

64 Purposes of All Arts

Toward a “Science of Arts”: Using Number & Depth of Purposes Covered to Measure How Great a Work Is, To Prescribe the Type and Amount of Art that People (Both Individuals and Organizations) Need to Achieve Their Goals in Life, and To Systematically Compose Works of Art Capable of Greatness

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Research Questions--lay the foundations for a new Science of Arts:

1. How do we measure how great a work of art is long before history makes it judgement? Can we and how can we predict the greatness of a work of art?
2. How do we specify changes in any existing work of art that actually succeed in increasing its greatness and historic impact?
3. How do we measure the degree to which particular lives lack essential levels of art? What levels of art are essential for healthy good lives? What levels of lack of art lead lives into disarray or suffering?
4. How do we measure the healthiness of the amount, quality, and type of art in a society in terms of its actual delivered care/service to those people?

This paper tests a hypothesis--that if we examine the functions actual works of art perform in actual lives greatly helped or impacted by art--we find that artworks that deliver more such art functions than others end up being judged by history as “greater”. This somewhat counters past research by Watts, Salganik, and Dodds showing that random chance makes some songs popular and others not but they concentrated on immediate popularity in commercial markets while this paper’s research seeks to lay a foundation for historic long term levels of popularity instead.

Method--Ask suppliers and customers of great art what functions they get/provide with it.

1. Nominate great artists and ask them what functions they produce or get from great artworks.
2. Nominate people as greatly impacted/helped by art and ask them what functions they got from great artworks.
3. Combine results from one and two above and categorize fractally to produce a fractal concept model of functions of great art experiences/works.
4. Use the model thusly produced to test the hypothesis that artworks that deliver more of the functions on that model are judged by history as greater than competing works.

This paper presents survey research to inductively define functions shared by many works of art in diverse fields. A stratified sample of artists from 63 different arts and a stratified sample of highly effective, educated, or creative people from 63 different parts of society were interviewed, functions that arts delivered to their lives that they

mentioned were grouped, groups named, groups grouped, such super-groups named, and so on. The resulting hierarchical model was then regularized by branch factor and principle of ordering to produce what is called a “fractal concept model”, the result of this study, of 64 functions of all arts. Later research will use this model to: 1) measure the greatness of any particular work of art or art type by how much of how many functions it delivers (is music “greater” in functions produced than painting, say); 2) measure how much of how many of these functions more effective, more educated, and more creative people have than people less so have (to link presence of all or some particular subsets of these functions with greatness of life of persons overall); 3) design greatness into particular works by broadening and deepening the number of such functions produced by encountering the work, 4) guide investment in works of art via choosing ones capable of greatness measured by how much of how many of these functions are produced in those encountering it, 5) guide composition and commercialization of movie scripts by optimizing which functions and how much of how many functions they produce in people encountering them; 6) to measure the “artfulness” or “artlessness” of entire organizations and societies via how little of how many functions they have established in people’s lives. The ultimate goal is to produce something like a “science of arts” that finds functions nothing else in society effects in people’s lives as well as particular arts do, relating those functions to what makes lives great, so we ultimately can prescribe arts to fix lives and propel them towards greatness, as well as quantify the cost of centralizations, commercializations, monopolizations, extremizations of arts in modern industrial societies. While it is easy to assert, especially if no effort to confirm with data is made, that there are millions of possible interpretations of any work of art, when actual artists and high performer people are asked what functions arts effect in their lives and work, quite specific, non-infinite results obtain.

Results--the Beginning Foundations for a new Science of Arts

1. A model of the 64 functions basic to all arts (plus two ancillary models developed in process--one of art creation processes across various arts and another of computational art traits and dynamics)

This paper’s research presents a well ordered model of 64 functions that all arts effect, to some extent, and that nothing else in society effects as well as the arts.

Key Words : Measures of Greatness, Auction Price Prediction, Artwork Values

A “Science of Art”: Measuring Do We Have Enough Art or the Right Art

People write that art is essential for life. In a modern industrial nation’s cities, though a lot of art is obviously around, it is not obvious that most of the people there need it as something essential. On the other hand, you can easily find in the daily news someone somewhere, lacking all chance for performing daily in front of peers, subordinates, and superiors, doing one last desperate suicidal performance by taking up arms and hurting other people, lashing out at random. People whose daily lives are stripped bare of all chance to perform may not be viable as people. Native tribal cultures, that preceded civilization, all, without exception, tend to weave performance roles in many festivals

through all members lives, yearly. Modern cities have performance monopolized by rich centralized elites “broad” casting to millions who just sit, not perform. There may be a minimum modicum of performance without which humans are not human, in a real, powerful, practical sense. Just what quality of performance is needed to attain that minimum? Just what frequency of performance is needed for it? Just what type or content of performance is needed for it? We have, at present, no way of answer those and similar questions. There is no science of art in this sense. Other than performance, is art essential, if so, what sort of art, how much of it, how directed or themed? We have no science of art that answers these questions adequately. We cannot diagnose any single person’s art level, finding it healthy or dangerous.

One way to approach establishing such a “science of art” is to find functions that art performs in those people it most helps, and see if people lacking art also lack good performing versions of such functions. If we could establish a set of functions that go on well in people exposed to arts of certain types, amounts, and contents, and that do not go on well in people lacking exposure to such art, then we have changed the locus of the question from art to function set. We can then ask how vital and necessary the set of functions are that, in the above analysis we found present in people exposed to a minimum level of art. What difference does the presence of these functions make in the lives of people having them versus the lives of those not having them? By answering this question we can begin to establish a “science of art” that has diagnostic power and practicality. We can measure how many of such functions anybody has, and prescribe the amount, type, and content of art needed to establish missing such functions for that person. We can prescribe art to keep lives, whatever it is that art makes lives.

Measuring How Great a Particular Work of Art Is

If we measure how many functions a work generates in people and how much of each function and how high the quality delivered of each function in that amount, we are measuring at least some dimension of the greatness of a work of art. This brings us to the issue of “greatness” judged by history looking at a stream of artworks and artists over a stream of eras and societies. This critic, outsider, historian of art viewpoint--greatness as “enhancing the historic stream of works”--disengages from another vital viewpoint--greatness as “making vital contributions of many people’s actual lives through functions delivered in adequate quality and amounts”. If we can devise a measure of the latter, we might even be able to measure the degree of disengagement of the former--“enhancing the historic stream of works”--from it. That is to say, we might be able to measure the quality of art criticism and history in an important sense. Just how “out of it” are the critics and historians when functions, how many, how much, with what quality, are delivered to real people are considered?

Who Knows the Functions of Arts?

Who are the people who know the functions of art? Tribal people do, but it is expensive, hard, and invasive to obtain data from them on this topic, though books by anthropologists of art are around that tell us something. Artists are major consumers of art and quite intelligent ones. They not only love

the arts of other people and that they themselves make, but they study and try to learn from great art accomplishments of others, throughout history and from contemporaries. They also work earnestly to project the future of their own particular arts. Artists are a major source of information on the role of art in sustaining and enhancing lives. However, artists are a very biased source in two ways--in opinion terms, they being “artists”, and in practice terms, their livelihood depending on their art. Critics are major consumers of art also and are more objective in some ways, but they too depend on art for their livelihood, though in ways different than artists. Also, they tend to pander to their audiences of editors or consumers of publications/shows. They are sources but biased in these ways. Ordinary people are a source but attenuated in important ways. It is truly difficult to find any ordinary person, in a modern industrial society, who does not consume much art on a daily and weekly basis, not to mention monthly and yearly. Just consider the number of music CDs in the room of any typical 13 year old. We can ask such people what art does for them and what particular art works do for them. However, the lives such people may be leading may be miserable failures or downward desperate spirals at the time we interview them, getting perhaps glowing tributes to art and artworks. We need to link arts consumed to functions sustained in lives.

What are the Functions of Arts

Composing a work of art, does something to you. That is one set of functions, I call herein the “composing functions of arts”. Viewing works of art composed by others does something else to you. That is another set of functions, I call herein the “consuming functions of arts”. Performing works of art (or displaying them) does something else to you still. That is a third set of functions, I call herein the “performing/displaying functions of arts”. There is a lot of controversy about the degree to which these sets are the same or different. I am not going to resolve that controversy here. However, I am interested in interviewing composers, performer-displays, and consumers and seeing just how similar and how different their versions of functions arts play in their lives actually are.

Expert Systems and Total Quality Process Techniques Applied to Art

Between 1980 and 2000, several hundred thousand expert systems were built, each involving painstaking analysis of transcripts of experts stating

every few seconds what was on their mind as they handled some particular case, typifying their work. In the same 20 years, several million processes in industry were found and modeled in great detail, to identify waste, unnecessary inventory, waiting periods, and other non-value-adding functions that, if eliminated, would improve service to and satisfaction of customers of process outputs. What if the same, or highly similar, techniques were applied to art, I wondered at the time.

Could an expert system protocol analysis approach, embedded in interviews and questionnaires, combined with a quality process modeling approach, similarly embedded, get at functions, how many, how much, and how well delivered? I thought it was at least worth a try.

Previous Work Measuring Quality of Literary Criticism

Many years ago I came up with a Structural Reading technique that diagrammed the number of main points, the names of those main points, and the principle by which they were ordered in a text, in something that I called a Structural Reading Diagram. This technique embodied latest research from cognitive science, cognitive linguistics, and artificial intelligence research on how human minds processed text (Kintsch, 1988). I mightily irritated a Toronto audience of literature professors and students by submitting an academic paper, measuring how many such points (and relations among them, names of them, and principles ordering them) were mentioned in any way by famous works of literary critics. I took Shakespeare's *Hamlet*, built a Structural Reading Diagram of the main points of its imagery, and of its plot actions, and counted how many points, names, orderings, relations among points, were mentioned in any way by the three most famous works of literary criticism of *Hamlet* (Greene, 1977; the resulting diagram was published in full in Greene, 1993). Somewhat surprisingly, no critic mentioned more than 17% of the main points, relations among such points, names of such points, or principles ordering them. In other words, most of the most famous literary criticism of that play ignored 83% or more of the play's structure and contents. This work of my youth left an impression on me, that famous works of criticism could, not being checked carefully by reading publics, operate at atrocious levels of incompleteness and sloppiness. Lack of accurate measures of how much is being conveyed, and how well it is conveyed, and how

well it, conveyed, is received into lives and minds, sets critics free to produce junk unchecked. Later on, in total quality programs, I extended this work to methods for measuring the quality of business reading and writing, speaking and reporting, finding, again, atrociously low standards of performance wherever clear measures for cognitive performances were not in place (Greene, 1993, 2004).

Recent research finding large numbers of plot and emotions-delivered aspects shared across disparate works of literature (Campbell, 1949, 1986; Vogler, 1992; Hogan, 2003), suggests that there may be one overall story that all other stories are subsets of, and by which we might measure the quality of individual stories.

The Problem of Interpretation and Stratified Responding

There is an atmosphere and long sequences of discussion in the humanities that almost never occur in modern social sciences. This phenomenon hinges on an assumption in the humanities that there are myriad different interpretations of any one thing, as many as their are possible frames for viewing it, and nothing gives real precedence to one or more frames over the others. The result is someone publishes one result but that is just "an interpretation" and hence has nearly no influence on anyone else's work. Add to this a chip on the shoulder against science (Foucault's fear of being oppressed by anything at all that exists) or anything that makes one idea or person not entirely equal to another, and you have a garden in which millions of interpretations bloom but no one or discussion ever goes anywhere. If we apply modern social science methods to questions in the humanities, then we devise experiments to test assertions that go untested in the humanities. For example, consider the following:

- all interpretation are as good as all other interpretations
- there are infinitely many interpretations of any one thing or event

translate these into the topic of this paper and you have:

- all purposes of art are as good as all other purposes
- there are infinitely many purposes of any one artwork.

These, if true, make my present purpose of research in this paper, questionable. However, even if these be true of entire populations, though I doubt it, they cannot be true of any one individual and, what is more important, they can be tested for truth by feasible, valid experimentation, using well known and, after all, rather simple methods, common in psychology and sociology departments of universities.

I did a little work in this area some years ago (Greene, 1977), using structural reading diagramming to show how many points, named what, ordered by what principle were in texts. When a completeness requirement was added, so all competing interpretations for a passage of text had to account for all the macrostructure nodes in the grammar of the text, the plethora of possible interpretations was instantly and severely reduced. College entrance exams tend to have questions like this, asking for completeness of accounting for macrostructure text nodes when students taking the tests are asked to select "best" names for paragraph main points or titles of entire passages. Hosts of "possible" interpretations were found to be possible only if a very few inconvenient non-fitting items in surface text were ignored. In other words, incomplete reading, and interpretations of subsets of text nodes, allowed a thousand interpretations to bloom. Requiring that all interpretations accepted as valid account for all macrostructure text nodes indicated in the grammar of the text, severely reduced possible valid interpretations in number, usually from tens or hundreds of thousands to two or three or less.

To further explore this issue of interpretations passing like boats in the night, and not interacting precisely in the humanities, I developed Stratified Responding (Greene, 1979). This involved using cognitive science results on how story or literature experience is processed in the mind, to produce a sequence of partial reactions, then requiring completeness of accounting for source stream grammar components for each partial reaction stratum. The sequence of strata were: object, feeling evoked, reminding, association, automatically retrieved frames, conceived frames, emergent patterns among objects-feelings-remindings-associations-frames, interpretations for each pattern, competition among pattern-interpretation pairs, emergent purpose of reading/hearing, decision about preferred pattern-interpretation pair or fusing of liked pairs. Individuals were asked to list all items of each stratum, completely, before moving onto

the next stratum of reacting. Groups were also put through these steps, with all members of a group listing all items of a stratum aloud before the group moved onto the next stratum. Repeated such exercises, both for individuals and groups, revealed convergence towards one or two overall structurings of the macrostructures of the experience/text/movie/story.

The Stratified Responding method was embedded, therefore, into my interviews and questionnaire items, in the form of asking for reactions, complete for each stratum of responding. In this way I hope to set the stage for spotting incipient convergence among different respondents.

A Plan of Action

The plan of action below uses two approaches, each approach using two methods, each method using both interviews and questionnaires. The first approach involved interviewing artists and consumers of art, nominated by eminent artists and art critics/promoters/curators. The second approach involved interviewing highly successful people of three sorts--educated-acting people, effective people, and creative people--who were nominated by eminent people. My goal with the first set was to get artists and consumers of art to note functions it performs for them when they compose, perform/display, or consume it. My goal with the second set was to get great people by many criteria, definitions, and frameworks, to note the functions, in attaining and exercising their greatness, that art furnished. I wanted these two sets as checks on each other. Then literature was reviewed, again split by these two sets, to check on each other and on the sets of interviewees. So the artists and consumers check the great ones and vice versa, the literature on artists checks the literature on great ones and vice versa, and the literatures, both of them, check the interview types, both of them. In all cases the same methods of categorical model building (fractal concept modeling) were applied to functions found in transcript or text. The resulting categorical models were then compared.

What is needed then is this:

- find what functions art performs that are essential
- find what functions art performs that nothing else performs
- distinguish composing functions, performing/displaying functions, and

consuming functions, to the extent they are different

- distinguish artists ideas, critic ideas, and art consumer ideas about the above.

What a good result will constitute:

- measure whether any particular person has a minimal level of art exposure needed for healthy living
- diagnose particular imbalances of type of art, amount of that art, quality of delivery of that art, and emotional impact from delivery of that art in any one person
- measure in impact-on-lives terms the greatness of any one work of art and compare it to that of other works in terms of specific functions delivered.

My approach to achieving the above:

the art source approach (ask those who produce, consume, or perform great art)

- apply expert system protocol analysis methods: use eminent nominators to name great artists and art consumers
- apply total quality process modeling methods: get process of composing, process of performing, process of perusing/consuming data
- develop a stratified sample of all types of artists and arts and art consumers
- develop an interview and a questionnaire
- categorize and combine functions found into overall model of functions of all arts
- review literature on art history, composition, creativity, and functions and build similar model of functions of all arts
- compare interview/questionnaire model with literature model and explain differences or do further research to investigate them.

the great lives approach (ask people with greater than average lives in many ways what in their greatness of life comes from what sort of art and art exposure)

- develop stratified sample of all types of great people
- apply expert systems protocol analysis

methods: use eminent nominators to name great people

- apply total quality process modeling methods: get process of becoming a great person and process of doing great things and find role of art in both
- develop an interview and questionnaire
- categorize and combine functions found into overall model of functions of all arts in the lives and work of great people
- review literature on functions of highly educated people, highly effective people, highly creative people and the role of art in possibly supplying or enhancing or degrading them, then make overall model of role of art in achieving educatedness, effectiveness, and creativity
- compare literature model with model from great people interviews and explain differences, researching some of them later.

The Plan of the Interviews and Questionnaires

The purpose of both was to get functions from respondents, not to test already existing ideas. Expert systems builders used to get experts to handle a case, interrupting them every 15 or 30 seconds, to transcribe what was on their minds. This can be simulated not unsatisfactorily in actual interviews and even in questionnaires. Total quality experts asked people what they produced, how customers felt about each aspect of what they produced, what process they used to produce each of their outputs, and what step in those processes caused output traits that displeased customers of the outputs. This can be simulated very well in interviews and questionnaires as well. In the first case, we ask respondents about types of moments in their processes of composition, performance, or consumption, that actually occurred in handling past works, and again, for imagined future works not created yet. As they recall or imagine those moments, issues in them, how they responded or might respond, we prompt them for alternatives, feelings, associations, weightings, criteria, accumulated relevant experiences, and more. In the second case, we ask respondents about what great aspects of life they produced or might produce in a future moment, the outcomes found in those moments, the satisfying and dissatisfying traits of those outcomes, what process produced each

Design of Data Collecting Instruments: Example Items

Interviews & Questionnaires	Approach One: Art Producers & Consumers		Approach Two: People with Great Lives	
	process of producing or performing art	process of consuming art	role of art in process of producing or performing their greatness	role of art in process of becoming great at something
case moment mental contents from expert systems interview for fresh content	retrospective: what you did one time •where did you get the idea for work X that you created --- what was on your mind at the time just when the idea appeared --- what was the very first intimation of the idea that appeared --- what was yet unclear in that first form it appeared in --- what was clear even in that very first form it appeared in --- what became clear only later about the idea --- what about the idea at the time attracted your special attention to it --- what about the idea made it different than others you had been toying with at the time	•when you first saw X, when and where was it and how was your attention drawn to it --- what first drew your attention in the work --- what feeling did you first have --- what associations came to mind --- what patterns appeared to you in the work --- what was foreground and background to you --- how did your impression of the work evolve in that first viewing --- what misreading or distortion of what was in the work did you have to bypass, slip by, or crush --- what feeling that you had never had before did the work generate in you at that time, in any	•what was the first real solid unquestionable achievement in your career, the one that set you apart from peers either in your own mind or in the mind of others in your field, however few in number --- what inspired that achievement --- where did the idea behind that achievement come from --- what sustained you during the trials and tribulations of attaining that achievement --- what key expression of contents in your mind or heart played a key role in your attaining that achievement, how? --- what key expression of someone else's heart or mind contents played a key role in your attaining that achievement, how? --- did any sort of art, performance, or composition play a role in that first achievement? what? how?	•what were the two or three key moments in your overall career --- select one to talk about now --- what was crucial about the moment --- what was unique about it compared to all other preceding and subsequent ones in your career --- what, in you or about you, prior to the incident contributed greatly to what made it a defining moment in your career, how? --- what happened in the incident, describe it in story form, who did what to whom why at what result --- what was different after the incident than before, why, what role did that difference play in your subsequent career --- what feelings were crucial in the incident? --- what images were crucial in it? --- where did such feelings and images come from?
	prospective: what you now imagine or want or plan to do next •what new work are you considering or fascinated with but have not yet committed to --- where is the idea for this work coming from now in you? --- what is as yet unclear about it? --- what is now clear about it? --- what fascinates you about the idea now? --- what inspires you now to work on this work? --- what feeling or image in you contributes most to this work --- where did that feeling or image come from in your experience	•what work has fascinated you by being somewhat attractive yet somewhat repulsive to you --- what in you is attracted to what parts of it, how, why --- what in you is repulsed by what parts of it, how, why --- where did the parts of you attracted to it come from --- where did the parts of you repulsed by it come from	•when you produce X these days, after succeeding at it many times, what is yet new and challenging and intriguing to you in the midst of the process of doing X, how, why •what feeling or images in you contribute to that now, how, why --- where did these feelings and images come from in you, what put them in you, how, when, where, to what effect	•simply put, what made you great at X? --- try to recall the very first moment that the idea that you might become truly great at doing X first entered your mind or heart? --- what was going on in and around you at the time this happened --- what images or feelings in you helped make this possible, how --- where did those feelings or images come from --- what work of art in any contributed to this outcome, how, why
	retrospective: what you did one time •circle all the following forms of art that played any role at all in your process of creating your most recent work --- in the blank space beside each one that you marked put what the role was that it played	•when you compare a painting by Picasso with a painting by Salvadore Dali, which of the following images comes to mind, mark each one that does --- in the blank space beside each image put why that image comes to you mind in this context	•which of the following feelings played a key role in your best achievements, put a mark beside the items in the following list that played such a role --- in the blank space beside the feelings that you marked, put what the role it played was and where the feeling came from in your life	•list seven stages in your becoming a great person in your chosen field in the blank spaces below --- in the second blank after each stage, put the image that played a key role in your imagination in that stage --- in the third blank after each stage, put where that image came from in your life
	questionnaire for testing validity of ideas from literature prospective: what you now imagine or want or plan to do next •your work is evolving in which of the following directions, mark one or two of the below --- in the blank beside the ones you marked, put what aspect of your next project will confirm this direction of evolution and how it will do so	•when you next get overwhelmed by a work of art, how will your ability to appreciate it be different than it was, say, ten years ago? --- what are you looking for now that you were not ten years ago, why --- what are you avoiding now that you were not ten years ago, why	•what next major accomplishment do you sometimes dream of doing, why --- what expansion of your repertoire of feelings helps this effort --- what expansion of your repertoire of images helps this effort --- what have you encountered in recent years that might help this effort, how, why	•what stage is your career in, mark one of the following --- in the blank beside that marked item put what art you liked at this period of your life --- in the blank beside that put what art you disliked at this period of your life --- in the third blank beside your marked item put what you likes and dislikes in art at that time indicated about how you conducted that stage of your life

outcome, and so on. In the first case we are going from moments to mental processes and steps; in the second case we are going from moments to mental processes and steps too. The difference is how we go from moments to mental steps producing them--via mental operators applied to mental operands in the expert systems way, via processes of production and traits of their steps in the total quality process modeling way.

The Two Samples

The sample of accomplished people was already developed for related research published elsewhere (Greene, 2004). In that research I built a stratified sample of 63 different fields of accomplishment in society and found 5 accomplished people in each of those 63 areas (half US, half global). These 315 nominators were interviewed briefly then asked to nominate really accomplished people in their own

Design of Data Collecting Instruments: Example Items

Interviews & Questionnaires	Approach One: Art Producers & Consumers		Approach Two: People with Great Lives		
	process of producing or performing art	process of consuming art	role of art in process of producing or performing their greatness	role of art in process of becoming great at something	
process that produces output traits that satisfy and dissatisfy customers from total quality validity of ideas from literature	retrospective: what you did one time	•what satisfies you the most about how you work	•what are the stages you go through when contemplating a great work by someone else in your field	•what works of art did you have around you when you made your last achievement, why, what did they offer to that effort	•what role does celebration play in your career process --- do you celebrate partial victories or only complete ones --- how do you celebrate --- how important is celebration to the progress of your work, why
	prospective: what you now imagine or plan to do next	•what will you do differently when you next produce a work, why	•what unimagined new feature would you like to find in the next great work of art you experience, why	•the next great challenge you wish to tackle is what --- is what you will need in terms of psychological strength to tackle it similar to something you have seen in drama, dance, poetry, theatre, opera or some other art? which work? how is it similar?	•what is the role of entertainment in attracting the attention you next major accomplishment needs •what are the steps of getting the attention of those whose attention you need for your next achievement
questionnaire for testing	retrospective: what you did one time	•is it you that reaches the audience or it is something other than you using you as a channel so to speak, mark you answer below and give an example in the lines provided	•when something reaches you deeply, which of the following is it satisfying well inside you	•mark the type of music from the list below that you use when you produce your best work --- beside each marked item put what it does for you and your work	•what works inspired you at each of the following stages of your career, put the work next to each stage below and put how it inspired you next to that
	prospective: what you now imagine or plan to do next	•what in yourself do you wish to satisfy with your next work that you did not satisfy with any of your past works	•what do you dream of a work doing to you in the future that none has done to you thus far	•what people in literature do you admire and how did they influence your accomplishments	•what heroic story of the types given below best captures what doing your next great thing will probably be like for you
Literature		literature on functions in composing or performing art	literature on functions in encountering/consuming art	literature on role of art in highly educated, effective, creative production or performing	literature on role of art in process of becoming someone great at something
		Approach One: Art Producers & Consumers		Approach Two: People with Great Lives	

fields, whether up and coming or already established. In one case they were asked to nominate “highly educated acting” people, in another “highly effective” people, in a third “highly creative” people. In the end, 2 people of each of these 3 (educated, effective, creative) were nominated for each of the 63 strata. As these nominated people were interviewed, 24

people they suggested were added, to make 150 for each of the 3 areas. For this study 150 of those 450 were randomly chosen, by computer.

The artist sample had to be developed for this particular study, on the other hand. This was done by asking 3 well known people in each of the 63

	Science	Art	Humanities	Social Science
Economic	technology ventures, idea markets, invention markets	museums, exhibitions, concerts, tours, coffee houses, clubs	resource limitation management; mystifications, historic preservation	economics: markets, pricing, regulation, trade regimes & orgs
Political	voting gaming representation campaigning	awards, cannons	agreement limitation management, power embeddings realization	political science: elections, campaigns, administrating, consensus
Cultural	ethics and religion policy making social clubs charities	art venture districts	meaning limitation management, false consciousness identifying	anthropology: deliberate culture invention, community enhancement
Social Change	democratization globalization	social cabarets	confidence and direction limitation management, frame-limited revolts	sociology: social process and structure--decline, fixing, invention
Traditional	astronomy geology meteorology oceanography space sciences	painting, music (song writers, performers, conductors), sculpture, dance, comedy, drama (theatre stars, movie stars), poetry	history philosophy	tribal community: festivals, calendars, wealth inheritance, bias in laws
Establishment	physics biology chemistry math	performance, design	literature, counseling regimes, critics, awards, theatre industries	rise and fall of civilizations, rutted cultures
Emerging	information media silicon and non-silicon computing h/w	digital art, interactive art, socially composed art, cyberart, virtual worlds	applied humanities, group composing, composing contests	networks, social virtuality

categories of art below (half US, half global), nominators, some questions about the role of art in their lives, the functions art performed in their lives, the functions it performed in doing their work, and so forth as the above table indicated. They were also asked to nominate 5 very high quality established artists in their own field and 5 up-and-coming artists of possible great quality in the future. Dice were used to randomly select 1 established and 1 up-and-coming artist for of the 63 strata of society, making a total of 126 people called nominees to be given fuller interviews and questionnaires. In the course of interacting with these nominees a further number of appropriate people were mentioned and added till 150 total were given the interview and questionnaire. Gender balance, age balance, geographic balance only of rough sorts was established by examining the random choice results for severe skew, and where severe imbalance was found in gender, age, or geography, that was not found in the underlying population being sampled, another random choice set was chosen till one more balanced resulted. An arbitrary limit of five such re-rolls was selected to prevent re-rolling to tilt samples towards other subtler characteristics. The least different in proportions from the underlying populations (where populations rates were known at all) of the five sets by gender, age, and geography was then chosen.

The purpose of the stratification by 63 areas of art was to highly distribute by art type the sample. The purpose of the nomination process was to move

in two steps from our own amateur choices through more professional choices to real professionals. The purpose of the random choice from nominee lists was to achieve a non-biased sample of well known people in a field. The purpose of having both established artists and up-and-coming ones nominated and selecting 1 from each for each nominator was to not bias the sample toward old established figures or young unfamous ones. The purpose of reserving 24 openings for people opportunistically recommended by nominees was to make sure that low quality in our set of nominators would not slight really wonderful people in the field that we should by all means contact. Each of these is highly imperfect for its own purpose, but better than no countermeasure at all. The overall result did not display any obvious biases though we cannot rule out ones too subtle or clever for us to have noticed.

Analysis of Data

The same procedure was applied to interview transcripts on functions of art in artists and highly accomplished people and to literature on functions of art in artists and highly accomplished people. All mentions of functions of art in transcripts/texts were marked, grouped by similarity, groups named, groups grouped by similarity, those supergroups named and so on then, the highest level groupings were put in some obvious order, and that order repeated as nearly as possible with all groupings on each lower level. Finally, branch factors, the number of component items within any group on any level,

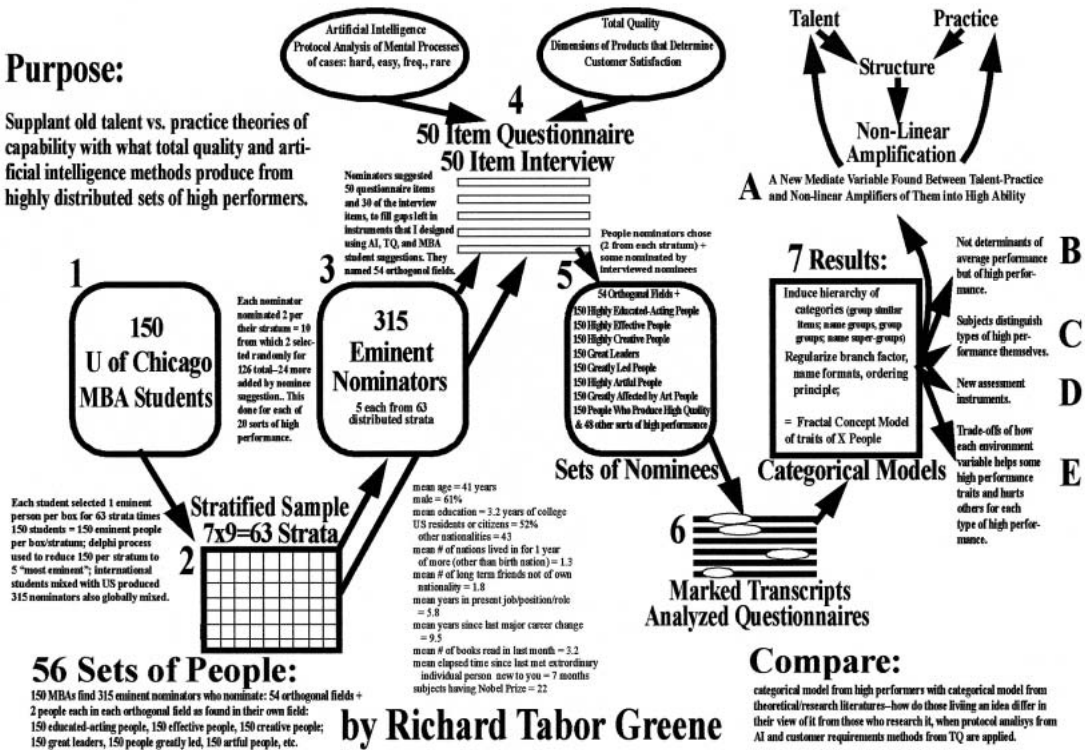
Engineering	Professions	Fad & Fashion	Lifestyle	Systems
financial engineering, inventors agriculture	business and management advertising & marketing	fashion designers, branding, multi-industry marketing by events	housing, communities locale type	technical innovation, quality movements
cyberdemocracy, internet funding of campaigns, net volunteer management	administration military	party politics, third party movements	involvement dimensions	policy deployment, dissatisfaction deployment
community organizing, environmental	religion education	lifestyle inventions, green movement	performing-consuming balance; diet, videogaming, manga	diversity management & expansion
innovation venture districts/clusters	movement builders	intellectual movements, liberation movements	social entrepreneurs, self funding "profitable" charities	coalition building, foundation grants
exploration, civil, architecture	medicine, nursing welfare	crowd generation, trend riding marketing, trend seeding, social imbalance exacerbations	festival organizers, theme parks, global event organizers	value sharing, negotiation, non-medical healing, reputation networks
mechanical, electrical, aeronautics & space	law & justice	epidemic generation, rights movements (human rights etc.)	consumer movement	value sustaining/imposition
biological & genetic, computer, internet society, nano tech--their blends	info tech, quantum devices	internet options: 6 billion channel TV broadcasting, agile economy	lifestyle inventors, micro institution development via viral growth regimes	complex adaptive systems research

Performance arts	Exhibition arts	Design arts	Composition arts	Event arts
opera stars	sculptors/wood carvers	product designers	music composers	festival organizers
orchestras	painters	info designers	song writers	floatdesigners
actors	tapestry creators	fashion designers/make up designers	choreographers/movie director	costumer designers
comedians	miniaturists/set designers/lighting designers	architects	comedy writers	sound effects composers
dancers/ballet	instrument inventors	gardeners/landscapers	jazz improvisers/rapp	fireworks designers
singers	inventors	interior decorators	comedy improvisers	venue decorators
models	photographers	bonzai/flower arranging/tea ceremony	event designers	chindonya

The Human Capability Definition: Research Process Flowchart

Purpose:

Supplant old talent vs. practice theories of capability with what total quality and artificial intelligence methods produce from highly distributed sets of high performers.



by Richard Tabor Greene

were regularized on all levels and between all levels, till one branch factor characterized all parts of the entire hierarchy of names. This results in what I have elsewhere called a fractal concept model (the first published such model appearing in Greene, 1993 as “Coordinates of Being: Japanese”). The regularity of branch factor and ordering principle on all levels and among all groups at any level leads to ease of use, memorization, and application not found in more irregularly formed models. Fractal concept modeling requires good “idea factoring” and good

“naming”. The former is extracting from three or four concepts grouped together exactly the ideas and frameworks shared among them to constitute the content of the name given their group. The latter is maintaining a balance in devising group names between name components, such as representational ones (capturing ideas shared by all component ideas subsumed by the name) and relational ones (capturing what in this group of ideas makes it unique compared to groups arranged left of or right of it at the same level). Also when irregularly branched and ordered

	Street Theatre arts	Circus arts	Martial & Sports arts	Written arts
	magicians	animal tamers	chikon/judo	poets
	jugglers	aerialists	ninja	novelists
	pierots	clowns	tai kwan do/ karate	dramatists/movie screen writer
	minstrels/one man bands	barkers & touts	competitive ballroom dance	short story writers/blog stars
	mimes	masters of ceremonies	country line dance	ad copy writers
	acrobats	rodeo	figure skating	computer graphic artists & designers
	manzai, rakugo	extreme jumps/stunts	synchronized swimming	image consultants

usual idea hierarchies, say, from Kawakita Jiro's KJ method used in quality programs, are regularized into fractal concept model form, overly numerous groups (in terms of number of component ideas in the groups) require fusing the least contentful ideas in them and overly sparse groups (in terms of too few ideas, in fact, the number of ideas is less than the chosen branch factor to regularize around) require splitting the most contentful ideas in them. Regularizing ordering within levels and across all levels requires highly abstract frameworks applied to every set of grouped ideas, putting all such groups into an ordering analogous to the ordering chosen for the top-most level items. All three of these skills are mentally demanding and found in few, as formal training in them is, at present, limited to Osaka, Japan.

In the case of this paper's research, fractal concept models from interviews and questionnaires for both artists and high performers, that is four such models, were produced. To fuse them a bottom up method was chosen, to preserve the inductive nature of the overall result. Lowest level items were aligned among the models by 3rd party categorizers not aware of the purpose or other content of this research. They were instructed to align lowest level elements among the four different fractal models as similarly as they could, then to argue out, between each other, which model's group content, and group name, best fit idea factoring, naming, principle of ordering propagation principles that constitute good fractal concept model building practice. No one pre-existing fractal concept model was to be preferred in any way but rather lowest level best group contents and names from any one of the four models was to be selected and combined with such best groupings from any of the other fractal models, gradually in this bottom up way constituting a new fractal concept model, not identical to any of the original four, the components of which it was built from.

The production of such models, using identical

procedures, for both transcripts and literature allowed precise comparison of the resulting models. Where groups or items named virtually identical things, terminology was adjusted in the transcript model to reflect already established terminology in the literature. The final model, then reflects what was supported both by literature and transcript data (all items found only in one were dropped from the final model). Questionnaire items that indicated functions were listed with functions marked, then subjected to virtually the same grouping and naming and ordering procedure above, resulting in a third fractal concept model of functions. This model was compared to the combined result of the other two models and only items appearing in all three were kept for the final analysis.

Note that all the above three models, thusly combined, were done twice, once to make a model of functions artists noticed and once again to make a model of functions highly accomplished people noticed. These were compared and only items appearing in both were put into the final overall model reported below in this paper. Had there been items in any of the three models showing up many times in one or two of them but not in the other(s), this would have been reported as an interesting exception telling us something about artists, highly accomplished people, interviews or literature on arts. However, once superficial differences in terminology were factored out by 3rd party categorizers, not connected directly to this research, no such items remained. There were no items receiving the minimal cut off number of mentions required to get into the final overall model below, that were entirely unmentioned in any of the sources. A sort of consensus among sources was what we were after here--finding functions that nearly all relevant sources agreed were performed by art and vital for life or work.

No data from tribal cultures was obtained, except things mentioned in literature on the anthropology

of the nature of life in this world, tired of all of it at times, and tired of any one or several particulars in it at other times. Art lets us, by imagination, live in worlds that are different, lack certain limits or rules, have different potentials. Art lets us explore how we as humans want to adjust and relate to every thinkable aspects of the one world we inhabit. All arts name new terrors and dreams, bringing them into human thought, discourse, and action. All the incipient, nascent, intangible, things at the edge of awareness are, by art, brought into view, named, thought about and acted on. Art civilizes all that is perceptible or thinkable for us--it brings it into view of everything in civilizations. All arts make impossible combinations. Our world is split by all sorts of divisions that works of art overcome or imagine away, revealing to us relationships and synergies we never would have directly encountered otherwise.

All arts cause reflection in people, re-presenting the world and experience. They do this four ways. All arts get us to admit gaps between word and deed, self and other, immortal imagination and mortal body that we deny, flee from, hide from, minimize, or otherwise distort. Art brings up back into the presence of holes, spaces, missing things. All arts get us to recall life's best and worst experiences. Art is a primary vehicle for remembering our past and envisioning possible futures. Our experience of life is so rich we cannot bear it all in mind at once and cannot maintain it in mind for long. Art overcomes such limits to awareness by representing our best experiences and worst to us, so we remember what life is beyond what our present moments contain. All arts free us from the bias of the present. All arts find the minimal essential traits that define or identify something. This is a game of seeing absolutely how few traits or acts or words we can use to recall completely for us or others some complex powerful experience or image. We love impersonators and mimes because they seem to exercise the immensely powerful and satisfying pattern recognition facilities of our human minds, pushing these machineries inside us to the limits of their performance. All arts get us to exchange local for more distant frameworks for viewing familiar things. Art magically turns our boring repetitious mundane daily life worlds into immense unexplored territories by getting us to view them from unfamiliar frameworks that, without arts, we would never encounter or use.

All arts cause us to see better. They do this four ways. All arts get us to spot what we are

missing in terms of public spaces where we can show our uniqueness via word and deed in front of a democracy of peers. Arts reveal what we are missing in terms of public fora and limelight. Arts vicariously provide us with recognition and limelight for intimate parts of our consciousnesses and lives that in reality we have no chance to show our selves or others. Arts reveal the attention we continually crave but do not get. It reminds us of what we wish liberation from. All arts reveal the neuroticism and paradoxical nature of our own goals. Art teaches us exactly how we are our own worst enemy. It shows the costs of our talents. All arts show how having a culture, our culture, has costs we often do not admit. It shows the cost of "being us" and "being I". What we love and are enslaves us, art shows. Art expenses the costs of growing up local and never accounting for all the localness inside us. All art finds the incipient edges of consciousness. The new continually erodes all that we based ourselves on as we grew up, but our frameworks from the past, blind us to the new and the novelty in new things. Art accounts accurately for what is new and preserves for us what is new in it, preventing us from assimilating it to the past, protecting it from being engulfed by the past. Art defends what is new from what is old.

All arts spawn creation, establishing in people the conditions required for being creative, for creating. They do this four ways. All arts help us find new questions to seek answers for. Art reveals entirely new questions that change us and what we seek in life. All arts create creation capability in people. They establish within us each of the conditions needed for creation. They draw us into the direction of creating. They reveal to us the inability of lives that create no meaning after they are gone, to satisfy. They introduce us to the audience of the unborn. All arts lead us to improve the quality of all that we think and do. Arts make us dissatisfied with things as they are and more importantly, with our current criteria of excellence. Arts raise the quality question profoundly in us. All arts entice us to go beyond all that ever was, all that is, and all that we can imagine to be. Arts raise the question of extreme trespass, violation, and extrapolation. Arts tell us stars have powers and arts entice us to master star powers and invent new stars with newer powers.

In piercing limits, all arts reveal the hidden, overcome fixed limits, name new terrors and dreams, and make impossible combinations. All arts reveal the hidden. They do this four ways. All arts reveal performance flaws, error, and mistake. Indeed the

only place in all of life where error and mistake are admitted is in fiction, in art. In reality, be it family, friendship, company, or team, error and mistake are denied, hidden, dangerous, distorted, used as a weapon against people. Comedy and tragedy both are based on error and mistake, comedy viewing it from afar and laughing, the tragedy viewing it from nearby and crying. All arts reveal goal flaws of greed and lust. We paint our faces always making the world and ourselves look better than we are. Our real animal nature embarrasses us, so we hide it till arts remind us it is there, real, and us. All arts reveal mood flaws of tiredness, disagreement, loneliness, and weakness that undermine our effort to always look and be “in control”. There is so much social pressure in humans to look powerful, in control, decisive, and the like that we constantly distort our actual degree of power, control, and decision. Art reminds us of all these distortions. All arts reveal diverging criteria of different images of virtue and what to aspire for between us and others. Our primary group of family and close friends is always there standing in the way preventing any fundamental change or growth in us, till art reveals how much maintaining such relationships and closenesses is costs us and them. Art sets us free from social support bought at a cost in what we aspire to and maintain as our standards of performance and excellence.

In getting us to overcome fixed life limits, all arts get us beyond time limits of death, busyness, and career, beyond physical limits of place, transport, and mundane things like tree heights, beyond social limits of wasted lifespans, politicizations, and herd conformities, and beyond self limits of self centeredness, sin, and loss of love. All arts get us to overcome time limits of death, busyness, and career. Time powerfully limits our lives in many ways. Death shortens things, though people tend to spend the first decades of their lives ignoring it. If you are not careful death can end up justifying horrible actions--you get one chance, someone is standing in your way, crush them because you do not have long to live. The arts, all of them, invite us beyond the anxiety that short lifespans and death tend to impose. The arts remind us what is lost when we get too wrapped up in the shortness of life. Busyness and career yearnings similarly become excuses for hurting those we loves and bypassing essentials for more superficial values. Arts call us back, beyond our wrappedness in work, career, and general activity, to see what is being unseen, remember what is being forgotten, value what is being de-valued.

All arts get us to overcome physical limits of place, transport, and mundane things like the height limit on trees. Arts invite us to imagine worlds with trees many kilometers high, worlds where people commute to work between planets, worlds where everyone lives on beaches computing to work from the waves. Arts release us from the tiresomeness of having only one world, one type of physics, one planet to live on and in. Arts invent capabilities that technologies tend, years or decades or centuries later, to actually establish. All arts get us to overcome social limits in life like wasted lifespan, politicizations of issues, herd conformities. Being social automatically gives us lots of poise, courage, encouragement, resources, so much so we sometimes forget the costs in conformity, politics, backbiting, self editing that come with it. Arts remind us of what these costs have cost us. It lets us imagine social support without herd conformity as a cost. All arts invite us beyond self limits like self centeredness, inability to follow through on our own values, and loss of love, among millions of others. Being a self means having great vulnerability to isolation, to posturing, to images that others develop of us through interaction. Being vulnerable is so much a part of being a self that we tire of the way we emphasize our selves all the time, the way we continue to make promises we fail to keep, the way we care for others who end up not returning any care to us. Art relieves us of these disappointments in being a self. Art lets us imagine I's not overly concerned only with “me”, promises not turned into mere posturing by failure to keep the promises, and loves that gets returned in equal measure.

In naming new terrors and dreams, all arts direct our attention to new threats from without, to things inside us that erode us or waste our efforts, to opportunities arising so gradually we may realize them too late, and to changes going on inside us that have great portents that we may miss entirely. All arts put a name to incipient or latent external threats that we would otherwise perhaps miss till they become overwhelmingly large. Long before policy discussions or budgets change, the arts dramatize and poke fun at, imagine and delve into parts of life too subtle or new to fit into any existing category. The arts are first to see what threatens whole communities and societies and give it a name. Things and trends that are just ideas get turned by arts into felt, seen, experienced impacts on real lives. Abstract threats become embodied via the arts. All arts make visible and name ways we threaten ourselves that are so gradual, slight, latent, inchoate

that we otherwise would never notice them till done in by them. Compromises, the costs of which we forget, time wasted as fear of dying consumes us, sentimental relations to others that prevent real care and changes in our perspective are all gradual things that build up unseen in us till one art form or another brings them powerfully to our attention. Suddenly that experience of those people in that drama over there gets seen as my experience here inside my mind, realized and made explicit. Suddenly I become aware of what has been going on in me for quite some time. Suddenly I see and feel it, notice its boundaries, parameters, and implications. Suddenly I care about it, that is, about me. All arts name new external opportunities gradually appearing around us, that we have not noticed. Indeed, opportunities that we have avoided noticing because of unwillingness to contemplate the changes in us they imply, get named too, by the arts. Whether we want it or not, the arts introduce us to newly opened vistas, now actually possible for us, that we can be pretending were not there. Hope that was not hoped for now confronts us, due to intervention by one art or another. All arts name new internal opportunity as well. We can lug around images of our self that get more and more out of synch with what we actually feel and do. The arts, break in, and name new aspects of our selves for us, making us realize new capabilities, fears, chances that are there latent in who we have unwittingly become.

In making impossible combinations, all arts combine things on different size scales, combine things on different times scales, combine things in different cultures and disciplines, and combine things based on different abstractions or metaphors. All arts combine things on different size scales. The small and the giant are joined in art. Patterns and themes operating on one size scale are noticed to be operating on smaller and larger scales in works of art. A unity across size scale is brought to attention and dramatized. Consider great tragedies where the slightest surface flaw in behavior dooms entire dynasties and families--the great brought low by the slight or insignificant. All arts combine things on different time scales. Arts bind times otherwise utterly separate. The eternal return of themes, incidents, character types itself recurs throughout all the arts. Art works stand in some eternal unmoving point viewing the swirl of time and history and story and career around it. It is the stillness of each art work that so emphasizes the swirl of what we call life around it. All arts cross culture and discipline boundaries. There are so many boundaries erected

by people and our organizations. We live in complex cages within cages. Arts pull us beyond the mental, social, emotional, moral, aspects of these boundaries, joining precisely what, in reality, is never joined. Boundaries as places to hide from the costs of diversity are revealed and reviled by the arts. All arts combine across abstractions and metaphors. Abstractions and metaphors (up is "better" than down, for example) are within the mind boundaries that, because they often operate unconsciously, restrict us in ways we are unaware of till works of art show us value that violates them (downs that are "better" than ups, continuing the example). The arts show where our habitual terminology, grammars, and images of language mislead us and distort reality.

In causing reflection, all arts get us to admit gaps of various sorts, to recall the best and worst experiences of our lives, to recognize complex wonderful things from extremely partial aspects of them, and to exchange our local comfortable frameworks for distant ones that change the meaning of everything. They do this four ways. All arts get us to admit gaps of several sorts, self gaps between word and deed or between dream and career, social gaps between self and others or between love and care, performance gaps between what is needed and what is supplied, or between what is possible and what is made real, and finally, anxiety of existing gaps between what we imagine and our very real mortality or between what we plan and the unexpected side-effects of getting it that often overwhelm what we planned. All arts get us to admit self gaps between word and deed or between dream and career. We disappoint ourselves but forget we do so. We aspire to more than we achieve and imperceptibly learn to exaggerate our actual achievements in our own minds till we lose track of reality entirely. Arts remind us that hope is different than achievement, most of the time. Art deflates bombastic versions of our greatness that we concoct all too easily. All arts get us to admit social gaps between self and others or between love and care. We need self and others and get sick of too much of self and others, as well. We go beyond them but also fall behind them. We pretend to be socially adequate rather than either actually meeting social needs or actually rejecting social criteria and demands. Arts remind us that what self is and wants in all too often not what others are and want. We are socially pressured into so many actions and words that we can lose sight of our own real selves and wants. All arts expose the gaps in our performance. What is needed is often, perhaps even usually, not what is supplied.

What is possible is nearly always greatly beyond what is really achieved. Our ambitions are immense, our accomplishments much more modest. We tend to want to forget that modesty of the actual and live more in the comfortably immensity of our imagined accomplishments. All arts expose the anxieties of existence that we erect artificial well controlled worlds to deny the existence of. Arts bring us face to face with death, consciousness, limitations of mind and culture, gender and biology. We have central, neutral, diverse, happy views of our selves that deny the marginal, biased, uniform, unhappy realities of where we grew up and who we have unwittingly allowed ourselves to become. Art reminds of us the unbounded, the unplanned, the unadmitted, the uncontrolled elements in reality that deny our images of control, rationality, purpose, and accomplishment.

All arts recall for us both the best and worst experiences of our lives. They do this four ways. All arts recall for us what we know about ourselves. Arts index our life experiences for us, giving us immediate access to things that happened to us decades ago, as if they are real, happening now, once again. Arts are time machines for us. All arts recall what we know about others. Our lives are so rich in experience that we cannot stay aware of it all. Arts remind us of the otherness of others, undoing how we naturally assimilate away what is different as we make things familiar to us. All arts recall what we know about what we know. They point out what we have learned and failed to learn. They highlight the borders of the known inside us. Arts call to mind things we learned and knew but forgot that we knew. Arts make all that we ever knew accessible again for us. All arts recall what we know we do not know. They remind us “you do not know anything about that” in the face of our constant posturing to look competent and accomplished in every life situation and circumstance. Arts remind us of all we have not done, not learned, never experienced, falsely claimed. They keep us honest. They deflate our continual efforts to self exaggerate.

All arts find the minimal essential traits of things needed to call them fully to mind. This is a sort of game. Humans have immensely powerful perceptual machineries and all the arts like the game of seeing how slight, tiny, and insignificant a fragment of something they can present that effectively fully brings into awareness and experience so complex powerful entity or part of the past. The greater the imbalance between slight trigger and overwhelmingly huge response the better the art,

we feel. This game of slightnesses suggesting hugenesses is a powerful drive within all arts, from judo to financial instrument design, from lip ends on the Mona Lisa’s smile to tiling in Frank Lloyd Wright ceilings. All arts seek out minimal gestures or movements that suffice to suggest complex immense things. It can be the rattling motion of two leaf bare branches in a tree that evokes a lost love, lost youth, lost innocence, lost era. All arts seek out minimal forms, shapes, bits and pieces of things that suffice to bring back huge wholes. When a fragment of a song is found evocative, artists shorten it, dropping notes, rhythm beats, tonalities playing the old game of minimal form needed to evoke. All arts seek minimal references that suffice to bring back huge wholes. A single word can bring back to full presence in the mind admiration for the ultimate courage of the human race. “Thermopolae” is one such word, where people knowing the reference recall how 300 Spartans, defeated, slaughtered to a man, in battle, tilted all of history so that Western civilization as a whole could emerge. Without that day, and those 300 heroic deaths, the moon might be now unvisited by man, vaccines might yet be undreamt of, most children dying before age five. Artists work at it, finding the slightest reference that yet suffices to achieve full recall of exactly the right experience. All arts seek out minimal recognitions as well. Minimal recognitions are minimal recalls, where you recall just enough to get the main point but not enough to get hardly any detail. This is an intensification of the overall game, where both ends are minimized, the input needed to recall, and what is recall minimized to include only the essential core.

All arts exchange local frameworks with distant ones, throwing new light on everything. There are four ways this gets done. All arts highlight swings in history from over-emphasizing one pole of a polarity to the other pole (and back again), highlight how the value of present arrangements and institutions comes from what they fixed and replaced not from what they by themselves are, highlight how what we are willing to call a “solution” is only something guaranteed to perpetuate our problems, often, and highlight how our beliefs, habits, and values are a prison we willingly keep ourselves in to protect ourselves from reality. All arts expose how current inventions, insights, and innovations repeat highly similar ones decades and centuries ago as civilization swings from one pole of polarities to opposite ones and back. By debunking claims of unmatched insightfulness by expanding historical context, arts remove the present’s ability to fool us by blotting out past and

future as context. A big part of this is the way arts ground the historic in particular lives, and expand the particulars of lives into historic trends and forces that generate them--arts make the individual historic and make the historic individual. This comes as absolutism to people who suffer from what they think is private "they alone" situations only via arts to discover exactly the same suffering in millions of others' lives, relieving them of guilt and shame. All arts expose how present arrangements do not make sense now by themselves--they made sense when invented to fix some arrangement that was present in the past. Now, however, they may or may not relate effectively to anything--usually they do not, hence, are literally senseless. Arts expose the senselessness of institutions when their process-of-creation contexts are removed. All arts expose how individuals, groups, and whole societies are only willing to call "a solution" things that are guaranteed to maintain their most intractable and important problems. Americans facing a third of their population without even the pretense of effective schools propose not elementary decency of the richest one third of their population but rather more innovation, more experimentation, more new methods of schooling, all things guaranteed to leave unaddressed the root causes of their lousy schools. Only Americans are fooled by these displays of "solution". Arts reveal these sorts of self contradiction in purpose and policy, person and proposal. All arts expose how our favorite beliefs, habits, and values imprison us. We yearn for freedom but yearn more for safety provided at a cost of non-freedom, it seems. Arts reveal how the world we erect between us and harsh nature also protects us from responsibility, opportunity, and all of our freedom.

In getting us to see limelight and public space of participation missing from our lives, the arts save us from the anonymity and loneliness that threatens to overwhelm us at times. They do this four ways. All arts get us to see how massive central broadcast entertainment industries have stripped chances to perform from everyday lives of most people. Each art work itself sets up a small new alternative public space where people directly experience shared feelings, perceptions, they did not know were shared by other people. This relieves them of loneliness and to an extent throws limelight on personal private struggles they thought they alone suffered with. Arts are, in this way, the single most powerful antidote to loneliness that civilizations yet offer. Arts also remind people of liberations they want but have been too timid to move on. When people gather in the

semi-public spaces of art works, find their longing or frustrations are not theirs alone, desire for liberation moves from wish to plan, gathering courage by observed support in others nearby. All arts get us to see wanted collaborations. We usually take social institutions as if they were embodied laws of physics, unchangeable. Art reminds us that humans made every last piece of the civilization and civilization's world, hence, humans can remake any part of that at any time. Art dissolves solids of society into liquids. Institutions now visible are the results of past collaborations. When arts makes us see the human-built-ness of existing imposing institutions, they also get us to start up those collaborations that result in changed or new institutions. All arts get us to see historic dreams we have failed to try for, embody, or have the courage to create. All arts via establishing mini-public spaces in which people's intimate contents become public and vice versa, democratize performing and inject chances to perform into daily life. The mini-performance before or inside a work of art, exhibition, concert, or event that arts provide also releases the big-performance of history changing dreams inside people but unreleased till they, finding aspirations they thought their alone are actually shared by many others, get emboldened to turn into reality dreams held till now inside. All arts expose novelty needing conserving and useless conserving of the old going on. Arts reveal the ferocity with which the old defends itself against anything new, however small and trivial. Arts warn us that inventing is only half the battle, the real battle comes after invention when forces of the past gang up to again attack and assimilate every particle of novelty to what is old, already established, and ungrowing.

In getting us to see the neurotic and paradoxical nature of our goals, the arts show how we are our own worst enemies. They show how our talents, all of them, have costs. They do this four ways, by showing the costs of talents and skills, by showing the contradictions inherent in our goals, by showing how we imbalance our lives by forgetting current positions were extremes along polarities whose other poles have been forgotten, and by showing how side-effects tend to overwhelm intended and planned effects. All arts reveal the costs of our talents. Every talent represents focus, selection, practice, reward, pride, and the like. Each of those narrows people, removing attention and practice from other parts of life, hence, each represents costs of being greatly skilled in the talent's area. All arts reveal contradictions in the goals we have and contradictory

other goals we have. For example, our drive to be individuals and our drive to be socially supported and recognized contradict each other daily. Art forces us to see such contradictions. All arts reveal lost and forgotten alternatives that explain the way out of current problems caused by our emphasis on one pole of how to think or act. We, long ago, faced a choice, chose an alternative, justified that choice for years, gradually forgot there was any other choice available, till arts remind us that we are occupying a tiny narrow space of living, reduced by forgetting all the alternatives we denied choosing over the years. All arts reveal how the surround of unplanned and unintended side-effects of our actions may overwhelm in significance and power all the wonderful rationally intended and accomplished achievements of our lives. We tend to celebrate our victories so much that we lose sight of side-effects of achieving them that negate their benefits, in not a few cases. Arts remind us of the costs of such victories, the denied other unintended outcomes around them.

In getting us to see how our identities and cultures are blindnesses, all arts reveal the costs of growing up anywhere at all. The process of growing up, wherever and whenever it takes place, has associated with it large costs. We think we get broader and broader as we age but in reality most of us get narrower and narrower. Any career success at all, tends to greatly narrow our interests, actions, audiences, accolades, and destinies. The few unnarrowed such people tend to become Nobel Prize winning novelists, starting their writing after age forty, because no other career worked out for them, for one example. The arts do this four ways, by undoing assumed goodness of our own nation, family, era, gender, profession, and so forth, by revealing our distaste for otherness in general, other people, other ways, other ideas, other cultures, by revealing the narrowness and tinyness of our chosen identities and careers, and by showing our lack of skill at handling diversity of any sort, including our lack of willingness and ability to learn from most of what we encounter in life. All arts reveal that those things we are most assured of the goodness of, do us and other the most harm. Our trust in self, family, nation, gender, era, profession all betray us into bigotry, error, paradox, and failure. Without undoing the unthinking narrownesses that our family, community, friends, schools, gender gave us as we grew up, we never see and fully choose from all the alternative ways of thinking and acting that are there in the world. Who we are, our identity, blocks so many choices from us that we live in

tiny restricted universes whose restrictions we fail to unearth, sometimes lifelong. All arts reveal how we take the unnaturalness, unlearnedness, unautomaticness of others ways of doing things, for inferiority and skill-less-ness. We fail to account for the years of practice in our own ways that make them seem clearly superior to ways of others that we have no practice experience with. All arts reveal how we have made ourselves narrower and narrower, in part by simply aging, in part by simply succeeding, in part by simply being who we are. All that is easy, natural, and unthinking in how we grew up and progressed comes back to haunt us in work after work of art. Arts show the cost in terms of narrowness achieved, of choosing and becoming any particular someone or identity. Arts reveal the tiny island of a world-let that we confuse with all of life and the world as we age. All arts show how unprepared we are to handle one after another sort of diversity in the world. Arts reveal our resistance to learning from others, our dislike of otherness itself, our refusal of the work of practicing the ways of others till we love those ways as much as our own ways. In part arts do this simply by showing us how wonderful the ways of others are, or how they precisely solve those recrudescing problems our own ways never seem to solve.

In getting us to see the incipient new things at the very edges of our consciousness, all arts expand the world we are in together and talk about with others. Such bugging novelties have to be seen and named before people in general can notice and talk about them. This happens four ways, by inventing new language for new phenomena, by enlarging slight new emotions till they become visible to all, by monitoring carefully what changes fast versus what changes little till mismatches become evident to all, by distinguishing automatic unthinking responses from care-filled authentic ones till structural patterns of distortion or insincerity become apparent to all. All arts exaggerate slight new interest, feelings, thought, actions, things till they become visible and get unique names. All arts invent new language for new such phenomena to be named. All arts update our emotions by naming new emotional phenomena too slight or unfunded or non-central to be noticed in the harsh flux and competitions of daily life. All arts make such new emotions visible much earlier than harassed daily lives would make them evident. All arts watch which parts of life change a lot and which change hardly at all and how friction and abrasions arise between these differently flowing layers. Such mismatches are named by arts far earlier than we would name them in the daily onrush of life. All arts

spot automatic unthinking responses and distinguish them carefully and dramatically from care-filled authentic ones. Arts show how our best efforts and “good” behaviors actually have become dated relics sustaining the unsustainable, ignoring the rising tides of the future.

All arts set up the conditions for creating in people encountering them. They do this four ways. They expose new questions. They create creation capability in people otherwise lacking it. They improve the standards of quality of all we do. They invite us to go beyond all we know and can handle. All arts help us by exposing new questions for us. They do this four ways. The arts expose gaps between in explanations and practices around us, any one of which might open up entire huge new opportunities. The arts reveal non-linearities to us, places where small inputs can have entirely disproportionate large outputs. The arts change how we represent and model situations, exposing myriad new aspects, parameters, and outcomes we never otherwise would have noticed. The arts change the logics by which we link one phenomenon to another, one fact to others, get myriad implications from one outcome.

All arts set up the capabilities for creating in people encountering them. They do this four ways, by creating interior psychic and exterior social room to create in, by exposing paradox and getting us involved in mental travel, by introducing us to creation machineries we can personally master and apply, and by inspiring us to conquer as failures to create pile up, till our accumulated failures specify what successes must be like. All arts create interior psychic room in us that allows us to create. All arts create exterior social room around us that allows us to create. They lead us into what to shut down, what to avoid, what to de-value, till we find ourselves alone with our imaginations in a fascinating world of imaginative possibility, introduced to us by the same arts. All arts expose paradox and invite mental travel. They transport us to where our certainties and values fail to work for us and to where the questions that dog our daily lives dwindle into utter insignificance. All arts introduce us to particular creation machineries we can master and apply, inspired to do so by the arts that introduced them to us. A particular material in one artwork, a particular technique in another, a particular emotion from another, all combine inside us till we see a way to combine them into works that would impress ourselves and others. All arts inspire the hardness,

the persistence, the doggedness, the will to conquer in us needed to turn attempts and interests into accomplishments and wonders.

All arts inspire us to improve the quality of absolutely every single part of life. They do this four ways, by revealing audiences and the limitations in standards that audiences maintain for themselves and others, by revealing new substrates, technologies, substances, configurations with which to do new functions never done before and with which to do old functions differently or better than when they were done by familiar materials of the past, by revealing new ways of working and collaborating not possible before that themselves constitute creativity and that allow functions to be creatively done that never were creatively done before, and by enlarging audience hopes and ambitions so audiences themselves inspire to go beyond their own current criteria of excellence. All arts reveal audiences to us. We observe the audiences drawn by particular arts and learn what those people react to and hope for. All arts reveal new materials and technologies to us, first applying and using things that general products will shy away from for commercial reasons for years yet. All arts reveal new ways of work that it will take decades for general society to must the courage to handle and benefit from. All arts inspire audiences to require better things of themselves, to upgrade their own criteria of living and excellence.

Finally, all arts invite us beyond all that is, was, or that we can imagine ever being. All arts invite us beyond all. They do this four ways, by revealing a sequence of highly abstract dimensions along each of which past inventors extrapolated new values that constituted past creations, by showing us sequences of technique progression within and borrowed across fields, by revealing the best expressions and recreations of feeling of every culture and age, and by revealing the trip lines, the tipping points of past lives, eras, genders, persons, nations, societies. All arts surprise or amaze or touch us via varying the past along highly abstract dimensions invisible to us till some art takes an extreme value along one such dimension. By exposing such dimensions of difference underneath each creation, they educate us in the abstract frameworks for doing our own future creating, going beyond all past such values on all past such dimensions. All arts add to a historic sequence of techniques tried, invented, and applied. By interpolating and extrapolating along that sequence we become capable of going beyond any past invention, in principle. All arts show us the epitome

of every culture and age in terms of great expression or recreation of feeling and thought. By exposing us to the best of humanity throughout all history again and again, the arts set us up for going beyond it all. All arts expose tipping points where slight inputs have huge outcomes. By exposing us to one of these after another for years and decades the arts inspire us to search for and equip us to recognize new such tipping points we discover on our own. Such tipping points become ways that we can go beyond all past accomplishments.

Using the Model: Future Research

There are hundreds of purposes of arts, collected in the data of this research but not included in the above model of 64 purposes because they each lacked enough mentions by this research's sources to meet my arbitrary cut-off values. I cut-off the list at 64 for two reasons--because fractal concept model form stops at certain numbers, one of which is $4 \text{ by } 4 \text{ by } 4 = 64$, and the other, because I wanted a model that represented a sort of consensus across many people, artists, and arts, not functions that, say, painting achieved but that, say, music did not. So I do not claim in this paper that the 64 functions above are a complete list. Rather, I claim the following as hypotheses needing research and worth the effort of researching:

- there are no things better than arts at delivering the 64 functions in the model to actual people's live now
- works of art that deliver more functions are judged greater than others by art consumers
- works of art that deliver more of each function are judged greater than others by art consumers
- we can achieve major measurable positive impacts on individuals or organizations by assessing how well each of the 64 functions is covered in that person or organization and prescribing arts to deliver those missing functions effectively
- if we measure how well each historic great work of art delivers all 64 functions, we can use that alone put the works in order of greatness, in a way that matches current historic judgements about the relative greatness of these works
- current artists who deliberately

optimize the designs of their currently being-produced works of art so as to maximize the number and amount of coverage of the 64 functions, of this paper's model, by works they produce, become "greater" than their peers faster and more.

- there are subsets of the 64 functions that characterize and typify the greatest art and artists of particular eras, nations, and genres of art
- there are subsets of the 64 functions that evolve in specific patterns throughout the careers of the greatest artists of certain eras, nations, genres of art
- there are subsets of the 64 that more commercially successful works typically have; such sets will in nearly all cases differ in consistent ways from subsets that greater works of art have.

Together the above 8 hypotheses constitute a working definition of a "science of arts". My future research will explore the above hypotheses using the above model of 64 purposes to all arts. Work evaluating movies-in-process-of-selection and evaluating individual artists working for record labels is underway and may, if confidentiality matters can be worked out, reported fairly soon in publication form.

Art Creation Process, Appendix

To illustrate future research already underway, using this paper's model of art purposes, I add as an appendix here, a model of 64 steps in composing a multi-art, multi-act Cabaret, each performance of which is specifically targeted at one or more of the 64 purposes of this paper's model. Power of art from fulfilling many purposes with quality and depth is thereby added to lesser power of great performance of arts not fulfilling many purposes with quality and depth. Most commercial entertainment forms of art, in our day, are the latter, highly professional performances of arts not serving many if any purposes in the lives of their audiences, as the arts are everywhere distorted by lowest common denominator commercial concerns and everyone involved in them is central, elite, rich, and not sharing living conditions or concerns with the audiences they wish money from. My students use the 64 steps in the appendix Art Creation Process

model to, each year, design and hold a Cabaret of Many Arts show, the scripts from which, increasingly are being bought by Japanese media. Experimental data on this process and the effects of various subsets of the 64 purposes of all arts will be forthcoming in future research papers.

Computational Arts, Appendix

To illustrate how so much research and practice assumes purposes to arts without using any explicitly, pushing for completeness or any other sort of optimum, I include as an appendix a model of computation art, developed by combining syllabi from 20 courses on computational art from leading colleges of design, and schools of art, in Europe, East Asia, and the US. No references to art purposes is found on the diagram of 64 computational art functions. In fact, the diagram is dominated by technology and technique, as is much discourse about art and art criticism. People note the quality of performance, the wonderfulness or otherwise of actors and performers, the “advanced” techniques and the impression they leave. One would think art were an optional technical game of play rather than an essential feature delivering essential functions to all lives in healthy communities. This technique-ization of art in modern discourse, along with its commercialization, and dumbing down self censorship for “selling to the masses”, in addition to stripping performance from normal lives, condemns modern arts to executing few purposes, not many, shallowly, not deeply, with minimal quality, not high quality. Of course there are exceptions but preciously few of them. Good conversation is so much better than great television or great Hollywood movies, some have said, because in conversation we all get genuine chances to perform, denied us by centralized broadcast industries using art for money, thereby laying waste to entire civilizations.

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<p>Cognitive Fault Lines 64 Found and Triggered in Societal Tipping Points:</p> <p>Art can reveal to us the fault lines in ideas territories along which major ideas quakes may occur. Art shows us tipping points where small inputs have huge outcomes.</p>	<p>Historic Levels of 63 Measurement in Your Emotion, Feeling:</p> <p>Art can reveal for us the history of how people have seen or expressed parts of experience of the world. By viewing this we can imagine better percepts or expressions of our own that make us creative contributors.</p>	<p>Inducing Higher Quality 59 Requirements in Your Customer-Audience:</p> <p>Art can enlarge your view of what your audience can aspire to and attempt. It can inspire you to lead your audience beyond what presently satisfies it. It can inspire you to improve what you see and do, and inspire us to improve the quality of all about us.</p>	<p>Improving Production 59 Process:</p> <p>Art can reveal new ways of work that no one has tried or pioneered. It shows us how people doing things improve how we work or spur us to attempt or do new means of getting things done.</p>	<p>Inisincerity: 48</p> <p>Issue responses, roles (reversals)</p> <p>Responses become habits and new values in us that as things change, gradually become ineffective then insincere responses. Art reveals how our best efforts or intents have unwittingly become insincere & ineffective responses.</p>	<p>Mismatches: 47</p> <p>lifestyle, family, culture,</p> <p>As we continually change and things around us so change mismatches appear where what we provide no longer fits what we or others need. Art reveals how these emerging mismatches.</p>	<p>Lack of Skills of Spelling 44 and Learning Other</p> <p>Art reveals our unpreparedness for a world of diverse values, views, & ways. It shows how we avoid learning and change. It shows how we avoid work to miss or slight the ways of others.</p>	<p>They Personal Repertoires 43 of Thought or Act:</p> <p>As we grow older and nearer to death, we find we occupy a flatter and staler fragment of ways of being and frameworks for viewing life. Art shows us just how they are. Values, values, and ways are, and others who have larger selves and lives via culture blends.</p>
<p>Beyond All 80</p> <p>Art invites us to go continually beyond all we have seen and done before. It invites extreme trespass and extrapolation. It shows limits to overcome.</p>	<p>Historic Levels of Improvement 62 in Technology:</p> <p>Art can show the abstract principles by which all techniques in the past were improved. By interpolating or extrapolating along them we can discern what dimensions we create ourselves.</p>	<p>Improve Quality 79</p> <p>Art raises the question of the quality of what we see and do, and inspires us to improve quite generally the quality of all about us.</p>	<p>Mastering 58 Changing Technology of Supply and Production:</p> <p>Art can reveal new substrates for doing old functions and new functions to do with old substrates. By doing so, art invites us to radically renew what we do and how we do it, turning everything we attempt into lives.</p>	<p>Incipient Edges of Consciousness 76</p> <p>Slight continual incipient changes go on all the time, not seen, named till art sees and names them.</p>	<p>Flight/Flight: 46</p> <p>Fears/dreams, threats/chances</p> <p>Our emotions are also continually changing, sending new fears or possibilities. Art updates our emotions by making clear, dramatic and visible slight changes in mood and emotions around us.</p>	<p>Assumed 44 Goodness of Others:</p> <p>Art attacks this basic blindness in all of us.</p>	<p>Culture as Blindness 75</p> <p>What we love the most, what we are, is revealed by art that investigates the curtailment of belief, the costs of growing up local.</p>
<p>Art can show the sequence of innovations in a field so we notice the abstract ways new ideas got envisioned and done. By extrapolating or interpolating along those seen dimensions or inventing new ones of our own we become creative contributors to those fields.</p>	<p>Art can show the abstract principles by which all techniques in the past were improved. By interpolating or extrapolating along them we can discern what dimensions we create ourselves.</p>	<p>Spawn Creation 54</p> <p>Art establishes in all the conditions for becoming creative. It sets up group and individual creativity.</p>	<p>Mastering 58 Changing Technology of Supply and Production:</p> <p>Art can reveal new substrates for doing old functions and new functions to do with old substrates. By doing so, art invites us to radically renew what we do and how we do it, turning everything we attempt into lives.</p>	<p>Incipient Edges of Consciousness 76</p> <p>Slight continual incipient changes go on all the time, not seen, named till art sees and names them.</p>	<p>Flight/Flight: 46</p> <p>Fears/dreams, threats/chances</p> <p>Our emotions are also continually changing, sending new fears or possibilities. Art updates our emotions by making clear, dramatic and visible slight changes in mood and emotions around us.</p>	<p>Assumed 44 Goodness of Others:</p> <p>Art attacks this basic blindness in all of us.</p>	<p>Culture as Blindness 75</p> <p>What we love the most, what we are, is revealed by art that investigates the curtailment of belief, the costs of growing up local.</p>
<p>Change Logic: 52</p> <p>Art gives us entirely new logics by which to link one thought to another, revealing new implications of existing knowledge never seen before. These new implications can uncover new problems to tackle or new solutions to well known problems.</p>	<p>Representation: 51</p> <p>Art gives us entirely new ways to represent things that emerge something better than we planned, which we miss if we let our attention to our plans too well.</p>	<p>Conquer Emergent 56 Patterns, Manage Emergent Insights:</p> <p>Art can expose us to precisely the creation dynamics or devices we have avoided or omitted, thereby pushing us over the edge from self doubt and hesitancy to bold attempt and lesson innovations.</p>	<p>Create Creation Machine & Use It: 55</p> <p>Art can expose us to precisely the creation dynamics or devices we have avoided or omitted, thereby pushing us over the edge from self doubt and hesitancy to bold attempt and lesson innovations.</p>	<p>See Wanted Novelty 36 Conserved:</p> <p>Art causes us to see true novelty, newly born into this world, as it gets attached by established old powers-that-be. It reveals the faculty with which the old fights against the new.</p>	<p>See Wanted 35 Historic Dreams</p> <p>democratized performing.</p>	<p>Side-Effects 40 Overwhelm Intended Effects:</p> <p>We build up our selves and plans and deeds so much that we continually are blind to unintended effects of our own.</p>	<p>Imbalances Maintained 39 Because Alternative:</p> <p>We often do or repeat things because we are unaware that there are alternative values or ways to be. Art, by showing dramatically such alternatives of our own as well as others, reveals our ways as we stand and seek. It forces us to possible change.</p>
<p>Find New Questions 77</p> <p>Art reveals entirely new questions that mystify us and change what we investigate and pursue.</p>	<p>Find Leverage: 50</p> <p>Art shows us places where small actions can have giant disproportionate effects. By highlighting such non-linearities in life art shows us ways to revolutionize knowledge or proceed via minimal but well focused input.</p>	<p>Create Creation Capability 56</p> <p>Art gives us step by step the wherewithal to create ourselves. It implies the neural roots for imagining and changing all.</p>	<p>Create Creation Machine & Use It: 55</p> <p>Art can expose us to precisely the creation dynamics or devices we have avoided or omitted, thereby pushing us over the edge from self doubt and hesitancy to bold attempt and lesson innovations.</p>	<p>See Wanted Novelty 36 Conserved:</p> <p>Art causes us to see true novelty, newly born into this world, as it gets attached by established old powers-that-be. It reveals the faculty with which the old fights against the new.</p>	<p>See Wanted 35 Historic Dreams</p> <p>democratized performing.</p>	<p>Side-Effects 40 Overwhelm Intended Effects:</p> <p>We build up our selves and plans and deeds so much that we continually are blind to unintended effects of our own.</p>	<p>Imbalances Maintained 39 Because Alternative:</p> <p>We often do or repeat things because we are unaware that there are alternative values or ways to be. Art, by showing dramatically such alternatives of our own as well as others, reveals our ways as we stand and seek. It forces us to possible change.</p>
<p>Find Opportunity 49</p> <p>Art shows us gaps all around us that, by filling, we might revolutionize the world. Art reveals chances in become creative by spotting and filling such gaps.</p>	<p>Find Leverage: 50</p> <p>Art shows us places where small actions can have giant disproportionate effects. By highlighting such non-linearities in life art shows us ways to revolutionize knowledge or proceed via minimal but well focused input.</p>	<p>Create Creation Capability 56</p> <p>Art gives us step by step the wherewithal to create ourselves. It implies the neural roots for imagining and changing all.</p>	<p>Create Creation Machine & Use It: 55</p> <p>Art can expose us to precisely the creation dynamics or devices we have avoided or omitted, thereby pushing us over the edge from self doubt and hesitancy to bold attempt and lesson innovations.</p>	<p>See Wanted Novelty 36 Conserved:</p> <p>Art causes us to see true novelty, newly born into this world, as it gets attached by established old powers-that-be. It reveals the faculty with which the old fights against the new.</p>	<p>See Wanted 35 Historic Dreams</p> <p>democratized performing.</p>	<p>Side-Effects 40 Overwhelm Intended Effects:</p> <p>We build up our selves and plans and deeds so much that we continually are blind to unintended effects of our own.</p>	<p>Imbalances Maintained 39 Because Alternative:</p> <p>We often do or repeat things because we are unaware that there are alternative values or ways to be. Art, by showing dramatically such alternatives of our own as well as others, reveals our ways as we stand and seek. It forces us to possible change.</p>
<p>Cross-Abstractions 16 Metaphoric Combines:</p> <p>Art stands at very abstract viewpoints seeing patterns and unity missed in our quotidian business of local viewing. Art spots patterns across widely separated and differing realms. It makes the world's diversity more manageable this way.</p>	<p>Cross Discipline & Culture Combines: 15</p> <p>Art overcomes the divisions, languages, cultures that forever split us. It binds together what seem split. It uses and values diversity that hurls or irritates or overwhelms us. It presents a bigger more diverse world in which we personally choose to deal with and live in.</p>	<p>Internal Opportunity: 12</p> <p>We can change internally in ways we are not aware of or deny. Art shows us new identities, feelings, styles, relations, aspirations possible now in us and names them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>
<p>Make Impossible Combinations 98</p> <p>Our world is split by all sorts of divisions overseas in Scale Combines that combines what in reality is usually never joined.</p>	<p>Make Impossible Combinations 98</p> <p>Our world is split by all sorts of divisions overseas in Scale Combines that combines what in reality is usually never joined.</p>	<p>Internal Opportunity: 12</p> <p>We can change internally in ways we are not aware of or deny. Art shows us new identities, feelings, styles, relations, aspirations possible now in us and names them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>
<p>Criteria Divergences: 4 virtues, aspirations</p> <p>Our primary group of family and close friends is the primary barrier to self change/improvement. They hate it if our criteria of performance differ from theirs.</p>	<p>Mood Flaws: 3 Directness, Disagreement, Incompleteness</p> <p>We like to feel in control of self and world so much we lie to ourselves about it; art lets us see us from others.</p>	<p>Internal Opportunity: 12</p> <p>We can change internally in ways we are not aware of or deny. Art shows us new identities, feelings, styles, relations, aspirations possible now in us and names them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>
<p>Reveal the Hidden 65</p> <p>Personal and social factors cause us to hide from ourselves in back realities we have hidden from.</p>	<p>Reveal the Hidden 65</p> <p>Personal and social factors cause us to hide from ourselves in back realities we have hidden from.</p>	<p>Internal Opportunity: 12</p> <p>We can change internally in ways we are not aware of or deny. Art shows us new identities, feelings, styles, relations, aspirations possible now in us and names them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>
<p>Performances: 1 Flaws, errors, mistakes</p> <p>People avoid seeing and admitting error; only fiction, art, or history accurately present error. Comedy and tragedy are based on making error visible, felt, palpable.</p>	<p>Performances: 1 Flaws, errors, mistakes</p> <p>People avoid seeing and admitting error; only fiction, art, or history accurately present error. Comedy and tragedy are based on making error visible, felt, palpable.</p>	<p>Internal Opportunity: 12</p> <p>We can change internally in ways we are not aware of or deny. Art shows us new identities, feelings, styles, relations, aspirations possible now in us and names them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>	<p>External Opportunity: 11</p> <p>Things may become possible for us gradually as we are not aware, or avoid awareness, that by disruption of our self we can respond to them and do them.</p>
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Show Imagery Embedding Events: actual audience feedback turned into presentations, posters, ideas used in normal life and work contexts by performer teams	The Show After the Show: stratified response meals/meetings held with some or all of audience after the show to find what they noticed and how their feeling/thinking changed.	Tooling for Easy Success: cue cards, tool sets, costume arrangements, etc. invented by all so doing the show becomes easy and chain-filled not labor.	Rest for Freshness: rehearsal produces hatred of self and work released by a gap till all years for the actual performance	Reading for Individual Performances: If performer anxiety shows audiences tune out. If performers are unclear emotionally or physically, then audiences tune out, edit out bad performing	Reading for Cumulating Impact: If acts/arts do not pull push in consistent directions then results do not add up in audience members so no transformation results; edit out rabbit impacts	Tune Individual Performances: test that each performer is using his/her performance to touch actual lives of audience	Test Sequence for Overall Impact: does the sequence of entire show have overall intended impact of transforming people and culture in a certain way? If not, redesign.
The Show Following Up The Show with Stratified Responding each team does all 4 items below	The Show of Following Up each team does all 4 items below	The Show of Conducting the Show Itself each team does all 4 items below	Second Full Dress Rehearsal: each team does all 4 items below	Reading for General Delight: each team does all 4 items below	Script Reading & Editing Process each team does all 4 items below	Turn Supports into Arts: each team does all 4 items below	Manage Media Peculiarities each team does all 4 items below
The Show Itself: all the work is done before the show so the show itself is just sheer release and fun, no heaviness left, an afterthought of the entire composition process.	Tunings During Performance Intermissions: 2 or 3 intermissions (with filler acts perhaps used so whole cast can talk and tune styles based on audience feedbacks)	Full Dress Rehearsal for Timing: a complete rendition of everything in the performance is done to find timing, flow, performance problems and fix them.	Design the Show this rehearsal is to get performers to keep promises about timing, quality, clean, effort; if details of performing are automatized performers can use roles to connect to audiences improvisationally	Reading for Interesting Flow: each team does all 4 items below	Design Art Acts if acts/arts undo each other's impact or clash, then audiences will be confused; edit out order faults	Test Arts/Acts for Impact: is the impact actually obtained emotionally and rationally what is needed or better, if not redesign for impact.	Test Arts/Acts for Impact: is the impact actually obtained emotionally and rationally what is needed or better, if not redesign for impact.
Plan and Launch Within Rehearsals/ Jokes: surprise secret changes and surprise changes in scripts so rehearsals become fun and alert.	Design & Hold Events Rehearsals design a sequence of ever more complete and equipped fully rehearsals, 3 or 4, then design arts around/within them so they are increasingly fun to do	Disguise Necessary Mundanities as Events: use inappropriate costume, singing together, marches, etc. to decenter mundane parts of set up and rehearsal	Design & Launch High Profile Attractants: build custom mini-events and hold them announcing or holding contests or quizzes for something coming that is yet unnamed, create mystery and gossip.	Invent Act Arts and Write Scripts: setting/lighting/props; who says what, how, looking how, to whom, who moves when, how, looking how;	Write Up Constraints for Each Act: specify what each act and art component must do, be, plus all competing ideas for its content & form	Conserving Liberty "Institutionalizing the new" committed self, hero dissolved self, hero society	Historic Dream "retuning transfused as healer" awakened self, rescue from within, re-entry opposition.
The Show of Assembling & Rehearsing the Show each team does all 4 items below	Design Work Events: specify theme, work assignments, teams, entertainment, decor, punctuating arts for work events building sets, getting costumes, doing make up, etc.	Select Show/Act Fragments: each team does all 4 items below	Design & Launch Low Profile Attractants: each team does all 4 items below	Form Matrix of All Arts for All Targets: each team does all 4 items below	Script Writing Process each team does all 4 items below	Human Journey Dynamics each team does all 4 items below	Freedom "fighting monsters & demons & finding allies" each team does all 4 items below
Specify the Acts Between Acts: between art roles, between art acts, break in acts, fake audience acts, space filler music etc. audience involvement	Art Creation Process 64 steps of composing songs, dances, comedies, tragedies, paintings, sculptures, designs, events and human transformations	Design & Launch Low Profile Attractants: each team does all 4 items below	Design & Launch Low Profile Attractants: each team does all 4 items below	Form Matrix of All Arts for All Targets: each team does all 4 items below	Script Writing Process each team does all 4 items below	Human Journey Dynamics each team does all 4 items below	Freedom "fighting monsters & demons & finding allies" each team does all 4 items below
Dimensions All: dimensions of difference; own uniqueness; become god; extrapolate deepest emotion;	Quality Dynamics has your analysis identified what your audience as customers need most and how they are ready to receive it?	Incipient Edges of Consciousness Analysis: news, pop, music language, fears, dreams, lifestyle, family, culture mismatches, insincere issue responses; role reversals;	Culture Dynamic Analysis: what is the pressure on each culture trait	Segment By: favorite delusion, favored excuse, favored unadmitted	Segment By: blindly within culture; trapped in culture; fleeing culture; out of culture; revising culture;	Write Up One Actual & Needed Experience As: joke, tragedy, song, dance, biography, group history, advert	Entice/Coach People into Inventing: jokes, carthartic conversations, comic histories, advert histories,
Question Finding Dynamics each team does 1 of these 4 items	Creation Dynamics: liberation, freedom, historic dream, conserve novelty	See More & More Thoroughly ex: fitting in hurting Japanese psyches	Neurosis & Paradox Analysis: ex: costs of our talents, want fame with integrity = contradictory goals	Segment By: each team does 1 of these 4 items	Audience Segmentation Imagery Analysis each team does 1 of these 4 items	Field Art Impact Experiments each team does 1 of these 4 items	Write Comic, Advert, Tragic, Song & Dance History of: particular groups, particular persons,
Question Finding Dynamics has your analysis found what your community's best next questions to answer are?	Community Spirit State Analysis liberation, freedom, historic dream, conserve novelty	See More & More Thoroughly ex: fitting in hurting Japanese psyches	Neurosis & Paradox Analysis: ex: costs of our talents, want fame with integrity = contradictory goals	Segment By: each team does 1 of these 4 items	Audience Segmentation Imagery Analysis each team does 1 of these 4 items	Field Art Impact Experiments each team does 1 of these 4 items	Write Comic, Advert, Tragic, Song & Dance History of: particular groups, particular persons,
Giving Names to New Terrors & Dreams: Making what is inchoate & nascent visible.	Remember Life's Best & Worst Experiences: know yourself, know others, know what of life you've not experienced	Seeing the Minimal Essential Traits that Define Our Uniqueness: what people 10 years from now will not be like	Reflectivities of All Arts ex: impersonators	Between Settled for and Possible: needed ambition	Between Realized & Actual: needed awareness	Extreme Metaphor & Viewpoint Expression: express targets using extreme metaphors or viewpoints	Manipulate Trends/Contents of Existing Arts: invert, blend, extrapolate form & content
Purposes of All Arts ex: 1984	Overcome the Fixed Limits of Life: ex: your most embarrassing moments	Seeing Gaps: each team does 1 of these 4 items	See Our Time & Obsessions from History's Perspectives ex: change of culture contents in time	Statement of Community Spirit State each team does 1 of these 4 items	Between Past & Future: each team does 1 of these 4 items	Art Idea Invention each team does 1 of these 4 items	Art Idea Sharing Seance Method: each team does 1 of these 4 items
Make the Invisible Visible: each team does 1 of these 4 items	error, mistake, greed, lust, virtue, tiredness, disagreement ex: Sempe, meek husband with murder inside	word/deed; self/other; need/supply; reality/possibility; our doing/our challenges ex: present job, dreamed of career	our solutions perpetuate our problems; swings from one pole of polarities to another; present practices' value from what they replaced; ex: Japan's deflation	needed deflations	needed transitions	structurally read best arts/performances; stry reply to them; cartooning; role reversals; ridiculous viewpoint retellings;	suggest, play, prune, sequence, perform ideas

