that they really did not understand the principle discovered by our Italian gentleman from the 19th century. I feel sadder that youngsters look at them with great admiration as those who contributed to architecture.

Now we have a serious problem here: On the one hand the allure of the 20% is pulling architects only to that section, but there is a need to work on the 80% too. How do we reconcile this? My answer is simple: Take up all commissions as they come to you – whatever they maybe. And if you excelled in something that belonged to the 80% part, I would rate that effort 80% higher than a job equally well done in the 20% part. In short, it makes much more sense to take the ordinary architecture around us and make it so good that the entire 100% is benefited.

A well balanced architectural practice ought to be like a well balanced diet. It should ideally contain all kinds of projects. If youngsters, reading this article, are keen to develop a quick rule of the thumb to know which architectural office to learn from – I would suggest they go for offices that has done all kinds of projects.

However, often it is beyond the control of many architects to get themselves the 20% kind of projects. Therefore, the next best thing would be to at least *accept* the 80% type projects and do so many of them that you would be sure that at least 20% of the jobs you took would turn out nice. Bit by bit, you and others like you would then be improving ordinary architecture all around you, and pose a serious threat to the esoteric projects – which in turn will also have to uplift itself.

In the last 20 years so of my practice, I have seen scoundrels on both side of the Pareto divide: In the 80% area there are those who are in it purely for the money. And on the 20% side are the those who are secretly happy with the mediocre 80% so that whatever little they do, it would seem that they are producing works of "great" quality. It is for this reason, why I claim that the situation is ripe for a grass-roots movement in architecture – especially in India, and possibly all over the world.

So next time you do a private bungalow or an interior design, and you feel proud of your design and maybe you even got recognized for it, let me dampen your spirits a bit. It just may be that Pareto's law is smiling benignly on you. And it really was not your talent that gave you your recognition.

3. Is it deep?
I can safely assume that all of us aspire to produce works that have enormous depths. I am sure none of us want to produce cardboard cut-outs or stereotypes. But more often than not, I have seen architects producing works that overcome the cardboard cut-out problem by the simplistic method of having several cardboard cut-outs stuck to each other to produce the required depth! If you have not understood the analogy, what I mean here is that architects believe that *just* by putting in various different things they can avoid a

finger pointing at them on their shallowness.

Some get the "depth" using visual pastiche. But that has also become blasé. Some handle it by ensuring that they are cleverly using Pareto's law. (Work on projects that society has already accepted as being in the "deep" 20% portion) . Some handle this issue by only improving the quality of construction or by providing rich finishes. But even more subtler and sinister strategies are also used – like using *a-posteriori* philosophical explanations and pretend that they were *a-priori*. This needs some elaboration:

Philosophers distinguish between two kinds of arguments[7]: *a-posteriori* arguments are those that happen "after the fact". All rationalizations fall in this category. And *a-priori* means "before the fact". When architects gives an *a-priori* explanations, they deserve some respect because they were bold enough to expose their intentions before the design materialized. That can be safely construed to indicate that they were holding themselves accountable. Unfortunately, there are some black sheep among us who have learnt the trick of converting *a-posteriori* explanations to *a-priori* ones. I've seen enough of those at award ceremonies. I have always wondered why I haven't heard their intentions and approaches of their designs before the design got the award.

The worst of the lot, according to me, are those who actually do mumbo-jumbo in their explanations. They quote some obtuse French philosophers who are in vogue now and make it look as if it is quite sophisticated. Here is a site where you will get a lot of articles on post-modernism and deconstruction

http://www.elsewhere.org/cgi-bin/postmodern

I must warn you in advance that it *is* quite sophisticated ... .and I think it reflects the sophistication in current architecture theory. (E.g. the theories behind the award winning entry for the New York's World Trade Centre are squarely based on stuff like that) But persevere, and one shall be rewarded and enlightened at the end of the article. Don't forget to go on to read Prof. Alan Sokal's article also at that website.

What is the way ahead? The answer to that question is already available to the scientific community. There is no substitute for careful *a-priori* argumentation. When I mention this approach to my colleagues, they toss me off as someone who is negating the "beauty in architecture". As if, my scientific probing will somehow violate the potential of beauty in architecture. I believe that everything of value has both a subjective part and an objective part. The subjective part can never be analysed. In fact that is why it is called *subjective*. But what about the objective? There is a lot to be examined there and shared and therefore uplift the understanding of the holistic aesthetic.

I would like to quote Richard Feynman, the Nobel prize winning Physicist, verbatim from an interview he gave to BBC in 1981. He does a better explanation of this subject than what I can remotely hope to do:

---

7   http://atheism.about.com/library/glossary/general/bldef_apriori.htm

Begin Quote:

I have a friend who's an artist and he's sometimes taken a view I don't agree with very well. He'll hold up a flower and say, Look how beautiful it is, and I'll agree, I think. And he'll say, "you see, I as an artist can see how beautiful this is, but you as a scientist, oh, take this all apart and it becomes a dull thing," And I think he's kind of nutty. First of all the beauty he sees is available to other people and to me too, I believe. Although I may not be so refined aesthetically as he is, but I can appreciate the beauty of a flower. At the same time I see much more about the flower than he sees. I could imagine the cells in there, the complicated actions inside which also have beauty. I mean it's not just beauty at this dimension of one centimetre, there is also beauty at smaller dimensions, the inner structure. Also the processes, the fact that the colours of the flower are evolved in order to attract insects to pollinate it is interesting - it means that insects can see colour. It adds a question: Does the aesthetic sense also exist in the lower forms? Why is it aesthetic? All kinds of interesting questions which a science knowledge only adds to the excitement and mystery and the awe of a flower. It only adds; I don't understand how it subtracts.

:End Quote

Richard Feynman in a 1981 BBC Horizon program; "The Pleasure of Finding Things Out".

Richard Feynman went on to learn sketching ... in fact, from the same artist friend he refers to in the above quote! I believe that Feynman was truly an open-minded person and did not have any mental blocks. He started off drawing stick figures that were no more refined than what Kinder-Garten children drew. Eventually he went on to become so proficient at it, that now his sketches have become collectors' items.

4. Is it profitable?
I am fairly sure this question is asked quite religiously by all architects. The definition of profit, however can vary. Some may define profit as something happening in kind (say an altruistic benefit). Some may define it in the regular sense of money. But whatever may be the definition of profit, the question requires more investigation.

In this discussion, I am distinguishing between self-centred and being selfish as two separate qualities. The former is despicable. The latter need not be always so: A person who is concerned with his/her own welfare need not be morally wrong.

A lot of us tend to believe that one's profit comes from being self-centred. That is actually often not true. It is sometimes *believed* to be true because of ignorance. In mathematics game theory, there is something known as the *Nash Equilibrium* that has a direct bearing on this point. Dr. John Nash, the economics Nobel prize winner and mathematician (made famous by the movie "*A Beautiful mind*") had won the Nobel prize for the *Nash Equilibrium*.

The *Nash Equilibrium* is useful for what are known as non-zero sum games. A zero-sum game is one where for every winner there is a loser (Say a game of chess, etc.) In a zero-sum game, a concept of profit is clearly recognizable. But non-zero sum games are not well defined in terms of the profitability for the players. Dr. Nash proved that it is best that participants of a non-zero sum game cooperate among themselves, *even if each*

member is simply concerned with their own beneficence. In short, he showed how we can be both selfish and cooperative at the same time. We need not become *self-centred*.

The *Nash Equilibrium* is reached when each member cannot have any further advantage irrespective of changing his/her strategy to accommodate the *perceived* strategy that the other members in the group may be undertaking. Many (but not all) non-zero sum games settle down at the *Nash Equilibrium* point.

The potential for its application can be seen in many traffic snarls in India. I've got caught in too many of them and I've always wondered if they only could peep a bit into mathematics, it would have eased or maybe even released the traffic jam completely. A traffic jam is an example of a non-zero sum game. Nash had proved that in such situations it is imperative that each member of the group thinks of the best for the rest of the members of the entire group. Only then there can everyone can derive the maximum profit *in that given situation.* (In the example, profit being defined as getting out of the traffic jam as soon as possible) Unfortunately that is not what happens. In a traffic jam, each person tends to think ONLY for himself and that makes the jam even worse. Come to think of it, a traffic jam would have been caused by such self-centred behaviour in the first place!

Let us look at the practice of architecture using game theory thus: All architects are playing a non-zero sum game where there are no clear winners or losers (exactly the same type of games that Dr. John Nash described) The definition of "winning" being producing work worthy of recognition. Dr. Nash has proved that in such situations, it is always the best strategy to have a considered opinion of the others in the playing field. This may seem contrary to logic. Just like in the traffic jam example, I've seen too many architects holding their commissions too close to the chests and without promoting the group as a whole.

There is a mistaken belief in the presence of an absolute *maximum* profit in the system. Each architect believes (erroneously) that he/she can actually get to that point. Sometimes the levels of non-cooperation reaches levels of absurdity: For example I have heard of architects not revealing the tricks of the trade to others. Even trivial things like how to interpret the municipal regulations are often not shared with each other.

They may have seen some examples where people had resorted to illegal means to reach that profit. But in our explanations here, I am not going to compare legal things with the illegal. That is an unfair comparison. Moreover, not many can indulge in illegal procedures, even if the mind is willing.

Nash had clearly proved that one can have a maximum profit only in some situations, and it would be varying *considering the holistic of the situation and depending on the behaviour of the individual members of the group.* A bad or ignorant or downright self-centred member can often pull *down* the profitability for *all* the people in the group. So it is in the best interest of everyone to make sure that everyone is up to the mark.

In public housing projects, I always advocate the use of an independent competition

gazette which should be used to select architects, instead of using the traditional method (followed in India) of a builder appointing the architect using an archaic feudal system. Let the builder publish his specifications and requirements, and let architects freely compete with each other for the commission. Let the playing ground be uniform by ensuring that all participants are up to their mark in terms of knowledge. And then let the best man win. Whenever I had mentioned this system, it had never cut ice with my colleagues: They feel threatened. How I wish, they would sit with Dr. Nash's theories and see that actually there maybe more money for them in the method that I suggest. And better architecture too.

Fair market competition is a threat to the age old feudal system: In a competition in India, (Freedom Park at Bangalore) the organizers did not even bother to announce the comments from the Jury to the participants. They changed the rules at the last minute. Like feudal lords, they just declared what the participants ought to accept and most participants seemed to meekly submit themselves to the whimsical decision of the organizers. I wonder who will get profited by such apathy.

I still remember the scene from *A Beautiful Mind* where the young Nash teaches his friends to get dates with some girls by cooperatively working out their strategies in a bar. I don't think the incident ever took place because it is not there in the book on which the movie was supposed to be based upon. The director of the movie was taking some liberties. But that scene explained the concept of the *Nash equilibrium* ...hmmm... rather beautifully.[8]

Now this explanation should not be used to fuel discussion regarding fees that many architects love to talk about when they gather. What is actually happening at those discussions is not any detailed talk on the *Nash equilibrium*. In fact, they indulge in a rather mean thing, called *cartel formation* in economics: They convince one another on the fees to be charged for various types of projects. This is against a free market and against the consumer. It is illegal in almost all countries (including India) but for some strange reasons even the Council of Architects in India does not have a position on it and heartily recommends slab wise fee structures that precipitate such controversial talks.

The current hot topic in India is the entry of foreign architects into India. The Indian Institute of Architects (IIA) has taken a position that other countries should reciprocate. They have clearly felt threatened. I think many of them do not read economics at all before they take ups such absurd arguments[9]. Architecture can never be bounded into boundaries.

My point was not about money, but about the entire concept of profitability. Something

---

8   (See further explanations here: http://www.ozmioz.com/resources/blurbsPopCulture/nash.htm and here: http://www.chass.utoronto.ca/~osborne/igt/nash.pdf)

9   I would recommend that they read **New Ideas from Dead Economists** by Todd G. Buchholz and Martin Feldstein :http://www.amazon.com/exec/obidos/tg/detail/-/0452280524/002-8804084-8505661 and ALSO read E.F. Schumacher's **Small is Beautiful** http://www.amazon.com/exec/obidos/tg/detail/-/0060916303/ref=pd_bxgy_text_1/002-8804084-8505661

that can become a sustaining principle, repeatable time and again. I've found people often blaming their ill fortunes because someone else in the neighbourhood was charging something less. That need not always be true. One can be running an extremely profitable office in the long run, even though the money may be lesser than the chap next door at some point in time.

Emergence
In the beginning of the article, I had indicated that I shall explain in detail what is meant by *emergence*. It is a buzz word that is appearing in many places, but the meaning is rather simple. It is a word that simply states that when you put many components together and *weld* them together, you would get a lot more properties emerging out of the homogeneous construct than those that were present in the individual components.

After having instilled several ideas into your mind, I am hoping that your own internal processes will take over and will provoke you to bring out something that is not part of you but belongs to the entire world of architecture. The poet John Donne had said, *no man is an island*. We are all intricately connected to one another. And I am not talking about the Internet here!

It is a truism that cannot be avoided. One gives something over to the community whether we want to or not. It is our choice to ensure that something useful can be given. A homogeneous community building effort is sorely needed in architecture. My advice would be to take some time out and take a position instead of merely sitting on the fence watching the proceedings diplomatically. When there is a collective will; much, much more can be achieved than what can be done individually.

Even the ants do it. The chemicals released in their tiny bodies make them scurry around and build up their ant-hills. Emergence can be seen even in inanimate things. The concept of pressure and temperature can only emerge from a *collection* of molecules acting as a *whole*. If one tries searching for the temperature or pressure at the molecular level, they are completely absent. So then how did the entire collection of molecules of gas exert pressure on the sides of the containing vessel? Why cant we architects act collectively and exert intellectual pressure on our containing vessels that artificially restrain us?

Let us take a look at the "molecules" in our field – the fresh graduates and the young architects who join our field. How many of them have learnt logical argumentation techniques and exert real pressure on the entire community to excel? I know of several students who did not even know how to present their thesis properly, who are now running flourishing practices. But one need not just blame this only on villainy or ignorance. The philosopher Edmund Burke had stated: "All that it takes for evil to triumph is that good men do nothing". In short, apathy is all that is needed to destroy the emergence of good will.

I also know of individuals taking easy routes once they start their practice – like planting stories in the media about their "accomplishments" or associating themselves vicariously with the currently fashionable architect in the currently happening place, etc. Much as I hate making generalizations, I am slowly realizing that this could be the general trend.

The sad part of this story is that whatever I've said is quite nicely understood by those who wants to arm-twist this very knowledge to suit their own glory. They sit on podiums and juries and speak bad philosophy. They may even happily and vicariously rub shoulder to shoulder with someone who is doing serious work, only to move on when the opportunity strikes. They actually know all about the ant-hills and would quietly tip them over with their toes when nobody is looking. Is it so difficult to unseat these fake kings wearing the Emperor's new clothes? I do not think so. It just requires will, patience and knowledge. Each time some good points that comes out from any anonymous architect are knocked down by famous personalities, a part of our muse dies. And with her death, we die too.

John Donne went on to explain...

<div align="center">

any man's death diminishes me,
because I am involved in Mankind;
And therefore never send to know
for whom the bell tolls;
it tolls for thee.

</div>