

## CHAPTER 7. FURTHER STEPS IN THE CURRICULUM

### 4th S T A G E

Cumulative Expository Mentation to make valuable inventions.

#### FOURTH LIST OF GROUPS

(FOURTH STEP IN LINGUISTIC MENTATION)

#### 19. LITERARY EXPOSITION OF THE THIRD LIST OF GROUPS

Instead of a classified list of data, now make a continuous and self-connected and readable and convincing *literary exposition* of the Third List of Groups (of its Inventories of Inventions, Prospections, and Business Opportunities.) It is made for the purpose of intelligibly describing the inventive work, for showing its value to business, and for indicating anticipated further development from your inventive research. It should be written to give a unitary view of your inventive work in relation to business opportunities, hoping thereby to make the means for carrying on that work.

This literary exposition should be a complete treatise on your heurids in their relation to your own time and place. Say everything as perspicuously as possible, and never tire at the re-writing of any and every part of it as long as any noticeable improvements are made in choice of word, in syntax, in forceful turn of phrase, in mode of explanation, in illustrative incident or episode, in accuracy of statement in regard to matters of fact. Every such *change for the better* represents *cumulative growth*. Each change for the better indicates *growth* and its incorporation into the literary exposition makes it *cumulative*, not only in the exposition but also and more especially in brain-growth and mind-embodiment. The exposition accumulates *every* item as an *integral part of a literary whole*; especially if the exposition be classified according to natural groupings (rather than to some artificial scheme superimposed upon it). Consequently, whenever an item can be put in a more appropriate place in a paragraph, or a paragraph in a chapter, or whenever any change for the better can be made in classification, do not hesitate to rewrite the whole exposition according to that classification. In such a rewriting most paragraphs will not have to be rewritten if properly written in the first place, so as to include nothing that properly belonged some other place.

The most important part of a literary exposition is to classify it naturally, according to actual likenesses and differences of its

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data and not according to some theory. If things and data have a

likeness to each other they belong to the same group regardless of any *theory* to the contrary. If a datum is more like some group into which it has not been placed than the one in which, for some hypothetical reason it is placed, then the whole exposition will thereby be vitiated and mentation will be misled.

Cumulative mentation is something more than a mere accretion of an increased number of data; it is more especially a growth of perceived relationships between data and a concomitant growth of the mind that perceives these relationships. Cumulative mentation is an inner adjustment of the conscious states representing the data, generalizations of data, syntheses of data, and a corresponding growth and adjustment of the whole person and periperson.

Not only the verbal and logical but also the moral, ethical, religious, and all other practical aspects of each meaning of the exposition should be the result of your best judgement at the best judgement periods of your life.

## 20. CRITICAL JUDGEMENT PERIODS

Every morning for half an hour, more or less, at that time when the critical judgement is found to be clearest and sanest, apply the critical faculty to each datum and each meaning and purpose and implication of the exposition. The critical judgement does not work at its best except for a very short time, after which it falls away from its high estate. During this period the critical judgement should “consider” each item of the literary exposition in order to eliminate therefrom everything of which the best judgement has disapproved, and more fully to express its exact approvals in every item of which it approved. Not only will it be advantageous from every utilitarian point of view thus to eliminate mistakes which only the best moments of the critical faculty can see and thus more fully to express the good points, but it will be a direct aid to the originative functioning thus to get *rid* of *disapprovals* FOR THEY INHIBIT productive and originative mentation *in their highest forms*. Moral, ethical, and religious disapprovals, acting reflexively through the cerebrum, obstruct all the better kinds of heuristic growth and discovery; and the results of disapproved data in an exposition will ultimately not be for the best.

Therefore as long as the Critical Judgement at its best moments can detect any mistakes (morally, ethically, scientifically, commercially, grammatically, and rhetorically), as long as it can make any improvement in plan or purpose, the exposition will not truly be a cumulative *unitary* mentation, for it will contain within its very data the elements of disunity and self-antagonism. It takes time to apply the critical judgement to

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a long exposition; half an hour daily does not cover much ground as measured by pages, but its results are vast, nevertheless. The early morning hour, before breakfast is at times best; at other times about 10 a.m. to noon. If in an insightful period, the very early morning hour, just on awaking, is best. If from the first making of the literary exposition the critical judgement has been applied to all records on being transferred to the exposition, these points will not have to be judged again, but only the new meanings and purposes for which they are at any time being used. This rule is important. Only after data have been approved by the critical judgement are they really ready to be used in the cumulative literary exposition. The act of forming a critical judgement of any datum places it more vividly and purposively before the mind.

*The Critically-Judged Cumulative Exposition.* It can be said without hesitation that the art of exposition as it is used by this method of critically-judged cumulative mentation, of which herein only an introduction is given, is the most important and most concretely practical feature of the art of heurotechny.

As long as the mind has the ability to add improvements of *any kind* to that exposition it will not be quite ready for the next steps, because the mind will still be growing in reference to its understanding of that mental content, and you should keep on adding improvements demanded by the critical faculty and keep on expounding them in the cumulative exposition until the summing up of them will constitute, by a process of conscious and subconscious becoming, a New Step, ere you are aware of it. This constant and minute *perfecting* of your exposition is intrinsically a perfecting of your mental content and of your person and periperson which leads after each period of growth, to *new steps*, and it leads to inventions of better quality. It *progressively conserves* every original achievement of your genius-capacities, and adds to them the aid that may be given by all your lesser abilities. It is the only way to bring *all there is* of your knowledge and ability (conscious and subconscious) to bear upon your whole inventional, prospectional, and business problem. Other methods cause your genius-capacities to work at *parts* of this problem. This method takes up the problem as a *whole*.

The heurotechnic tree must grow and keep on growing in every branch, twig, and leaf, and in every root; it must not skip any or it will soon be lop-sided and these neglected parts will decay and make pathologic conditions in the tree. So every new fact or idea or prospection achieved by the mind must be incorporated in its exposition or it will not be a *cumulative* mentation of the mind's whole growth, for only by a self-consistent expository whole will

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the items all be related into a rational and living whole. Otherwise there will be but a jumble of items, a junk-shop of unrelated parts. Unless your whole mental content along heuristic lines is expounded as a whole it will not be a *mentative cumulation* fully VITALIZED with its own consistencies, but only a mere accretion, dying with its own unrelatedness.

If for the next five years your mind were filled with an ever-active content of hate, suspicion, deceit, fear, anger, jealousy, and revenge; if every morbid incident in literature and from the annals of the Police Courts were learned and expounded — What think you would be the effect on your brain and character and daily thought and *impulses* as compared with five years of the reverse kind of life? Five years of love, confidence, faith, joy, courage, friendship, altruism, of literary exposition of every normal incident from life and literature, would fructify your brain, ennoble your character, and fill your days with benevolent impulses. If two persons were absolutely alike but each living one of these lives, they would no longer be alike after the five years; they would even look different.

So it is, only more powerfully so, with the method of cumulative literary exposition; it keeps the whole body of facts relating to a subject uppermost in the mind, as a whole, with growing perfectedness in every detail, with the constantly clearer vision that comes from clearer literary statement. All the physiologic and psychologic growth is being directed by that content-as-a-whole, resulting not merely in a perfected and complete literary exposition of the whole subject as you know it but resulting in a perfected and correspondingly complete brain growth and mind growth and character growth and periperson growth; giving you higher abilities and thoughts and impulses corresponding thereto.

## 21. THE COMPREHENSION

A *Comprehension* of a subject is a *holding together* of all the data thereof as an understood whole. One of the important results of the work of preparing a critically-judged literary exposition of your work relating to your inventions, prospectings, and business opportunities is that it gets into the mind as a *connected whole*, as a Comprehension, in which the expounded relations of parts to each other are part of the data of the exposition. So true is this fact that it often happens that without adding to the number of data or in any way changing any data, but just by a change in their interpretation or intended use, new data are thereby added, and of course added cumulatively to the exposition. The whole subject is held in the mind with all its data in relief when the literary

exposition thereof is familiar to it. It is kept vividly active in the mind as a *growing whole* every time a new datum is

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added thereto, because in order to add a new datum in its proper place the whole Comprehension must be *in the conscious attention*, and to add the new datum requires that it be adapted to the style of that composition and must be cognizant of *all that has been said* and of all *the purposes and ideals expressed in it!*

The cumulative literary exposition gets to be known like a multiplication table; as a whole and every datum in it. It is a living, growing, self-consistent and almost self-expository whole. It has been said that an idea writes itself; the idea suggests what is to be said and what not. So it is with a Comprehension; it writes itself. It becomes self-directive of its own growth; the very features of syntax, classification, style, degree of generality, purpose, and ideals are *on guard* for mistakes and for new truths. The whole content and growth of the mind along originality-lines and with reference to purposes and opportunities becomes a growing, cumulative, literary whole, absorbing avidly all that belongs to it, rejecting what does not suit, keeping its parts together as a whole, as a Comprehension. It becomes the concrete record of an active mental process in which every detail is not only accumulated into that group but is *cumulated* to the whole. Note the difference. The Comprehension broods in the mind and over it as a consistent whole; directing its growth.

That is the point. An *integrated* result has now been reached of all your heurotechnical work thus far done and it will henceforth remain integrated and will absorb into its life every subsequent fact and insight and understanding and appreciation that may be attained by your mind. Using it as part of the whole, the person and periperson will be organized in reference thereto.

When the invention, prospection, and business opportunity Comprehension is complete and fully expounded in a treatise that is creditable as a literary result, and capable of arousing enthusiasm for your work and of securing cooperation, then hold the Comprehension in mind and WAIT.

## 22. 1st. PERIOD OF WAITING FOR ASSIMILATION, ADJUSTMENT, and GROWTH

There is still another step to be taken in this method of cumulative mentation and Comprehension; namely, that of waiting for a more complete *assimilation* of the mental content in reference to purposes, for its more complete influence over the subconsciousness, for an *adjustment* of the person and periperson and organism thereto, and for a conscious and subconscious

*growth* that has been directed by the Comprehension. That is, having by the method of cumulative exposition gotten a far more extensive mental content, detail by detail, every step the result of voluntary effort and voluntarily directed use of the genius-capacities and other abilities, the

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student now rests and waits in responseful and unhurried quiet and relaxation, under the influence of the Comprehension, for GROWTH. He waits for his heurotechnic tree to feel the on-rush of the sap of a new spring-time in its life; waits for the sunshine and rain. He waits for the whole subconsciousness and its organism relations to get to work; waits for steps to take place in his mind, for the step that will be taken *in* him rather than *by* him.

Assimilation is both conscious and subconscious; the adjustment is conscious and subconscious; the growth is conscious and subconscious; and all takes place in person and periperson.

If the student has really learned and understood his own literary exposition of the results of his cumulative mentation along his own inventional and prospectional and business lines, he should undergo a *period of reposeful waiting* in order that his mental processes may fully *assimilate* those results and that he may *adjust* himself to the new plans and ideas and prospects and to the attitude of his social environment in regard to them; and in order that growth may take place in his whole person and periperson. Out of that assimilation and adjustment and growth will come (a) new ideas and (b) prospections and (c) feelings and (d) impulses-to-do. It will be a higher order of inventive subconscious mentation because it will have been systematically *prepared* for and voluntarily and scientifically *directed* by an active *Comprehension* of data. If the cumulative exposition of the Third List of Groups was well learned and exhaustive and accurate and the waiting period sufficient for assimilation, adjustment, and growth, then the new ideas and feelings and impulses WILL BE THE PRODUCT HIS LIFE'S AND HIS ENVIRONMENT'S ENSEMBLE—of his total adjustments to the totality of his surroundings, and he will have safe and sane heurotechnic steps.

During this first period of reposeful waiting, the heurist should keep in a well-rested, well-nourished, well-slept, and relaxed condition; *awaiting new ideas*, feelings, impulses. It is this *attitude and habit* of being in a *constant* introspective INLOOK and perceptive OUTLOOK for new ideas, feelings, and impulses that is one of the important results of this period of waiting under the aegis of the Comprehension. It results in a naive and instructive effort at introspectively and re-functionally acting on the Comprehension, producing first a *conscious* and then (within a

few years) a subconscious HEURIC DOMINANCY. This dominancy will, as it rises, become adjusted to your life habits, if you give it a chance by relegating all else to a secondary place in daily *intentions* and *attentions*. For best results, from now on you

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should make the heuristic life dominant completely in your person and periperson. The main characteristic of this life is that with reference to any and every affair that calls for judgement or action, the whole mental content and effort is brought heurotechnically to bear thereon.

It is sufficiently difficult at best to realize one's highest and best levels and powers and then get from them any large portion of what they might easily give. It requires the cooperation of all one's best impulses and insights, aided by one's fullest expectancy of attention, to achieve the best to which one is eligible. Any other strain of attention, such as the constant prompting of the inner mentor regarding an undone duty, will often suffice to keep the mind on a lower level. Spencer pointed out the law that those highest appreciations and sentiments and abilities which were the last to be attained in the phylogenetic process of evolution are the first to disappear under narcotics or degeneration. It is here pointed out that those impulses and abilities and insightful capacities and instincts which were the last to be phylogenetically evolved and which consequently are the latest to appear ontogenetically, are the most difficult to recognize by the student, are most easily side-tracked and effaced by earlier evolved instincts and impulses and abilities. Therefore while awaiting the highest heurids and impulses along any line during a dominancy, those latest and highest tendencies should be subjected to no *obstruction* whatsoever. No other attentions or intentions or anticipations should be at work in the mind.

### 23. INCORPORATION OF RESULTS

When groups of new ideas and impulses and feelings commence to come as a result of the Comprehension-waiting, the student will be able to identify them as being psychologically of different order than those found in the previous Lists. Incorporate these new items into the Third List of Groups to extend and improve it.

### 24. THE RE-WRITTEN EXPOSITION

Re-write the cumulative literary exposition completely. The incorporation of these new results will make them more fundamentally a part of the Comprehension.

## 25. 2nd AND IMPROVED COMPREHENSION

Learn the new exposition and hold it in mind as a new Comprehension.

## 26. 2nd PERIOD OF WAITING

Undergo a second waiting period for assimilation, adjustment, and growth.

## 27. THE FOURTH LIST OF GROUPS

Results of this second period of waiting should be embodied

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into the Third List of Groups to make out of it the Fourth List of Groups, which will be improved and enlarged inventories of inventions, prospectings, and business opportunities. After this second waiting the mind should begin to make the most valuable kind of inventions, and you will by this time intensely feel the urgent need for a more complete knowledge of the sciences and arts relating to your subjects.

## 28. NEED FOR SCIENTIFIC EXPERIMENT

After this second period of waiting, if the mind *invents anything at all*, it will invent a *step in the progress of that art*, and it will be patentable, timely, and salable. It will be salable because it will be in accord with the valid and active prospectings of the world, and for another reason. You will begin to be more accurate in your data. You will begin to be somewhat afraid of “authorities,” even the best of them, and you will prefer to *try it and see for yourself*. That is, you will be led and driven into scientific experimentation along your originality-lines.

*Period of Systematic Inventing.* Systematic inventing should start now. Before this period an occasional invention may be hit upon by good luck, but from now on the inventions should be adapted to the demands of the time and be the direct product of your genius-capacities. It is truly a waste of time and money to keep on inventing during the earlier stage. Less than one inventor in a thousand *happens* to strike effective mental methods and the right level of inventing for his own time, for only a few ever really master the state of the art relating to their own lines of endeavor. It is an egregious waste of time and money to spend years of inventive effort along a line in which you have not *thoroughly mastered the related scientific knowledge and the technique of the art*, for the reasons given, and also because inventions made without this preparation *belong to an earlier stage* of mental and technical and sociological development and are not adapted to *the present* time and place. Unless you do master the scientific

knowledge and technique of some one or two lines in which you wish to do inventive work (such a mastery as implied in the Invention, Prospection, Business Opportunity Inventories of your Fourth List of Groups) you will be a mere adventurer and dabbler and dilettante in that domain. Occasionally you may “make a hit” but 999 times in 1000, no matter how promising an idea may be at the start, you will be ultimately disappointed.

## 29. MASTERY OF SCIENTIFIC PARTICULARS OF ORIGINALITY-LINES

As a rule, it is only by *carrying further the whole previous technical development* along any line that real commercial success comes. If you choose to give this amount of time to systematic inventing as a means to a livelihood, it behooves you

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to master the scientific particulars relating to every phase of the inventories of your Fourth List of Groups.

Validate to the extent possible by scientific observation and experiment all the data of this List.

Having gone thus far in your heurotechnic training you will know what lines your mind naturally follows, so you can afford to master the sciences relating thereto. (Until a student shall have done all this work he is really not ready to select a scientific course at college.)

This fourth stage may be considered the Fourth Step in Linguistic Mentation.

## 5th S T A G E

The Sanctioned Comprehension to prepare for business effort.  
FIFTH LIST OF GROUPS

## 30. PRINCIPLES OF LIVELIHOOD AND BUSINESS APPLIED TO EACH HEURID

By the aid of the principles of livelihood and business you should be able to make as much of an income as your time will permit. To spend time making more money than you will need for your life-work would be foolish. Consider *each one* of the principles and methods of livelihood and business outlined in Chapter 8 with each *heurid* or invention of your Fourth List of Groups.

## 31. THE BUSINESS PROSPECTUS

Put the attractive inventions, from a business standpoint, each in a business prospectus. Accompany with a showing of prospective profits.

### 32. WORKING MODELS

In order that these propositions may be truly convincing and commercially practicable, make attractive working models, and use them. You will need a machine shop.

*The Machine Shop.* Apart from a certain list of tools and machines and materials of general use, selected with reference to what is first to be undertaken, select what is especially needed for the actual things to be made. Otherwise money and shop room will be tied up by machines so seldom used that the work should have been done outside. It is a good rule not to buy a machine tool until it is certain that money will be saved to do so. Until then, what is needed is a *tinker's shop* and tools for assembling parts made outside. Start with a small assembly shop and a good mechanic who can be foreman in the later shop if the time comes, and who can attend to outside mechanical affairs.

Besides the actual one or two rooms for the shop, there should be an office with desk and filing cabinet, a small reference library, and a private room for writing, models, and other personal records. The models should be kept in condition for

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showing any experiment which they will properly illustrate for aid in making a deal.

At first choose those inventions which do not require much money for exploitation or an extensive knowledge or great skill *of the kinds which you do not* possess. Choose what may be called “minor inventions” rather than “big inventions,” reserving the latter for a later period in your life, if you should ever have time for them. Inventions requiring long research or a special knowledge of sciences that you do not know, do not expect to exploit, although ideas and prospectuses must be recorded. Select for your first business prospectus those requiring such knowledge as you actually possess or may easily acquire. When a really novel and socially up-to-date invention has been selected from the Fourth List of Groups, you should proceed *to make and use it*.

### 33. A COMPREHENSION OF PURPOSIVE-INTERPRETED PROSPECTIONS

It is simply astonishing how very many stern realities confront whenever a thing is made for actual use. It's too big or fragile or unesthetic or expensive or heavy or noisy or ineffective — or too something. Not merely is there one difficulty but there are many, and every change made to get rid of one is almost certain to introduce new difficulties. But it is precisely at this point where the many *minor* prospectuses of the more practical sort arise in the

mind, and a *Comprehension of these prospectiorts* relating to an actual case will soon lead to the solution of them if they are really solvable. To *make and work with* your invention until you find its good and bad points and thereby get purposive-interpreted PROSPECTIONS AS A COMPREHENSION is the heurotechnic secret of this stage of development.

All previous development of an invention is preliminary, leads up to this point and it is at this baptismal font where it is finally ordained to success — or failure. This is the *time of the opportunity* in all inventing; here and now it shall take shape for fruition or be abandoned. If definite prospections arise it will sometime come to fruition; if it is not clearly discernible what further needs to be done to make it a success, if there are no prospections, then you are even then attending the obsequies of that invention.

If you achieve definite prospections, then do not be disappointed if your mind fails *at once* to solve them. Any further inventing thereon may not commence until your special Comprehension of Purposive-Interpreted Prospections has had time to produce its special conscious and subconscious elaborations and assimilations and adjustments and growths, and that may take time. Your mind in some way may know that

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this particular problem cannot be solved until you shall have made further progress along some entirely different and seemingly unrelated line; progress that will supply the missing factor in your unsolved problem.

Keep your unfinished invention on the shelf before you, with its defect objectively emphasized and do not let the dust settle on it. Use it once in a while to see how bad it is and why. You need purposive (action) impressions and impulses as well as intellective and introspective understandings. Your unsuccessful models of inventions should form a museum of prospections for you. Handle them; you will some day solve most of them, and perhaps by some entirely different method which gets rid of the difficulties by avoiding them, for those are the kinds of steps the mind is apt to make under the influence of the Comprehension and Waiting.

You will get a number of Comprehensions of Special Prospectional Groups; as many as you have of unsatisfactorily completed inventions. All these are a crop which you are to till until, one by one, they ripen or are usurped by some better method of your or of *someone else*. Get in the habit of watching the weekly Patent Office Gazette and technical literature for Death Notices of your inventions.

#### 34. THE ADJUSTED EXPOSITION

Of course you may achieve minor livelihood results *as you go a long*, but the major results will come only after you shall have made *as good an exposition as you can* of your seriated and accumulated inventories, then gone through the second period of reposeful and masterful waiting for assimilation, adjustment, and growth under the urge of the Comprehension. This waiting brings about subconscious growth that is influenced and directed by your then active and dominant mental content and this growth will be due to the *ensemble* of your person, periperson, and organism in *interaction* with your environment. Then your new ideas will be the actual *next steps for you and for that science and art and for the world's progress*; they will not only be *novel* but they will quite likely be almost wholly true and safe and sane and *adjusted to present conditions*.

Classify and expositionally incorporate these new steps (discoveries, insights, inventions, prospections, feelings, skills) into the cumulative literary exposition, thereby making it larger, more true, better, and more *adjusted* to your needs and to the opportunities of your time and place.

#### 35. MORAL AND ETHICAL ASPECTS

Then consider the *moral* and *ethical* aspects of each business proposition in each prospectus. Omit every plan and motive which fails to get your full sanction.

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#### 36. THE SANCTIONED COMPREHENSION

Perhaps with a little further thought you can amend each condemned plan to enable it to get your sanction. Hold the exposition in mind as the 3rd or Sanctioned Comprehension.

#### 37. 3rd PERIOD OF WAITING

You should then undergo a 3rd Period of Waiting under the Sanctioned Comprehension for assimilation, adjustment, and growth. That is, this third period of WAITING should take place under the benign influence of The Moral and Ethical Approvals, which are *feelings* rather than intellectual and introspective censures of the Critical Faculty. These moral and ethical approvals tend to produce impulses to act. Your results will be business insights and opportunities rather than inventions; business prospections rather than inventional prospections; new acquaintances rather than improvements; personal influence over others rather than ideas; power to gain other's confidence rather than further intellectualization. That is, this 3rd Period of Waiting will prepare you for social effort with your Business Prospectus.

*Adjustment and Livelihood.* This step is of practical importance. The great point is that the primary and paramount achievement in any line of livelihood endeavor is to attain a true ADJUSTMENT of it to your life and your environment, so that it will be *adapted to your abilities*; so that you will properly *prepare yourself* for that line of endeavor; so that you actually will produce something for which there is a remunerative demand; and so that you will be in favorable social relations with those with whom you must deal. For these reasons the period of moral and ethical mentation is of prime importance.

It would be non-adjustment for you to be influenced into taking up a line of endeavor which would not require your real genius-capacities or abilities; it would be non-adjustment for you to keep on inventing along lines whose technique you have not fully mastered; and it would be non-adjustment to keep on inventing something that nobody wants. To *earn* money one must *specialize* upon SOME OPPORTUNITY FOR UTILIZING ONE'S ABILITIES, and unless you intend to drift with the "followers" you must (unless you are naturally one of the few greatest geniuses), first master your subject and *then do original work therein* by heurotechnics. All livelihood affairs are compromises between what you can and will now actually do in the present time and place and what you could or might do under special conditions. Nay, it is something still more specialized; it is what YOU ARE DOING NOW AND HERE.

It is obvious that what you are doing for a livelihood, now and here — if you are doing it well — will not be any great number of

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diverse kinds of unrelated businesses but some one main kind. If that is not an expression of your genius-capacities then you will be a victim of non-adjustment and you will suffer, and the world will lose what original things your genius-capacities might have given it.

Whilst the making of a livelihood is of utmost practical importance it must be remembered that when once a paying business or profession is secured there need be no continuance of striving to find what to do unless the business or profession becomes unremunerable. Then a little rational striving under inventive guidance will again make it remunerative; but non-adjustment to one's genius-capacities and to opportunity by *inadequate preparation* early in life, is seldom remedied. Most persons are forced into ruts which they must thereafter follow; but the student of heurotechny should take time to choose and consider according to the aforesaid methods.

Hence whatsoever you intend to do for a livelihood you should

begin to do it and thereby get in closer touch with the actual *demands made by your opportunities* along those lines and with your *actual abilities* to supply those demands. What *is wanted* and *what you can do* shall be your guide rather than *what ought to be wanted* and what you wish you could do (insofar as money-making is concerned). Of course, as pointed out, you may at any time be fortunate enough to attain a few vendible results of your inventive efforts, but the safe, sure, and conservative financial success that you seek as the mainstay of your livelihood will come more slowly and will widen and deepen as it comes.

### 38. INCORPORATION OF RESULTS INTO THE FIFTH LIST OF GROUPS

The previous Fourth List of Groups will be enlarged and improved by these new results incorporated into their inventories of inventions, prospectations, and business opportunities to make a new or Fifth List of Groups. The results will be original, new, true, and so will be heurids.

*One Step At A Time.* Does all this work seem strenuous and difficult? It is not, unless you take it so, for you should be making money and out of this heuro-technical struggle will come new levels and appreciations and powers. Take up *one* step at a time and DO IT. Do not hurry, but *keep at it*. Keep that work predominant in the attention until it is accomplished and becomes an actual attainment in your life.

### SOME SPECIAL RULES OF PRACTICE

A. *Preliminary and Transferred Records.* The first jotting down of a heurid should be on a card or paper of distinctive color

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or size or texture for easy identification, such as a yellow card or letter-size paper. It may advantageously be several times rewritten on this kind of paper before being transferred to the appropriate List of Groups (on some other kind of paper like white letter size). The Third List of Groups and later Lists use a distinguishing paper. The yellow cards and paper are intended to be a sort of catch-all for any and every undigested and unverified idea, clipping (pinned to the card), or off-hand sentence, to be afterwards more carefully considered, more carefully written, more carefully classified and its sub-points distributed and incorporated in the Lists.

B. *Degrees of Originality.* Before being transferred, each record should be *well considered, validated* to the extent possible, its *operativeness* carefully worked out in a drawing and its degree

of originality carefully ascertained. Place in the First List of Groups any data which most nearly anticipate priority. In the matter of an invention or prospection it is good practice to look up priority in the Patent Office as soon as the subject is definitely before the mind, else much time will be wasted considering ideas that are not racially new. If found not to be new, then transfer the record to the preface of the List of Groups to which it belongs.

Keep in touch with the current progress along inventional lines by glancing over the weekly Patent Office Gazette and by reading the current technical literature. If actually handling an invention, subscribe to the special technical publications relating thereto.

In like manner whenever a discovery or bit of creative work or social attainment is added to the List of Groups, always look up the degree of originality to determine in what ways and degrees it has been anticipated. This procedure should be done for many reasons. In the first place, the heurist should always know from what branch of knowledge the heurid springs. If from the world's latest and highest achievements along that line it will be timely, will fit into that which is then going-on; if it springs from heurids that are already ahead of the world's state of the art it will be especially useful for guidance to teachers, but not necessarily ready for propagandization or sale. In the second place, in every exposition of a heurid it is desirable to state what has been done by others that led up to it. The reader or hearer gains great confidence to learn that the heurator knows what his predecessors have done, just how far they have anticipated the heurid, and that they have been given fullest credit for every phase of their priority. This knowledge of the prior art is highly essential in preparing patent specifications.

*C. Order of Listing.* It is advisable in the List of Groups to place

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the prospections relating to any group of inventions in with the description of that group so that it may always be seen and considered whenever that group is seen and considered. Inventions not new to the race should be listed in the preface to each group, then inventions, prospections and business opportunities. This order will make it more convenient to apply the critical faculty and expository mentation thereto, and will more surely keep the prospections in mind. A special list of prospections may be made when they alone are to be mentated. The same is true of prognosis; it should form a subdivision of the description of every discovery. In like manner an impulsion should be recorded in with the article describing the thing to which it relates.

*D. Titles.* All main titles in the Lists should constitute a separate line commencing at the margin, and the descriptive items

thereunder indented. The *main titles* of not racially new inventions, prospectings, business opportunities, prognoses, purposes, impulses, should be in ordinary small type of the text, *underlined*, beginning each word with a capital letter; all sub-titles should not be underlined. The titles of inventions, discoveries, creative works, social attainments, should be in all capitals, underlined, with sub-titles not underlined. Such an arrangement will prove helpful.

E. *Form of Record*. In writing out the exposition of the Lists always *keep the reading matter solid*; that is, do not devote whole pages to a single title at the top, unless the page is intended to represent an entire part. Do not use narrow columns. The First List of Groups as stated may be conveniently put in the form of a card file, the cards being large enough to take copies of such records as patents and periodicals; the file being extended to *include* books on shelves as literature relating to priority.

F. *Old Records*. It is *not* desirable to keep cards or records that have been re-written or transferred; destroy the old one so that its imperfections may no longer be re-impressed on the memory.

G. *Re-writing for Diction*. Subsequently each item of the expositions should be re-written with the mind *on nothing else* but the diction, more minutely going into details of terminology, syntax, rhetoric, or other such aspects, and the items should then be more carefully classified.

H. *Specifications*. Write out preliminary patent specifications with drawings for each invention that appears to be most immediately available for being exploited. The writing of this specification and the making of the drawings therefor and the more careful patent searches is the most effective way of getting down to "brass tacks" with the invention and of turning its prospectings into actualities. It puts the whole invention

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practically before the mind; it almost invariably leads to further improvements and it shows clearly just what is required as a working model.

I. *Shop Work on Models*. A work shop will be needed in which to make a succession of working models and incidental experiments relating thereto. While doing this work, keep on writing the patent specifications and perfecting the drawings and *improving the description* of the invention. Several months is not too much time to devote for a "minor invention"; important inventions will require much more time.

J. *Initiate Business Opportunities*. In the meantime get in touch with those practical persons who are working in that line, manufacturing and selling goods of that kind, and who may

purchase or handle the invention or discovery or creative work. That is, get in touch with all the chances for getting *business opportunities* relating to your heurids, study the scope of the demands which they supply, the legislation, competition, and other factors, so that a reasonable price may be asked with some likelihood of getting it.

#### 6th S T A G E

Self-expression in invention for livelihood and business.

#### SIXTH LIST OF GROUPS

The process of self-expression in originality-lines and extending invention is a continuous one. Although the work of the previous stages should produce inventions and even a livelihood or income, it is necessary to proceed further to reap a crop of valuable inventions, and to make sure that they are a real expression of the genius-capacities and predilections.

#### 39. THE LIST OF ORIGINALS

Only items of original work (heurids) should remain in the Fifth List of Groups. Delete any which are not, or add original improvements.

#### 40. THE CLASSIFIC SYNOPSIS

Instead of a mere grouped inventory, now make the List more taxonomic; that is, classify it more carefully and accurately, as nearly as possible grouping items into like concepts and ideas and thoughts. Heurotechnically, a concept represents a group of images of objects classified according to their natural likenesses and differences. The discovered relation between two or more concepts is an idea; and a generalization of two or more ideas is a thought.

Group the items expressing the simpler and more fundamental information, which will somewhat approximate concepts, into like classes; and relations between them (corresponding to ideas) into like classes. Group generalizations between these ideas into like classes of thoughts.

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This List should now become more like a “Classific Synopsis” or a diagrammatic exhibit of headings, sub-headings, and other subdivisions of a subject, so that at a glance may be seen the coordination, synordination, and dysordination of classes.

#### 41. THE SERIATED SYNOPSIS.

Apply seriated mentation between the items of this synopsis.

42. THE CUMULATED SYNOPSIS  
Apply cumulative literary exposition to the synopsis.
43. THE IMPROVED SYNOPSIS  
Incorporate results of this seriated and cumulative mentation into the synopsis.
44. THE 4th OR SYNOPTIC COMPREHENSION  
Learn this synopsis and hold in mind as a Comprehension.
45. 4th PERIOD OF WAITING  
Undergo a 4th Waiting for assimilation, adjustment, and growth.
46. THE ADJUSTED SYNOPSIS AND COMPREHENSION  
Incorporate results into the synopsis and Comprehension.  
Apply to them the previous steps as follows:
47. NAIVE INGENUITY
48. A NEW AND ENLARGED LIST OF TOPICS AND WORD-GROUPS.
49. SERIATED MENTATION OF THIS LIST OF TOPICS WITH SYNOPSIS
50. CUMULATIVE LITERARY EXPOSITION
51. CRITICAL JUDGEMENT PERIODS
52. THE 5th COMPREHENSION
53. THE 5th PERIOD OF WAITING FOR ASSIMILATION, ADJUSTMENT, AND GROWTH.
54. WORKING MODELS OF MOST AVAILABLE INVENTIONS
55. COMPREHENSION OF PURPOSE-INTERPRETED PROSPECTIONS
56. BUSINESS PROSPECTUS
57. MORAL AND ETHICAL SANCTIONS OF PROSPECTUS

58. A DOMINANCY OF THE NEW OR 6th COMPREHENSION

59. THE 6th PERIOD OF WAITING FOR ASSIMILATION,  
ADJUSTMENT, AND GROWTH.

60. INCORPORATION OF RESULTS INTO A SIXTH LIST OF  
GROUPS

This List will be inventories of timely and valuable inventions, prospections, and business opportunities in predilective originality-lines. The process of individualization will have narrowed from the wide *highway* of the world's inventories to the *narrow path* of the List of Groups and then to the *blazed trail* of the student's individual initiative, leading into new regions.

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*The Cumulative Process of Steps.* Each of the foregoing steps or stages is potently cumulative and presupposes the previous step. If originality-lines were not first determined, the Second List of Groups could not be prepared, and if these did not exist and if linguistic mentation were not achieved, then the List of Topics could not be seriated therewith. Likewise seriated mentation is the essential precursor to the Fourth List of Groups, and so on. That such a progressive and cumulative relationship naturally exists (and is not merely invented) gives additional confidence in the method.

This inventional work will be intellectuating the student; the prospectional work training him to look forward; the livelihood making and business transactions carrying his person and periperson into a practical adjustment with the ensemble.

*Doing a Precursor to Learning.* You came out of a *Whole* every part of which was going on all the time, and all of it and your whole life were thrust at you *at once*, not step by step. You had to learn living first and take time to understand it afterwards. Your later specialization arose out of this complexus. Little by little you found yourself differing from it. You learned a little of many sciences and arts before taking up the systematic study of any one. All these subjects were blended and undifferentiated during your first acquaintance with them. From the very start you had to *keep on living* every day in a world that was *actually going on* every day. You could not wait to *learn to live* before trying it, you had to live while learning it. You had to learn science and art and philosophy while daily doing the things which these studies would have taught you to do better. This state is the case with each person at each stage and step: the next step or stage should always begin *in* a preceding step or stage by *doing* the new thing and then learning more about it afterwards!

*Livelihood the Purposive Training.* Most students are out of purposive touch with what they are doing; they have no creative relation to it. They may take pleasure in some phases of it, may intellectually appreciate it, but this interest is not *vital* and active like unto one who is *doing* those things. The amateur in medicine who reads it for passing time or general interest, is not in as vital and active touch as the physician who is daily saving lives. The young chemist who on leaving college intends to earn a living and gain a reputation by making chemical analyses, will study his subjects with a firmer grasp of details and their relations than the student who aims at a degree. The young wife who is about to become a mother “reads up” on that subject with a keener attention and judgement than when, some years before, her mother gave her books on the subject. It is that which the student is *actually* and predilectively *doing* at anytime that puts him in

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purposive touch with the subject matter of that domain of knowledge and that kind of feeling and that kind of activity and enables him to select those data and methods that are needed for immediate use.

As long as you drift or simply follow others you are a drifter, but as soon as purposes of your own direct, you are an independent source of events, a wielder of forces, a director of causes. For instance, as long as you are fed and clothed by others you are a parasite; you will be neither free nor self-respectfully happy until you make your own living. As there is also a *special advantage* in making your own living and making money for research and other creative work, heurotechny is learned while applied to livelihood and business.

*The Process of Individualization.* Not until this transition out of the state of the art and the List of Groups has been accomplished will the student be ready successfully to follow the real workings of his own genius-capacities in making inventions or doing other kinds of creative and originitive work. He will not sooner have thrown off the influences which inhibit and side-track his main capacities. He will now have learned to know when he is adopting a mere chance hit or giving birth to an idea that is the child of his dominant mental character and tendencies. The first inventions made by a person are apt, as before stated, to be the result of the exercise of mere ingenuity upon any problem that happens to present itself, and not necessarily the result of his characteristic genius-capacities exercising themselves upon those particular problems which it is their province to solve. Only after he has learned the heurotechnics of several groups of inventions as applied to the world’s achieved results, not until he has at least

twice waited for assimilation, adjustment, and growth and not until he has natural dominancy periods in discovering and inventing, will he be sure that his mind in making inventions is *expressing its special genius-capacities in such a way that the results will belong to its development in himself, and AS RELATED TO THE PARALLEL DEVELOPMENT OF THAT LINE OF INDUSTRIAL PROGRESS* in the world. The student will not then get caught in the deep ruts of the world's prospections nor in the shallower ruts of his own, but will be free to roam at will. It is at this time that the constant aid of science and scientific method will be needed.

It is a slow process, that of emerging as an individual out of that from which and into which one was born, and it can be done only by a succession of steps. Only a few of the very greatest geniuses ever accomplished it alone; most of them fail. At the beginning each one of us is totally dependent upon his mother, in her womb; then as infants we are only a very little less dependent

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upon her and on our surroundings. We learn what childhood has to teach almost wholly by *imitation* which is a form of dependence. We inherit and adopt manners, language, customs, and only about one-tenth of one percent of each of us is individualistic. Slowly we acquire the knowledge and skill of our race and time; and slowly, as our distinctive genius-capacities begin to come to the front, do we become emancipated. In the process each one meets difficulties at every step, for ignorance and error enthrall and right methods have to be painfully learned during an apprenticeship. That is, if right methods are to be learned early in life and well learned. Otherwise the whole life will be spent in learning them less well.

After such apprenticeship, for which the systematic methods of the curriculum serve, the student may walk alone in the mental world, using all the skill he has acquired and all his knowledge as a means for a *unitary self-expression* of his genius-capacities, not to attain which is death to his highest and most individualized life. THE GREAT PSYCHOLOGIC LAW OF INDIVIDUAL DEVELOPMENT is that only by cumulatively and associationally combining EVERY item of the student's originality in an exposition and functioning that exposition as a whole that his genius finally becomes FREE and achieves its meaning in the world. Those who never thus learn to express themselves in an EXPOSITION (inventive, scientific, literary, musical, oratorical, sculptural, pictorial, pugilistic, or what not) remain in thralldom — they never get entirely out of the environmental womb — THEY DIE UNBORN!

*The Guide to Genius.* The process of self-expression is extended by initiated steps through a constant inventing and discovering and creating along originality-lines, and by functioning the whole ensemble to that end. The individual no longer follows or obeys. He creates and dominates; it is even his own person and periperson that he creates and dominates!

To the pioneer there are no precedents, no established customs that are helpful, no sentiment in his favor. He must mark out his own path and follow it despite obstacles, for that is the price to be paid for genius. Genius is vicarious; through the genius-capacities of a person the world-progress is taking a step. The new powers are not for the genius alone, they are the symptoms of a world in parturition.

What guide shall a genius have but his own powers of discovering, inventing, creating, foreknowing?

None!

Therefore, it is to an art of heurotechny that he must look for help and to *that alone*.

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*Science The Next Step.* History teaches that humanity's interest in science arose quite largely out of the arts (industrial and esthetic), and it is by actually doing work in an art, especially in the art of heurotechny, that the individual will get the most wholesome kind of hunger for scientific knowledge. If livelihood depends on it and the inventive predilection calls for it, certainly that interest in science will lead to a purposeful study of it. While actively engaged in inventing for a living, the constant need for more scientific knowledge is felt, and the instincts point out the kind of knowledge that is then needed as unfailingly as appetite points out what food will at that time satisfy hunger. With the learning of a science the next step is possible, which is the advent of science into invention and of invention into science as an art.

*Organization of Mentative Data a Start to Cooperative Mentation.* There appears to be particular opportunity for assembling and classifying for creative work the special mentative data of an industry, a business, or a project, so the steps in development and trends could be communicated readily to workers. That is, each business or specialized technical or research group should prepare and have available for its inventors, discoverers, and creative workers its own *List of Topics and List of Groups* showing its original contributions as related to the sciences and arts and the underlying state of the art. They could serve as starting point for each individual's Lists. It may be a large task, but one that will become ever more pressing.

## SUMMARY OF THE LIST OF STEPS IN HEUROTECHNY

**1st S T A G E:** Naive Mentation to get in touch with the world's achievements to where each originality-line begins to take further steps.

NAIVE INVENTORIES: Original work done to determine originality-lines.

1. MAKE A CARD RECORD OF VOLITIONALLY ACHIEVED RESULTS
2. ANALYZE INTO FOUR CARD RECORDS OF ORIGINAL WORK DONE
3. MAKE A CARD RECORD OF PURPOSES
4. MAKE A CARD RECORD OF INCENTIVES
5. KEEP THE DAILY MENTATIVE RECORD

FIRST LIST OF GROUPS: Inventories of the world's achievements which anticipate priority.

6. INVENTORY THE WORLD'S ACHIEVEMENTS IN ORIGINALITY-LINES

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7. SPECIALLY INVENTORY THE ART IN TWO LINES OF INVENTION
8. INVENTORY PROSPECTIONS IN INVENTIVE LINES
9. INVENTORY BUSINESS OPPORTUNITIES IN ORIGINALITY-LINES

**2nd S T A G E:** Naive ingenuity applied to originality-lines.

### SECOND LIST OF GROUPS

*(FIRST STEP IN LINGUISTIC MENTATION):* Data in mind re[garding] predilections.

10. RECONSIDER FIRST LIST OF GROUPS & PURPOSES WITH OFF-HAND INGENUITY
11. TRY TO UNDERSTAND EVERY DEVICE AND PRINCIPLE INVOLVED
12. SEGREGATE LIKE SUBJECTS INTO GROUPS
13. GIVE TO EACH ITEM AND GROUP A NAME
14. INCORPORATE RESULTS TO MAKE THE SECOND LIST OF GROUPS

**3rd S T A G E:** Linguistic and Systematic Seriated Mentation to organize mental content into a whole and extend it along originality-lines.

THIRD LIST OF GROUPS

*(SECOND STEP IN LINGUISTIC MENTATION)*

Data in world re predilections.

15. MAKE THE LIST OF TOPICS TO SUMMARIZE  
READING-STUDY OF THE SCIENCES
16. EXPAND WORD-GROUPS FROM DICTIONARY FOR  
SPECIAL VOCABULARY AND AUGMENTED  
INTELLECTUALIZATION

*(THIRD STEP IN LINGUISTIC MENTATION)*

17. APPLY SERIATED INVENTIVE MENTATION OF LIST OF  
TOPICS WITH SECOND LIST OF GROUPS
18. INCORPORATE RESULTS TO MAKE THE THIRD LIST  
OF GROUPS (Inventories of heurotechnical lines with special  
attention to Inventions, Prospections, and Business  
Opportunities)

**4th S T A G E:** Cumulative Expository Inventive Mentation to make valuable inventions.

FOURTH LIST OF GROUPS

*(FOURTH STEP IN LINGUISTIC MENTATION)*

19. WRITE LITERARY EXPOSITION OF THIRD LIST OF  
GROUPS (INCLUDING WORD-GROUPS)
20. APPLY CRITICAL JUDGEMENT PERIODS
21. LEARN AND HOLD AS A COMPREHENSION

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22. UNDERGO 1st PERIOD OF WAITING FOR  
ASSIMILATION, ADJUSTMENT, & GROWTH
23. INCORPORATE RESULTS IN THIRD LIST OF GROUPS
24. REWRITE AS COMPLETE EXPOSITION
25. LEARN AND HOLD AS 2nd COMPREHENSION
26. UNDERGO 2nd PERIOD OF WAITING FOR  
ASSIMILATION, ADJUSTMENT, & GROWTH
27. INCORPORATE RESULTS TO MAKE THE FOURTH LIST  
OF GROUPS (Inventories of Inventions, Prospections, and  
Business Opportunities)
28. RECOGNIZE NEED FOR SCIENTIFIC EXPERIMENT

ALONG ORIGINALITY-LINES  
29. MASTER SCIENTIFIC PARTICULARS OF ORIGINALITY-LINES

**5th S T A G E:** The Sanctioned Comprehension to prepare for business effort.

FIFTH LIST OF GROUPS

30. APPLY PRINCIPLES OF LIVELIHOOD & BUSINESS TO EACH HEURID OF FOURTH LIST OF GROUPS
31. WRITE A BUSINESS PROSPECTUS FOR EACH ATTRACTIVE INVENTION
32. MAKE AND USE WORKING MODELS (The Machine Shop)
33. MAKE A COMPREHENSION OF PURPOSEFUL-INTERPRETED PROSPECTIONS
34. CLASSIFY AND ADD NEW STEPS TO EXPOSITION
35. CONSIDER MORAL AND ETHICAL ASPECTS OF EACH BUSINESS PLAN
36. AMEND TO SECURE SANCTIONS (THE 3rd OR SANCTIONED COMPREHENSION)
37. UNDERGO 3rd PERIOD OF WAITING
38. INCORPORATE RESULTS TO MAKE THE FIFTH LIST OF GROUPS OR HEURIDS (Results will be mostly Business Opportunities and Prospections, Social Extensions in New Acquaintances and Personal Influence over Others)

**6th S T A G E:** Self-expression in invention for livelihood and business.

SIXTH LIST OF GROUPS

39. BE SURE ONLY ORIGINALS REMAIN IN FIFTH LIST OF GROUPS
40. MAKE LIST MORE TAXONOMIC INTO A CLASSIFIC SYNOPSIS
41. APPLY SERIATED MENTATION TO THIS SYNOPSIS
42. APPLY CUMULATIVE LITERARY EXPOSITION
43. INCORPORATE RESULTS IN SYNOPSIS AND EXPOSITION

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44. HOLD AS 4th COMPREHENSION THE SYNOPSIS

45. UNDERGO 4th PERIOD OF WAITING
46. INCORPORATE RESULTS INTO SYNOPSIS AND COMPREHENSION APPLY PREVIOUS STEPS AS FOLLOWS:
47. CONSIDER WITH NAIVE INGENUITY
48. MAKE A NEW AND ENLARGED LIST OF TOPICS AND WORD-GROUPS
49. SERIATE THIS LIST OF TOPICS WITH THE SYNOPSIS
50. APPLY CUMULATIVE LITERARY EXPOSITION
51. APPLY CRITICAL JUDGEMENT PERIODS
52. LEARN AND HOLD AS 5th COMPREHENSION
53. UNDERGO 5th PERIOD OF WAITING
54. MAKE AND USE WORKING MODELS OF NEW INVENTIONS
55. MAKE A COMPREHENSION OF PURPOSIVE. INTERPRETED PROSPECTIONS
56. WRITE A BUSINESS PROSPECTUS FOR EACH TIMELY INVENTION
57. APPLY MORAL AND ETHICAL SANCTIONS TO BUSINESS ASPECTS
58. LEARN AND HOLD A DOMINANCY OF THE NEW OR 6th COMPREHENSION
59. UNDERGO 6th PERIOD OF WAITING FOR ASSIMILATION, ADJUSTMENT, AND GROWTH
60. INCORPORATE RESULTS TO MAKE THE SIXTH LIST OF GROUPS OR HEURIDS (Inventories of Inventions, Prospections, and Business Opportunities)