

Handout for seminar 1999-11-10 on sabbatical background of
Platonic Theorizing for Information Technology
Platonic perspectives of IT-problems

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The endless cycle of idea and action,
Endless invention, endless experiment,
Brings knowledge of motion, but not of stillness;
Knowledge of speech, but not of silence;
Knowledge of words, and ignorance of the Word.
All our knowledge brings us nearer to our ignorance,
All our ignorance brings us nearer to death,
But nearness to death no nearer to God.
Where is the Life we have lost in living?
Where is the wisdom we have lost in knowledge?
Where is the knowledge we have lost in information?

1. Introduction

1.1. Purpose of this confessional-working seminar is the same as expressed in a couple of elaborated excerpts that were published as Ivanov, K. (2000). Platonic information technology. Reading Plato: Cultural influences and philosophical reflection on information and technology. In *Proc. of ISTAS 2000, IEEE Int. Symposium on Technology and Society, 6-8 September 2000, Rome, Italy* (pp. 163-168). New York: IEEE Institute of Electrical and Electronic Engineers' Society for Social Implications of Technology SSIT.

1.2. The understanding of information technology (IT) and its spread starting from the industrial and post-industrial Western world requires an understanding of both "information" and "technology". Technology in its various historical mechanical, electrical, and nuclear physical forms has been well studied. It is far less known in its newer forms of bio-technology and information technology. Information has been studied in its various contexts of information systems, information management, artificial intelligence, and such. It has not, however, been studied in its essence which would determine also the peculiar character of information technology in its differentiation from other earlier known forms of technology. Philosophy is needed also in order to make sense of the proliferation of opinions about IT resulting from IT-theories, models, methods, conceptual frameworks, and other loosely used terms in what appears to be a relativistic pluralism which also may be a symptom of crisis of disparate Western philosophical currents. Plato and Aristotle together with the Judaeo-Christian thought, may be used as a more unified source of inspiration. The two sections of this paper that follow this introduction consist of two samples out of an ongoing study which starts from an integral reading of Plato's collected works and present

slightly edited excerpts out of these works. They are completed with an analysis in the form of comments which show the relevance of the texts for the definition and evaluation of information as it is found in information technology, and its relation to the problems of stability and change. In the subsequent section the criticism of Plato in a recent study of science is briefly considered in order to confirm the continuing relevance of Plato's thought.

- 1.3. With the drawing of this Love and voice of this Calling
- 1.4. We shall not cease from exploration
- 1.5. And the end of all our exploring
- 1.6. Will be to arrive where we started
- 1.7. And know the place for the first time

1.8. The following commented headlines which are not yet elaborated help also to explain the purposes of the text.

1.9. Thomas Stearns Eliot's quotations above are from Eliot, T. S. (1963). *Collected poems 1909-1962*. London and Boston: Faber and Faber. They express aptly my sense of crisis triggered locally by the development at the university in general and IT in particular, with the post-positivistic systems trend being followed by marxian and design trends.

1.10. The continuity of my research with my earlier documented research plans in the "Prefekttestamente" (Department chairman's report and last will, seminar held on June 10th and 11th 1998, last version of June 30 1998, item #8), which is to be found in my computer's Public-folder or in our computer jupiter.informatik.umu.se, in the folders <Gemensamma original> and <Ivanov>. A related relevant background-document is the handout summarizing my seminar on our research education "Seminar-FoUtb 980408" (held on April 8th 1998, revised version 980501, esp. items # 5 and 7-9), also to be found in the above mentioned folders.

1.11. This and the following seminar(s) with respective materials seen as trip report and sabbatical report.

1.12. After 40 years in the field, on technical, psychological, and social basis, and after 30 years at academia. Present lack of historical perspectives, even at a rough level like those advanced by Ivanov, K. (1999), En enastående intellektuell gestalt, in J. De Geer (Ed.), *Vänbok till Tage Lindbom*, Skellefteå: Norma.

1.13. My role: cf. political economics on "comparative advantages". Cf. mainstream vs. counterpoint research, with sacrifice of recurring empirical project work but with personal experience of repeated equivalent empirical findings, "failures", etc.) Possible integrative role of "university" which is being changed: research group(s), cross-contact between advisors, range of department's graduate competence.

1.14. The role of empiricism in my earlier career in computer-supported engineering, manufacturing IT-business, and library. Empirical research indicated different expressions of recurrent basic facts that continue unexplained. Rediscovering of apparent irrationalities consistent with application of my hypersystem approach (HySy) to explain e.g. different conceptions and uses of Lotus Notes as network, database, wordprocessing into spreadsheets. My dissertation still congruent with our latest

research, in addressing transperspectivity for the challenging of views and stimulating imagination.

1.15. I am conscious of the puer-senex archetype phenomenon in Hillman, J. (1979). *Senex and puer: An aspect of the historical and psychological present*. In J. Hillman, et al. (Ed.), *Puer papers* (pp. 3-53). Irving, Texas: Spring. The import of aging.

1.16. Examples of weak uncritical scientific attitudes in university research environments and faculty's previsions. Not only untrendy "definitions". E.g. C-D courses attendance as function of quality vs statistics, or success =popularity-demand or Alta-Vista hits or web-statistics for visits of home-pages as indication of quality of web-design or of scientific quality, analyze fluctuations of number of students demanding our undergraduate education, or Churchman's vs. Simon's citation index, or the former not having written about I.S. Ranking of universities, freedom of research, affirmative action, nazist seminar. Internet economy or old "administrativ data processing ADB" which still exists as at strike-hit BNF in Paris (October 1998), airports and airline-bookings and in quantitative methods as they appear in industry and business. An increasing part of research goes to "web-design" and "experimenting" with released software? Cf. the rhetorical counterquestion "do you, then, prefer to minimize demand-statistics?"

1.17. My experience of mentorship and graduate students' advisor: risk of becoming an encyclopedic consultant who edits executive summaries and helps to streamline feasible dissertations? Gap towards PhD colleagues who cannot bridge my wider gap towards undergraduate students, with consequent difficulty to create midway study opportunities in final examination work (C-D uppsatser). Cf. Platonic-Jungian lack of systematization. My consciousness of, and prevision that the direction of my development would widen the gap. An apparent gradual neglect of the "system approach" in undergraduate literature in also mirroring this trend.

1.18. Empiricism and the present questioning of philosophy in IT. Is "philosophy" useful and is it a philosophy in the flesh which is empirically relevant or responsibly testable and based on deep knowledge of what it criticizes? Cf. Habermasian technical, hermeneutic, emancipatory (+Weltanschauung +existential) interests: my research as "existential"?. Does philosophy reflect only on words or also on bodily experiences. But: philosophy discussion on how to think, including relation to empirical action and emotion, and to theology discussion of ultimate presuppositions. (IT)-concepts vs. percepts, body vs. mind. Importance of definitions (cf. the FRISCO report www.wi.leidenuniv.nl/~verrynst/frisco.html). E.g. design or creation, system or whole, designer or legislator, interaction or motor response, body or perception, creativity or change or innovation, technical bricolage or mythical reflection, alignment or adaptation, practice or praxis or empiricism, *experimenting* or experience "erfarenhet-upplevelse", theory or frameworks, understanding or intelligence or learning, success or implementation, illustration or example, image or figure of thought, perspectives or points of view or views, parti-formats and representations, character and judgment, flow and fitness, care or interest, cultivation or evolution, hospitality or trust, project or organization (cf. Kallinikos' struggle in *Technology and society, etc.*). And cf. gap between software practice and social thinking (vs. software thinking and social practice?). Research empiricists as "Sophists" opposing Socratic philosophy, or voyeuristic parasites of doers who design and use the technology, or symptoms of empiricism of "crisis" (Lindbom 1999)?

1.19. I am conscious of the dangers of "infinite regress" (legitimate if no linear beginning, cf. Eliot-quotes & Lindbom 1999) in following postromantic or postmodern design-civilization (in Spengler's meaning) back to Nietzsche and Kant through Lyotard's Lessons on the Analytics of the Sublime, and further back to Renaissance, Aquinas, Aristoteles, Plato, And what about Eastern wisdom as applied in theorizing about improvisation and intuition, or about bricolage and myths borrowed from anthropology & ethnographic studies, etc? Why Kant not enough: less clear and more polemical than Plato and Aristotle while he himself had the benefit of their basis. The alternative is to be "seduced" by Kant in the sense that to be able to follow him at all is a prohibitively heavy investment of time with scanty possibilities to be able to prove him wrong as his critics could try. And Kant *is* heavily used in legitimating aesthetic science.

1.20. Why Plato (and Aristotle): I could have tried to create "executive summaries" through secondary sources like encyclopedias or MacIntyre, A. (1998), *A short history of ethics* (chap. 8, pp. 85-109 "Postscript to Greek ethics"), or Rothenberg, D. (1993), *Hand's end: Technology and the limits of nature*, or Mitcham, C. (1994). *Thinking through technology: The path between engineering and philosophy*. Chicago: The University of Chicago Press. (Esp. pp. 105ff, 228ff.), or Flusser, V. (1999), *The shape of things: A philosophy of design* or his chapters 30-32 in his recent book in portuguese on *Philosophical Fictions*. But my focus is not on ethics, nature vs. technology, or design in general but rather in particular on information, knowledge & technique which must be understood at a basic level.

1.21. Why Plato. Did we need heideggerian "breakdown"? Understand how design, knowledge and technique was conceived before the anglo-american word "design" was launched, and why it became so attractive. Ferry's "Homo aestheticus" and or Spengler's the "Decline of the West" seem to give a definite but incomplete answer. Consider Jungian ego-inflation, or popularly assumed Kantian autonomous intuitive "genius", bolstering "Faustian" feelings of creativity. Avoidance of anxiety when relieved from responsibility thanks to the legitimation provided by the encouragement to improvise and rely on "experimenting" trial & error? Cf. Maffesoli, M. (1996), *Éloge de la raison sensible*. Spengler's paradoxical recommendation would be to forget second or third-rate social science as philosophizing, in favour of satisfactorily good engineering, but this would be done within the frame of a "decline of the West" which is far more problematic than Lindbom's *Västerlandets framväxt och kris* (1999).

1.22. I wished I had had time, before philosophizing, to write down and contribute my own (cf. Eliot quotes) views improving the understanding and application of core concepts like "success" or "design" of computer application or commenting constructively others' work, books and seminars, as it is done in our latest departmental dissertation. Such a task would also be a sort of empiricism. Cf. the reliance of empirical work on Marx, Habermas, Heidegger, Wittgenstein, Claude Lévi-Strauss, Foucault, Mark Johnson, Giddens, Ciborra, Orlikowski, Buchanan, Maldonado, and their key-terms which easily get misused as catchwords. My intention of synthesizing comments on our local graduate students' and advisors' work was inhibited by delays and failures in satisfying my request for feedback on others' most important personal references.

1.23. Why Plato: The roots of the design approach, are not satisfactory in Buchanan, R. (1995). Rhetoric, humanism, and design. In R. Buchanan, & V. Margolin (Ed.), *Discovering design: Explorations in design studies* are not satisfactory. Ferry, L. (1993). *Homo aestheticus : the invention of taste in the democratic age*, however, as

well as the review of "romanticism" in Lindbom's *Fallet Tyskland* (1988), addresses the aestheticizing philosophizing behind design, and push the reader back to Plato, enabling to make sense of the political discussions in e.g. Selle, G. (1973). *Industriell formgivning: Sociala utopier och ideologier*. Lund: Studentlitteratur. (Orig. *Ideologie und utopie des Design – Zur gesellschaftlichen Theorie der industriellen Formgebung*.)

1.24. Why (not) Plato, in face of the absurdity of my situation? The paradox confronting me, having to read hundreds of manuscript pages saturated with references to many new fashionable trend-names renewed every 5 years, while tens of top quality book await me to be read in order for me to be able to orient my graduate students instructors of undergraduate students, and while I myself cannot expect to be read or obeyed in my recommendations for readings.

1.25. Why Plato? Cf. increasing references to pre-Socratics especially through Heidegger. Cf. also Plato's importance for following discussions about Western thought and its technology (and its science and technology) in e.g. Lindbom, *Västerlandets framväxt och kris*.

1.26. Why Plato? Churchman has written in Plato's style. Cf. the postgraduate and undergraduate & graduate students' frustration and misunderstandings (e.g. that Churchman did not write on information systems) when they have read text written in a Socratic style. And Socrates was condemned to death!

1.27. Why Plato? Our historical ground for discussion of what knowledge (or information) is or should be, as in "knowledge management" (Ulrike Schultz's seminar 991012, and her suggestions on the desirability of ignorance?).

1.28. Sense of crisis: the absurdity of the "change"-trend, no standards and no extrapolation possibilities on "growth", "progress" or "strategies". Cf. "Top managers of big firms devote the bulk of their efforts to formulating strategy, though there is remarkably little agreement about what it is" in *The Economist*, (March 20th 1993, pp 80-81, 96), also in relation to education and infinite regress of ex-post research.

1.29. My partial concern for the development of postgraduate careers, perceived to be in direction of postmodern relativistic pluralism and tolerance which can be tolerance which may be indifference or not caring for closest colleagues' work, face to the alternative opportunities opened by consensual net "communities". Why different and isolated commitments? I realize the possible importance of esoterism as explained by Lindbom (1999).

1.30. Why Plato: the search for bridges to ethical and political discussion, through philosophy, to theology. But I do not mean that "all" should be trying to do that.

1.31. Why Plato: if one means to take seriously the requirement of dialogue and "understanding", and understanding nature vs understanding others who challenge us because they are indeed radically different from us, like in an ethnographic study of the "savage mind", or being able to stand in or take in "different perspectives". Cf. also the requirement of client – if not market – orientation. It is a matter of different social organization, and different mentality of people, like Tage Lindbom in his authorship, and the relationship to "traditionalist conservatism" (cf. www.panix.com/~jk/trad.html). And if we do not wish to read dead or old authors why should older people read young authors if not as occasional daily news?

1.32. Why Plato: For understanding Kant's adduced aesthetics which includes the "sublime" as mentioned by Simon Niedenthal from från Art Center College of Design, on 991008 in the seminar on ACCD: Six St. Jeromes. Notes on the Technology and

Uses of Computer Lighting Simulations. Also reference to the "philosopher king" by Victor Kaptelinin and Hans-Erik Nissen in the seminar 991013 on the Dagstuhl conference on the gap between social thinking and software practice.

1.33. Why Plato: possible solution to the paradox implied by my judgment that it is not worthy at the available intellectual level to try to review or criticize so many new trend-names arising among different people in the field in general, and in our department in particular. Consider the more advantageous alternative to try to write directly something good and valid as motivated by trying to help (among others) the own community, especially when it is not anymore, at advancing age, a question of trying to make career by means of "socializing" publications. Implications for teaching of students and for their own career planning, comparing with the circle of young intellectuals around Tage Lindbom? Publish or perish or a third way suggested also by my own or Lindbom's (90th birthday recently celebrated by De Geer's editing of *Vänbok* published by Norma in Skellefteå, and by Martin Lindström in *Statsvetenskaplig Tidskrift* nr. 2, 1997) or Richard Matz's (*Sammanbrott och gryning*, Pan Norstedts 1971) or Vilém Flusser's careers and "failures" by graduate students. Go through my selections out of Plato, or Kant, or Tage Lindbom with special reference to IT, or go through recently published trend-articles with school-building potential with the purpose of submitting them to a severe critique?

1.34. Why Plato: enables and facilitates the review of many interesting and relevant but problematic new books like chap. 30 on "artistic vs. scientific creation" in Flusser's recent *Philosophical Fictions*. It can be sign of cultural crisis if one perceives that an understanding of Plato is necessary in order to understand why chapters 2-3 in Lindbom (1999), *Västerlandets framväxt och kris*, complete Ferry's explanation in his *Homo Aestheticus* of the problems implicit in Flusser's thought which also is basis to his philosophy of design in the newly published *The shape of things-A philosophy of design*.

1.35. Why Plato (and Aristotle): suspicion of increased misunderstandings and misuse in IT-research by third-hand references to Kant (through Makkreel), Heidegger (through Winograd), Aristotle (through Nussbaum), but, symptomatically not to Plato, and this is done without even the qualification of "Kantian", "Heideggerian" or "Aristotelian" (as Churchman in *The Design of I.S.*).

1.36. Crisis: scientific-strategic cultural crisis also in the paradoxical problem that academic refutation of many present and emergent IT-schools of research is seen to require "empirical" research which in turn requires economic and political basis which would distort its nature and possibilities. Consider also that several approaches to e.g. design may sometimes have a strong financing but report no common intellectual background in the form of, for instance, common references. Cf. Dubuisson, S., & Hennion, A. (1997), *Le design: L'objet dans l'usage: La relation objet-usage-usager dans le travail de trois agences*, Paris: Les Presses de l'École de Mines, and R. Buchanan, & V. Margolin (Eds.) (1995), *Discovering design: Explorations in design studies*. Chicago: The Univ. of Chicago Press. See also the seldom acknowledged sense of crisis sometimes acknowledged as in Wigley, M. (1998), Whatever happened to Total Design? in *Harvard Design Magazine*, (Summer), 18-25, also an example of a journal source which seems to be seldom referenced in Scandinavia.

1.37. Crisis: why the "China twist" as indicated in my Ivanov, K. (1997). *Strategies and design for information technology: Eastern or neo-romantic wholes, and the return to Western systems* and its later revised shorter version of the paper co-authored with

Ciborra, (1998). East and West of IS, in *Proc. of ECIS'98*. Cf. Flusser's hint of the why of the China crisis twist on pp. 110 in his *Philosophical Fictions*. The China-twist can also be the rebirth of a superficial or unconscious Nietzsche-cult, as also apparent in the opposition intellect vs blood in Spengler, O. (1981-1983/1918). *The decline of the West - (2 Vols.)*. New York: A. Knopf.

1.38. Crisis: my attitude perhaps should have been the same as at the beginning (1) of Jung's professional life according to his auto-biographical notes. Not to teach (except in socratic dialectics?) until one has something to say that is not only convincing but also corresponds to own convictions.

1.39. My concern: unnoticed "deconstruction" of the psyche and reason, and TV or VR as games and gambling vs programmatic educational visualizations and playfulness. Cf. Sass, L. A. (1992). *Madness and modernism*, New York: Basic Books, and Reichmann, S. (1993). *Kulturen utan Gud*, Stockholm: Interskrift.

1.40. Why Plato and my way "on the shoulders of giants": my dissertation results still holds, for instance, for appreciating the "transperspectivity" of Mark Johnson, because it happens to rests on the traditions of Western philosophy leading further to the "romanticism" of Jung and of the I Ching (cf. the recent "chinese" twist). From the unprofitable Jung and I Ching to the Bible (and lately the Jerome Biblical Commentary) and theological matters clarified by Plato and Aristotle, revived by equally unprofitable numerous books by T. Lindbom. Your way is your choice of family and friends and determines who you are to become through your choice of influences and where you want to go. Cf. various metaphors of knowledge and their implications for "pluralism". My perceived paradoxical sacrifice of "career" or at least of "influence".

1.41. Why Plato: a better understanding of Christianity related to science. Paul "Christianizes" Platonism, and theological questions stand at the basis of an understanding of technology, cf. especially Mitcham, C., & Grote, J. (Ed.) (1984), *Theology and technology: Essays in Christian analysis and exegesis*. Lanham: University Press of America. (Esp. pp. 3-42, 53-119, 193-225. Bibliography of 478 entries.)

1.42. Example of a modern "platonic" problem: body-mind and Paul's anthropology: inability to observe the Mosaic law stems in part from the carnal condition of a human being as *sarkinos*. What does Paul mean by this? To explain, we must try to ascertain what he means by soma, "body," sarx, "flesh," psyche, "soul," pneuma, "spirit," nous, "mind," and kardia, "heart." In Brown, R. E., Fitzmyer, J. A., & Murphy, R. E. (Ed.) (1993). *The new Jerome biblical commentary*. London: Geoffrey Chapman, p. 1406, and see also the essays on e.g. criticism, hermeneutics, and mythopoieic thought, pp. 1135, 1146, 1288). Note that the structure of thought or of the so-called mind is basic to the study of design processes especially if attempts are done to keep them isolated from the social dimension of politics.

1.43. Beginning to summarize: my conception of my responsibility in this university and this department: compare with "comparative advantages" and "bottleneck" metaphors. Relate to the comparative advantages of the university vs. of product development departments of firms, consultancies, or technological or business schools. Dialog with students.

1.44. My pedagogical problem: in contrast to others I cannot expect that my students will read the literature which I have used or will have to use, and cannot expect help in my task. The dilemma of experiencing insight with increasing burden of expressing extense thoughts with decreasing physical energy, and at the same time avoiding to

appear as overbearing ("jantelagen") in a "democratic" environment where, by sure, lip-service is paid to "personal silent knowledge" and "bodily experience" but age and life in the body - experience do not count so much. The consequent search for en "grundbult" (not in Kenneth Ahl's spirit) or for a "main key". The "socratic" dilemma of thought vs. political action (ref Churchman vs. Ackoff, or Koestler's yogi vs. commissar, or Spengler's nietzschean intellect vs. blood). Cf. crisis-consciousness.

1.45. My research attitude: Socratic, but Socrates was condemned to death. Analog to a psychotherapeut or its modern successor, the strategic consultant. Refer back to Eliot's quotations. and concerning my future plans: I refer to my "prefekttestamente" and to October 2002.

- 1.46. So here I am, in the middle way, having had twenty years–
- 1.47. Twenty years largely wasted, the years *of l'entre deux guerres*–
- 1.48. Trying to learn to use words, and every attempt
- 1.49. Is a wholly new start, and a different kind of failure
- 1.50. Because one has only learnt to get the better of words
- 1.51. For the thing one no longer has to say, or the way in which
- 1.52. One is no longer disposed to say it. And so each venture
- 1.53. Is a new beginning, a raid on the inarticulate
- 1.54. With shabby equipment always deteriorating
- 1.55. In the general mess of imprecision of feeling,
- 1.56. Undisciplined squads of emotion. And what there is to conquer
- 1.57. By strength and submission, has already been discovered
- 1.58. Once or twice, or several times, by men whom one cannot hope
- 1.59. To emulate–but there is no competition–
- 1.60. There is only the fight to recover what has been lost
- 1.61. And found and lost again and again: and now, under conditions
- 1.62. That seems unpropitious. But perhaps neither gain nor loss.
- 1.63. For us, there is only the trying. The rest is not out business.

1.64. Some literature which was more closely studied during the first months of the sabbatical (followed by the Plato's and Aristotle's collected works):

- 1.65. Ferry, L. (1990). *Homo aestheticus: L'invention du goût à l'age démocratique* . Paris: Grasset. (English trans.: *Homo aestheticus : the invention of taste in the democratic age*, trans. by Robert de Loiza. Chicago : The University of Chicago Press, 1993.)
- 1.66. Giovanni Paolo II. (1998). *Fides et ratio: Lettera enciclica circa i rapporti tra fede e ragione* . Milano: Paoline. (English trans. at http://www.vatican.va/holy_father/john_paul_ii/encyclicals/documents/hf_jp-ii_enc_15101998_fides-et-ratio_en.html),
- 1.67. Goffi, J.-Y. (1996). *La philosophie de la technique* . Paris: PUF (Que Sais-Je?). (2nd ed. First ed. 1988.)
- 1.68. Gras, A. (1997). *Les macro-systèmes techniques* . Paris: PUF.
- 1.69. Kenny, A. (1993). *Aquinas on mind* . London and New York: Routledge.
- 1.70. Maldonado, T. (1993). *Reale e virtuale* . Milano: Feltrinelli. (1st ed. 1992.)

1.71. In writing this paper I am conscious that it counters a dominant attitude against philosophy in the scientific IT-community. This attitude which also implies a dislike for older emphasis on definitions and testing of validity claims is sometimes masked behind the requirement that a legitimate philosophical interest be "empirically relevant". A dislike for definitions is, for instance, expressed when somebody reprehends empirical research on the use of IT for enhancing creativity in design without bothering to define what is to be meant by creativity or by other substitute words like imagination or fantasy. One hidden presupposition of such requirement of empirical relevance seems often to be that there is no meaning in requiring that empirical work be philosophically relevant or be evaluable for its worth. Because of some reason it is philosophical work that must prove its worth empirically, whatever that means when empiricism itself is not supposed to be defined or questioned.

1.72. To the extent that we take the anti-philosophical attitude seriously some insight into this conundrum is supplied by a section of this paper dealing with "Against philosophy" below, in Plato's own reflections over opposition to philosophy. Cf. "Against philosophy" below. For the rest it may be noted that much of design theory today with its emphasis on visualization, has an often unacknowledged dependence upon romantic philosophy. Such dependence can be ignored in works that are framed in terms of so called cognitive science but it is clearly manifested in cultural criticism which considers the present status of Western society with reference to both romanticism and Greek philosophy. So, it is the case that studies of the development of crisis of the West¹ dedicate whole chapters to Platonism and to Aristotle reminding the readers that much of our IT-design theories are ignoring the political and spiritual dimensions of design. Similar reminders on the importance of Plato are to be got when studying romantic and post-Kantian philosophy that underscore much of the thinking in IT-design in the context that is very relevant to the present issue of researchers' responsibility.²

1.73. To make things more difficult in the appreciation of this paper, "Platonic IT" may be interpreted as analog to platonic love, which in the superficially popular version is equated to a sort of nominal love without concretion and consequences. The answer to such analogy will be to direct the reader to a better acquaintance with the meaning of love in general, and platonic vs. so called erotic love in particular, in order that the analogy gets its proper meaning.

1.74. This paper was written in the conviction that the discipline of informatics, for all the assurances about the advent of "the new informatics" which is a "design science", etc. is in serious crisis which, however, is not necessarily deeper or more serious than the crisis of Western thought in general. While fragmentation in different and isolated schools is sometimes taken to be a mark of vitality and creativity, it is very probable that the relative isolation of most of these schools, depending upon hidden different presuppositions and upon inconsistent language and terminology, is, rather, a sign of crisis. It is my belief that many presuppositions can be made conscious, and language can be purified,

¹{Lindbom, 1999 #2464, pp. 22-55, 127-138}

²{Fichte, 1794/1994 #2465, pp. 133-140}

- 1.75. Isolated arguments that are quoted require to be put in the context of the respective works, and of the total work by Plato.
- 1.76. Duplications of some paragraphs when they forcefully can be said to belong to more than one section.
- 1.77. Edited text in order to make it more readable without its context, while at the same time taking into account that context.
- 1.78. I do not take a stand on the value of Plato's thought for our contemporary problems but I assume it (with knowledge of, and reference to, key contributions by post-Socratic Western philosophy, in particular Kant's critique as reference point but not necessarily "basis" for modern philosophy and late returns to pre-Socratic thought). But note that mistakes were to great extent caused by limited power (instruments) of observation that are now available thanks also to old work and valid methods.
- 1.79. Plato about the dangers and limitations of writing at all.
- 1.80. Empirical work as a drug delaying, especially in academia, a normative critical appreciation and purposiveness of research.
- 1.81. "My anxiety will be not to convince my audience, except incidentally, but to produce the strongest possible conviction in myself."³
- 1.82. "But with the advance of age, when the soul begins to attain its maturity, they should make its exercises more severe, and when the bodily strength declines and they are past the age of political and military service, then at last they should be given free range of the pasture and do nothing but philosophize."⁴
- 1.83. Empirically relevant philosophy OK but philosophically relevant empiricism? And what is "action"? How this written material can be "applied"?
- 1.84. What "is" informatics?
- 1.85. Body and mind, + flesh and soul and spirit?
- 1.86. Definition ("game") and cognition vs recognition (it can be something else than that I believe it to be).
- 1.87. Vico's language about bodily experiences
- 1.88. Reflection is about what has passed, vs. flow phenomenological flux, ref Schütz Husserl+Bergson

2. Design

2.1. Rhetoric

2.1.1. Rhetoric is a creator of persuasion, the kind of persuasion employed in the law courts and other gatherings, and claims to be concerned with right and wrong. Rhetoric seems to possess almost superhuman importance and includes then practically all other faculties under her control. Teachers of rhetoric impart their instruction for just employment and they say are not guilty of wrong employment of the skill [NEUTRAL

³Phaedo 91a

⁴Rep. 498b-c

TECHNIQUE]. The craft is not for this reason evil or to blame, but, rather, those who make improper use of it. But then there is a contradiction regarding the concern for right and wrong. Rhetoric is then not an art but only a kind of routine and a knack that produces gratification and pleasure, a part of an activity that includes cookery and is but the occupation of a shrewd and enterprising spirit, and of one naturally skilled in its dealings with men, a flattery. If one considers that difference between apparent and real health of bodies and souls, sophistic is to legislation what beautification is to gymnastics, and rhetoric is to justice what cookery is to medicine. Sophist and rhetorician, working in the same sphere and upon the same subject matter, tend to be confused with each other. For if the body was under the control, not of the soul, but of itself, and if cookery and medicine were not investigated and distinguished by the soul, but the body instead gave the verdict, weighing them by the bodily pleasures they offered, all things would be mingled in indiscriminate confusion [PM]. Rhetoric is the counterpart in the soul of what cookery is to the body.⁵

2.1.2. Concluding commentary

2.1.2.1. Rhetoric is a textual equivalent to design theory inasmuch the classical theory of design as represented by Vitruvius is considered to have been formed as an adaptation of rhetoric to the needs of architecture [REF BUCHANAN]. In approaches to design it has been pointed out that it is important to check the quality of a particular design by appeal to "the right feeling", to the experiencing of "flow", or to the importance of trusting one's own feeling of conviction as an equivalent to ethics, an ethics of personal conviction. The text above raises the need of a definition or determination of the difference between such a feeling and sheer conviction arising from persuasion. If we, furthermore, consider the late appeals to the importance of the "body" or or perceptions in design creativity then appears the question of whether such appeals to the body are not theoretically a self-fulfilling prophecy in their justification of the confusion between conviction by aesthetic pleasure of beautification, and ethical "health". The body under the control of itself recalls also the auto-poietic issue of self-reference where the criterion of survival is a particular kind of pleasure (of survival) or avoidance of pain of the death process. The observation that rhetoric is not an art but rather a kind of routine or a knack (belief without knowledge) removes it further away from science (belief with knowledge). The observation that rhetoric seems to possess almost superhuman importance and includes practically all other faculties under her control recalls the claims of design theory of being an all-encompassing knowledge applicable to design of all things and organizations.

2.1.2.2. The reference to a "shrewd and enterprising spirit, and of one naturally skilled in its dealings with men" is to be related to what today in the so called social competence that is expected and required from personnel dealing with IT-projects and IT-research. Such a social competence is certainly a main component in the formation of consensus in local subcultures of the modern scientific pluralistic community, as well in the academic community at-large where management by consensus is often equated to genuine democracy. The observation that teachers of rhetoric impart their instruction for just employment and they are not guilty of wrong employment of the skill, or that the craft is not for this reason evil or to blame, but, rather, those who make improper use of it recalls also the liberation of the shrewd and enterprising IT-expert with his essentially instrumental technique from any ethical responsibility in the application of his technique.

⁵Gorg 453a, 454b, 456e-465e.

2.2. Master of many arts

2.2.1. One supposes, as the name implies, that a Sophist is one who has knowledge of wise things. One could say the same of painters and builders, that they are those who have knowledge of wise things. But if they were asked what sort of wisdom painters understand, we should reply, wisdom concerned with the making of likenesses, and so on with the others. If then we were asked what sort of wise things the Sophist has knowledge of, what should we answer? Of what is he the master? The only answer we could give is that he is master of the art of making clever speakers. It invites the further question, On what matter does the Sophist make one a clever speaker? Do you realize the sort of danger to which you are going to expose your soul? The Sophist is really a merchant or peddler of the goods by which a soul is nourished. So too those who take the various subjects of knowledge from city to city, and offer them for sale retail to whoever wants them, but it may be that some of these men also are ignorant of the beneficial or harmful effects on the soul of what they have for sale, and so too are those who buy from them, unless one of them happens to be a physician of the soul. Indeed the risk you run in purchasing knowledge is much greater than that in buying provisions. When you buy food and drink you can carry it away from the shop in a receptacle, and before you receive it into your body by eating or drinking you can store it away at home and take the advice of an expert as to what you should eat and drink and what not, and how much you should consume and when; so there is not much risk in the actual purchase. But knowledge cannot be taken away in a parcel. When you have paid for it you must receive it straight into the soul. You go away having learned it and are benefited or harmed accordingly.⁶[cf. NEGATIVE VALUE OF INFORMATION]

2.2.2. A phantom, for example, a painter, will paint us a cobbler, a carpenter, and other craftsmen, though he himself has no expertness in any of these arts. Nevertheless if he were a good painter, by exhibiting at a distance his picture of a carpenter he would deceive children and foolish men, and make them believe it to be a real carpenter. And when anyone reports to us of someone that he has met a man who knows all the crafts and everything else that men severally know [cf. AI KNOWLEDGE-BASES], and that there is nothing that he does not know more exactly than anybody else, our tacit rejoinder must be that he is a simple fellow, who apparently has met some magician or sleight-of-hand man and imitator and has been deceived by him into the belief that he is all-wise, because of his own inability to put to the proof and distinguish knowledge, ignorance, and imitation.⁷

2.2.3. When one who is known by the name of a single art appears to be the master of many, there is something wrong with this appearance. If one has that impression of any art, plainly it is because one cannot see clearly that feature of it in which all these forms of skill converge [cf. VISUAL VR], and so one calls their possession by many names instead of one. Suppose a man professed to know how to produce all things in actual fact by a single form of skill, in some kind of play, like imitation. The man who professes to be able by a single form of skill, to produce all things, when he creates with his pencil representations bearing the same name as real things, he will be able to deceive the innocent minds of children, if he shows them his drawings at a distance, into thinking that he is capable of creating, in full reality, anything he chooses to make. Then we must expect to find a corresponding form of skill in the region of discourse, making it possible to impose upon the young who are still far removed from the reality of

⁶Protag. 312c-

⁷Rep. 595b-598c

things, by means of words that cheat the ear, exhibiting images of all things in a shadow play of discourse, so as to make them believe that they are hearing the truth and that the speaker is in all matters the wisest of men. It is inevitable that, after a long enough time, as these young hearers advance in age, and, coming into closer touch with realities, are forced by experience to apprehend things clearly as they are, most of them should abandon those former beliefs, so that what seemed easy, difficult, and all the illusions created in discourse will be completely overturned by the realities which encounter them in the actual conduct of life.⁸

2.2.4. There are two forms of imitation. One art is the making of likenesses. The perfect example of this consists in creating a copy that conforms to the proportions of the original in all three dimensions, and giving moreover the proper color to every part. The other form is of those sculptors or painters whose works are of colossal size. If they were to reproduce the true proportions of a wellmade figure [FERRY], the upper parts would look too small, and the lower too large, because we see the one at a distance, the other close at hand. So artists, leaving truth to take care of itself, do in fact put into the images they make, not the real proportions, but those that will appear beautiful. The first kind of image, being like the original, may fairly be called a likeness (icon). The other, the kind which only appears to be a likeness of a well made figure because it is not seen from a satisfactory point of view, but to a spectator with eyes that could fully take in so large an object [SYSTEM] would not even like the original it professes to resemble, we may call it a semblance (fantasma). We are faced with an extremely difficult question. We are faced with an extremely difficult question. This "appearing" or "seeming" without really "being", and the saying of something which yet is not true – all these expressions have always been and still are deeply involved in perplexity. It is extremely hard to find correct terms in which one may say or think that falsehoods have a real existence, without being caught in a contradiction by the mere utterance of such words.⁹ We ought to begin by studying "reality" [VR] and finding out what those who use the word think it stands for. One party affirms that real existence belongs only to that which can be handled and offers resistance to the touch. They define reality as the same thing as body. Their adversaries maintain that true reality consists in certain intelligible and bodiless forms. In the clash of argument they shatter and pulverize those bodies which their opponents wield, and what those others allege to be true reality they call, not real being, but a sort of moving process of becoming [cf.CHANGE]. I suggest that anything has real being that is so constituted as to possess any sort of power either to affect anything else or to be affected [PRAGMATISM]. I am proposing as a mark to distinguish real things that they are nothing but power. We have intercourse with the becoming by means of the body [BODY-CHANGE] through sense, whereas we have intercourse with real being by means of of the soul through reflection. Intercourse is the experiencing of an effect or the production of one, arising, as the result of some power, from things that encounter one another.¹⁰

2.3. Dialectic: design of information vs of objects

2.3.1. The name of a thing is an instrument. When we name we give *information* [INFORMATION DEF] to one another and distinguish things according to their nature. Then a name is an instrument of teaching and of distinguishing natures, as the shuttle is

⁸Soph. 232a, 233f-234d

⁹Soph. 235d-237a

¹⁰Soph. 243d, 246a, 247d-248b

of distinguishing the threads of a web. The weaver is the one who uses the shuttle well. When the weaver uses the shuttle he will be using well the work of the skilled carpenter. In an analog way the teacher who uses the name will use the work of the maker of names, that is the legislator. When the carpenter makes shuttles he will look to that which is naturally fitted to act as a shuttle. And whatever shuttles are wanted, for the manufacture of garments, thin or thick, of flaxen, woolen or other material, all of them ought to have the true form [DESIGN] of the shuttle, whatever is the shuttle best adapted to each kind of work, that ought to be the form that the maker produces in each case. And the same holds of other instruments. When a man has discovered the instrument which is naturally adapted to each work, he must *express this natural form*, and not others which fancies, in the material, whatever it may be, which he employs. The one who is to determine whether the proper form is given to the shuttle, whatever sort of wood may be used, is not the carpenter who makes, but the weaver who is to use it. In an analog way he who will be best to direct the legislator in his work will be [USER] *the user*, and this is he who knows how to ask questions, that is a [SYSTEMS ANALYST-SYSTEMS PHILOSOPHER-DESIGNER] *dialectician*. The work of the legislator is to give names, and the dialectician must be his director if the names are to be rightly given. Things have names by nature, and not every man is an artificer of names, but he only who looks to the name that each thing by nature has, and is able to express the true forms of things in letters and syllables, that is the natural fitness of names [FLOW?].¹¹

2.3.2. What is true about numbers, which must be just what they are, or not be at all, does not apply to that which is *qualitative* or to anything which is represented under an image. We must find some other *principle of truth in images*, and also in names, and not insist that an image is no longer an image [depiction, description] when something is added or subtracted. Images are very far from having qualities which are the exact counterpart of the realities which they represent. The effect of names on things would be ridiculous if they were exactly the same with them. For they would be the doubles of them, and no one would be able to determine which were the names and which the realities. Have the courage to admit that one name may be correctly and another incorrectly given, and acknowledge that the thing may be named, and described, so long as the general *character* [QUALITY AESTHETICS SUBJECTIVE VS. QUANTITATIVE] of the thing which you are describing is retained. We must find some new notion of correctness of names or representations of things.¹²

2.3.3. The nobler and clearer way to learn things is not to learn of the images, but to learn of the truth. How real existence is to be studied or discovered is, we suspect, beyond us, but we admit so much, that the knowledge of things is not to be derived from names. They must be investigated in themselves. Let us not be imposed upon by the appearance of a multitude of names given under the mistaken opinion of the idea that all things are in motion and flux [PM PLURALISM]. Having fallen into a kind of whirlpool themselves, the givers of names are carried round and want to drag us in after them. Then let us seek the true beauty, not asking whether a face is fair, or anything of that sort [DESIGN], for all such things appear to be in flux, but let us ask whether the true beauty is not always beautiful.¹³

¹¹Crat. 388a-391a

¹²Crat. 432a-433b

¹³Crat. 439a-d

2.3.4. Concluding commentary

2.3.4.1. Information technology seen as an instrument is closer to the instrumentality of names, of giving information, rather than the instrumentality of conventional technology as expressed in, say, the shuttle for the weaver. The maker of names is the legislator but the user who must direct his work is the dialectician who knows how to ask questions. In the IT-field the maker or "carpenter" of *names* is the designer who knows the relation between form and material and knows how to express the form in the material, but the determiner of the natural form adapted to the particular work will be the educated dialectical philosopher-user who knows how to ask questions. The blurring of information with other techniques and of the different roles under the name of designer, combined with a distrust if not outright rejection of philosophy in design amounts to a turning of systems analysts into either uneducated users who do not know how to ask questions socially, relying rather on their own intuition, or into maker technicians who assume that the forms have been rightly determined. The integration of dialectics in the design of information systems was shown in dialectical inquiring systems¹⁴, but its disregard in the more recent trend of design theory coupled to emphasis on perception, body, and (political or social) "practice" indicates a regress into the subjectivistic thinking of variants of empiricism and postmodernism.¹⁵

2.3.4.2. The text above goes further in remarking that too many of today's philosophers and strategists of adaptation to "change", in their search after the nature of things, get dizzy from constantly going round and round, imagining that the world is going round and round and moving in all directions, and that this appearance, which arises out of their own internal condition, they suppose to be a reality of nature. "Having fallen into a kind of whirlpool themselves, the givers of names are carried round and want to drag us in after them": this appears to be an apt description of our postmodern trends towards pluralism, flexibility and change, where IT has often proved to be inimical to necessary change and, yet, is hoped to enable us to cope with change.

2.3.4.3. The discussion that follows, concerning the nature of representations, textual or visual, recalls the question of names or words, and images. The apparent rigor of mathematical or "depictive" representations is rejected in favor of textual and qualitative representations which, in any case, are necessary but are not to be confused with the truth of the thing. The requirement that we must find some new notion of correctness of names or representations of things seems to be a prelude to our newly discovered aesthetic dimension in, for instance, virtual reality. The difference, of course, is that in Plato's text the importance of this sort of representation does not obfuscate the severe requirement of distinguishing between virtual and real, or, we could say with Singer, between ideal and real¹⁶, in the name of multiple perspectives which claim to substitute the Kantian "thing in itself". The final appeal to investigate the things in themselves seems to be a welcomed humble recognition of the need of some sort of phenomenology. The humility of the expectation, contrary to contemporary brands of phenomenology is, however, expressed in the statement that "how real existence is to be studied or discovered is, we suspect, beyond us, but we admit so much, that the knowledge of things is not to be derived from names".

¹⁴{Churchman, 1971 #131, kap. 7-8}

¹⁵{Churchman, 1971 #131, kap. 5}

¹⁶{Churchman, 1971 #131, kap. 9}

2.4. Design of a city

2.4.1. Let us create a city from the beginning, in our theory. Its real creator, as it appears, will be our needs: food, housing, raiment, etc. One man is naturally fitted for one task, and another for another. If one lets slip the right season, the favorable moment [IMPROVISATION KAIROS LATOUR-CIBORRA-CHINA] in any task, the work is spoiled. The result, then is that more things are produced, and better and more easily when one man performs one task according to his nature at the right moment [DIVISION OF WORK, KAIROS, TAYLOR, ADAM SMITH], and at leisure from other occupations. [SYSTEM]¹⁷

2.4.2. The true state – the healthy state, as it were – will aim at the satisfaction of legitimate needs. But if we contemplate a fevered state, couches will have to be added thereto, and tables, and other furniture, yes, and relishes and myrrh and incense and girls and cakes. And the requirements we first mentioned, houses and garments and shoes, will no longer be confined to necessities, but we must set painting to work and embroidery, and procure gold and ivory and similar adornments. For that healthy state is no longer sufficient, but we must proceed to swell out its bulk and fill it up with a multitude of things that exceed the requirements of necessity in states, as, for example, the entire class of huntsmen, and the imitators, many of them occupied with figures and colors and many with music – the poets and their assistants, rhapsodists, actors, chorus dancers, contractors – and the manufacturing of all kinds of articles, especially those that have to do with women's adornment.¹⁸

2.4.3. There is no man whose natural endowments will ensure that he shall both discern what is good for mankind as a community and invariably be both able and willing to put the good into practice when he has perceived it. If ever, by God's mercy, a man were born with the capacity to attain this perception, he would need no laws, to govern him. No law or ordinance whatever has the right to sovereignty over true knowledge. But as things are, such insight is nowhere to be met with, except in faint vestiges, and so we have to choose the second best, ordinance and law. Now they can consider most cases and provide for them, but not all. The different cases are countless and their circumstances are widely unlike. So it is equally impossible to leave everything to the discretion of the courts and to leave nothing. One issue, indeed, we cannot avoid leaving to their discretion in all cases, that of the occurrence or nonoccurrence of the alleged event. The question, then, is which are the points to be thus dealt with by statute, and which should be entrusted to a court's discretion.¹⁹[DESIGN SUBJECTIVE JUDGMENT, IMPORTANCE OF FACTS VS POSITIVIST & MEASURE OF NEEDS VS DESIRES]

2.4.4. Concluding commentary

2.4.4.1. This introduces the design of a city in the "Republic", and points to a basic theory of design which – like the design of the human body in Timaeus²⁰ – is remarkably different from other theories of design that have been launched in the IT-field²¹. For one, it takes its starting point in an enumeration of needs or, in a certain sense, is teleological, aiming at necessary vs. desired goals or objectives. The various

¹⁷Rep. 369c

¹⁸Rep. 372e-373b

¹⁹Laws IX 875a-876a

²⁰Tim 69a ff.

²¹Cf. social technical systems design as exemplified in modern weapon systems {Anonym, 1999 #2455}

needs represent in turn as many "subsystems" whose exchanges include economics. We find there also the pristine recognition of a principle of systemic division of work and skill which today is "democratically" supposed to be uniformly distributed or is brushed away as "Tayloristic" in favour of the pre-industrial noble artisan skills. It is important to observe that the design of a "city" is closer to the design of an information system in its social and human context than the design of an inanimate object seen as a tool or an artefact.

2.4.4.2. The reference to the "fevered state" introduces, in one way, considerations of what could be called aesthetics but is, rather, closer to the attractions of consumerism and to certain brands of "client-market orientation". Legitimate aesthetics as such is properly acknowledged and considered in other contexts labeled often as beauty²².

2.5. Judgment

2.5.1. The primary classes of men are three, the philosopher or lover of wisdom, the lover of victory, and the lover of gain [MARX]. And there are three forms of pleasure, corresponding respectively to each. The financier will affirm that in comparison with profit the pleasure of honor or of learning are of no value except in so far as they produce money. The lover of honor regards the pleasure that comes from money as vulgar and low, and again that of learning, save in so far as the knowledge confers honor, mere fume and moonshine. And the philosopher will think that these pleasures are far removed from the true pleasure of knowing the truth and the reality, and being always occupied with that while he learns. He will call them the pleasures of necessity [CF NEED VS DESIRE - OF PLEASURE AESTHETICS], since he would have no use for them if necessity were not laid upon him. Since there is contention between the several types of pleasure and the lives themselves, not merely as to which is the more honorable or the more base, or the worse or the better, but which is actually the more pleasurable or free from pain, how could we determine which of them speaks most truly? If things are to be judged rightly they must be judged by experience, intelligence, and discussion. The philosopher must needs taste of the other two kinds of pleasure from childhood, but the lover of gain is not only under no necessity of tasting or experiencing the sweetness of the pleasure of learning the true natures of things, but he cannot easily do so even if he desires and is eager for it. The lover of wisdom, then surpasses the lover of gain in experience of both kinds of pleasure. And honor, if the three classes of men achieve their several objects, attends them all so that all are acquainted with the kind of pleasure that honor brings, but it is impossible for anyone except the lover of wisdom to have savored the delight that the contemplation of true being and reality brings. Then, as so far as experience goes, he is the best judge of the three. And, again, he is the only one whose experience [EXPERIENCE SENSATION PRACTICE] will have been accompanied by intelligence. And yet again, that which is the instrument of judgment, words and discussion, is the instrument mainly of the philosopher. Now, if wealth and profit, or if honor, victory and courage were the best criteria by which things are judged, the things praised and censured by the lover of gain or by the lover of honor and victory would necessarily be truest and most real. But since the tests are experience and wisdom and discussion, it follows that the things approved by the lover of wisdom and discussion are most valid and true.²³

²²Rep. III 401a-402a

²³Rep. IX 581c-582e

2.5.2. The mind contemplates some things through its own instrumentality, others through the bodily faculties [VR BODY]. Existence, likeness and unlikeness and sameness and difference, and about 'honorable' and 'dishonorable' and good and bad, those again seem to me, above all, to be things whose being is considered, one in comparison with another, by the mind, when it reflects within itself upon the past and the present with an eye to the future [IMPROVISATION PRAGMATISM]. The hardness of something hard and the softness of something soft will be perceived by the mind through touch, but their existence and the fact that they both exist, and their contrariety to one another and again the existence of this contrariety are things that the mind itself undertakes to judge for us, when it reflects upon them and compares one with another. It is not true, then, that whereas all the impressions which penetrate to the mind through the body are things which men and animals alike are naturally constituted to perceive from the moment of birth, reflections about them with respect to their existence and usefulness only come, if they come at all, with difficulty through a long and troublesome process of education? It is impossible to reach truth when cannot reach existence, and if a man cannot reach the truth of a thing, he cannot possibly know that thing. If that is so, knowledge does not reside in the impressions, but in our reflection upon them. It is there, seemingly, and not in the impressions, that it is possible to grasp existence and truth. Then, perception [PERCEPTION] and knowledge cannot possibly be the same thing. And knowledge cannot be said to be judgment as a whole, because there is false judgment, but perhaps true judgment is knowledge.²⁴ [NO CONCLUSION, BUT STILL TRUTH VS. "LESSONS", KNOWLEDGE MGMT X DEF?]

2.5.3. In the case of objects one does not know and has never perceived, there is, it seems, no possibility of error or false judgment, but it is precisely in the field of objects both known and perceived that judgment turns and twists about and proves false or true—true when it brings impressions straight from their proper imprints, false when it misdirects them crosswise to the wrong imprint.[cf. MEMORY RECALL PERCEPTION]. The difference between true and wrong judgment is said to arise in the following way. When a man has in his mind a good thick slab of wax, smooth and kneaded to the right consistency, and the impressions that come through the senses are stamped on these tables of the "heart"—Homer's word hints at the mind's likeness to wax—then the imprints are clear and deep enough to last a long time. Such people are quick to learn and also have good memories, and besides they do not interchange the imprints of their perceptions but think truly. These imprints being distinct and well spaced are quickly assigned to their several stamps—the 'real things' as they are called—and such men are said to be clever. When a person has what the poet's wisdom commends as a 'shaggy heart', or when the block is muddy or made of impure wax, or oversoft or hard, the people with soft wax are quick to learn, but forgetful, those with hard wax the reverse. Where it is shaggy or rough, a gritty kind of stuff containing a lot of earth or dirt, the impressions obtained are indistinct; so are they when the stuff is hard, for they have no depth. Impressions in soft wax also are indistinct, because they melt together and soon become blurred. [PRECISION-ACCURACY AVH] And if, besides this, they overlap through being crowded together into some wretched little narrow mind [NARROWMIND], they are still more indistinct. All these types, then are likely to judge falsely. When they see or hear or think of something, they cannot quickly

²⁴Theaet. 185e-187b. Please note that as sometimes is the case, Socrates leaves the issue open, and he also changes progressively his position in the course of the dialogue.

assign things to their several imprints. Because they are so slow and sort things into the wrong places, they constantly see and hear and think amiss, and we say they are mistaken about things and stupid....We must account for false judgments in some other way than as the misfitting of thought and perception, and we must describe what knowing is like, and what knowledge is.²⁵

2.5.4. Well, thinking and discourse are the same thing, except that what we call thinking is, precisely, the inward dialogue carried on by the mind with itself without spoken sound, whereas the stream which flows from the mind through the lips with sound is called discourse. And further, assertion and denial occur in discourse. When this occurs in the mind in the course of silent thinking [TACIT KNOWLEDGE], we call it judgment [JUDGMENT]. Judgment occurs not independently but by means of perception; the only right name for such a state of mind is 'appearing' [FLOW NOTITIA]. Well, then, since we have seen that there is a true and false statement, and of these mental processes we have found thinking to be a dialogue of the mind with itself, and judgment to be the conclusion of thinking, and what we mean by 'it appears' a blend of perception and judgment [AESTHETICS], it follows that these also, being of the same nature as statement, must be, some of them and on some occasion, false.²⁶

2.5.5. Though a person holding any opinion at all must hold in fact, yet it might sometimes have reference to what was not a fact, either of the present, the past, or the future. And there, I think, lay the source of our false opinion, of our holding opinions falsely. Well then, should we not ascribe a corresponding condition, as regards these references, to pains and pleasures? I mean, that though anyone who feels pleasure at all, no matter how groundless it be, always really feels that pleasure; yet sometimes it has no reference to any present or past fact, while in many cases, perhaps in most, it has reference to what never will be a fact. And the same principle will hold good in respect to fear, anger, and all such feelings, namely that all of them are sometimes false.²⁷[AESTHETICS & VS FEELINGS ALWAYS RIGHT COTTINGHAM]

2.5.6. We may take it that any human being is one person, but one person who has within himself, as a pair of unwise and conflicting counselors, whose names are pleasure and pain. He has, besides, anticipations of the future, and these of two sorts. The common name for both sorts is *expectation*, the special name for anticipation of pain being *fear*, and for anticipation of its opposite, *confidence*. [HOPE] And on the tops of all, there is *judgment*, to discern which of these states is better or worse, and when judgment takes the form of a public decision of a city, it has the name of law. Let us look at the whole matter in some such light as this.[THINKING METAPHOR] We may imagine that each of us living creatures is a puppet made by gods, possibly as a plaything, or possibly with some more serious purpose. That, indeed, is more than we can tell, but one thing is certain. These interior states are, so to say, the cords, or strings, by which we are worked; they are opposed to one another, and pull us with opposite tensions in the direction of opposite actions, and therein lies the division of virtue from vice. In fact, so says our argument, a man must always yield to one of these tensions without resistance, but pull [CF WILL] against all other strings—must yield, that is, to that golden and hallowed drawing of judgment which goes by the name of the public law of the city. [VS POSTMODERN SUBJECTIVITY] The other are hard and ironlike, it soft, as befits gold, whereas they resemble very various substances. So a man must

²⁵Theaet. 194a-196d

²⁶Soph. 263e-

²⁷Phil. 40c-

always co-operate with the noble drawing of law, for judgment, though a noble thing, is as gentle as free from violence as noble, whence its drawing needs supporters, if the gold within us is to prevail over the other stuff. In this wise our moral fable of the human puppets will find its fulfillment. It will also become somewhat clearer, first, what is meant by selfconquest and self-defeat, and next that the individual's duty is to understand the true doctrine of these tensions and live in obedience to it, the city's to accept this doctrine from god, or from the human discoverer, and make it law for her converse with herself and other societies. This will lead us to a more exact articulation both of vice and of virtue, and the elucidation of the subject will presumably throw further light on education and institutions at large.²⁸

2.5.7. The chief value of all things which have an attendant charm lies in this mere charm itself [AESTHETICS], in their rightness in some sense, or, finally, in their utility. For example, meat and drink, and articles of nutriment generally, are attended by a charm which we call flavor. As to rightness and utility, it is precisely what we call wholesomeness of the various viands which is also their true rightness. Again, the act of learning if attended by a charm, a gusto, but it is the truth of what is learned which gives it its rightness and utility, its goodness and nobility. [PED LEARN LEARN RIGHT] And of the various arts of imitation which work by producing likenesses, if they are so far successful in giving rise to an attendant pleasure, charm will be the right name for it, whereas their rightness depends not on their pleasantness, but on accurate correspondence in quality and magnitude. Thus, the only case in which it will be right to make pleasure our standard of judgment is that of a performance which provides us with neither utility, nor truth, nor resemblance, though, of course, it must do us no harm either. It will be an activity practiced solely with a view to this concomitant charm, which is very properly called pleasure, unattended by any of the results just specified. We can also use the name play for it in cases where it does neither harm nor good worth taking into serious account²⁹. [WHY AESTHETIC VR-PLAY]

2.5.8. A man's feeling of pleasure, or his erroneous belief, is never a proper standard by which to judge of any representation and proportionality. [VS AESTHETICS] Since music [MUSIC] is an art of producing likenesses or representations, citizens should aim not at a music which is pleasing, but at one which is right. A man who is to make no mistake of judgement about a particular production must, in every case, understand what that production is. If he does not understand what it is, what it is meant for, or of what it in fact an image, [IMAGE VISION] it will be a long time before he will discern the rightness or wrongness in the artist's purpose. One who is to be an intelligent judge of any representation, whether in drawing, in music, or in any other branch or art, must have three qualifications. He must understand, first, what the object reproduced is, next, how correctly, and third and last, how well a given representation has been effected, in point of language, melody, or rhythm.³⁰

2.5.9. When a poet takes his seat on the Muse's tripod, his judgment takes leave of him. He is like a fountain which gives free course to the rush of its waters [IMAGINATIVE CREATIVITY], and since representation is of the essence of his art, must often contradict his own utterances in his presentations of contrasted characters, without knowing whether the truth is on the side of this speaker or of that. Now it is not the legislator's business in his law to make two such statements about one and the same

²⁸Laws I 644c-645c

²⁹Laws 667b-e

³⁰Laws 667e-669b

topic, he has regularly to deliver himself of one pronouncement on one matter.³¹[VS DIALECTIC CONTRADICTIONS]

2.5.10. Concluding commentary

2.5.10.1. The statement that "Again, the act of learning if attended by a charm, a gusto, but it is the truth of what is learned which gives it its rightness and utility, its goodness and nobility" explains why, when it is ignored, it easy to fall into the remarkable attitude of seeing learning, vaguely associated with creativity, as a good in itself. Learning, like creativity, is regarded as a good in itself, disregarding whether what is learnt or created is a good or bad, right or wrong thing.

2.5.10.2. There are clear tendencies in late theoretization of the design of computer artifacts to appeal to the importance of good design of *play, improvisation, bricolage*, and such. In the light of the text above, play being "the only case in which it will be right to make pleasure our standard of judgment" it can be the case that such tendencies are fostered by the attraction of procuring pleasure to the disadvantage of genuine ethical concerns. Alternative but equivalent explanations of the tendencies are to be found in the emphasis on the "body" with its sensory pleasures or stimulations of an undefined creativity.³² Another alternative is the belief in an immanent order of nature that does away with the need of a purposeful intelligence behind nature or behind "naturally" found human organizations: teleology, immanent as well external, is dispensable, and totally non-telic processes of chance variations come to characterize what it called evolutionary thinking³³.

2.5.10.3. Ultimately these discussions correspond to the controveries about the place of aesthetics in relation to information, knowledge, and ethical action, where the problematic Kantian approach in the third critique (of judgment) needs to be critically appreciated in the light of new readings of Plato's work.³⁴

2.6. Visualization & Virtual Reality

2.6.1. It is indeed no trifling task, but very difficult to realize that there is in every soul an organ or instrument of knowledge that is purified and kindled afresh by such studies [of the science of arithmetic, geometry, and astronomy] when it has been destroyed and blinded by our ordinary pursuits, a faculty whose preservation outweighs ten thousand eyes.³⁵

2.6.2. Tragic poetry and all other imitative arts seem to be a corruption of the mind of all who do not possess as an antidote a knowledge of its real nature. In considering what imitation is, taking, for example, couches or tables, there are three couches, made by the painter, the carpenter or cabinetmaker, and [the idea] God. Painting is directed to the imitation of appearance as it appears, and not of reality as it is. It is an imitation of a phantasm, not of truth. The mimetic art is far removed from the truth, and this is the

³¹Laws IV 719c-d

³²Such claims for IT-applications are seldom motivated with reference to Kantian aesthetics {Kant, 1790/1987 #2411, e.g. §329-330} where misreadings which equate art and science can lead to "postmodernist" twists in theorizing about design and virtual reality.

³³{Ferré, 1973 #2459, p. 676}. The most sophisticated defense of such an attitude relates to the Kantian "puposive forms" {Kant, 1790/1987 #2411, §326} which because of its obscure complexity is an invitation to, again, postmodern relativistic misreadings.

³⁴ Ivanov {, 1997 #2408} initiates a struggle with this issue.

³⁵Rep. VII-527d-e

reason why it can produce everything, because it touches or lays hold of only a small part of the object. [VS VR (MOST VISUAL) MOBILIZATION OF SENSE PERCEPTION EMBODIED COGNITION] A phantom, for example, a painter, will paint us a cobbler, a carpenter, and other craftsmen, though he himself has no expertness in any of these arts. Nevertheless is he were a good painter, by exhibiting at a distance his picture of a carpenter he would deceive children and foolish men, and make them believe it to be a real carpenter.³⁶

2.6.3. The poet himself, knowing nothing but how to imitate, lays on with words and phrases the colors of the several arts in such a fashion that others equally ignorant, who see things only through words, will deem his words most excellent, whether they speak in rhythm, meter, and harmony about cobbling or generalship or anything whatever. So mighty is the spell that these adornments [AESTHETIC] naturally exercise³⁷.

2.6.4. There are three arts concerned with everything, [DESIGN SYSTEM] the user's art, the maker's, and the imitator's. The beauty, the rightness of every implement, living thing, [NONHUMAN] and action refer solely to the use [USE] for which each is made or by nature adapted [DARWIN?]. The user, possessing knowledge, reports about the goodness or the badness of anything he knows most by experience, and the maker, believing, will make it. The maker will then have right belief, [MAKER

SYSANALYST/PROGRAMMER DESIGNER] but the user will have true knowledge. The imitator [VR] will have neither knowledge from experience of whether the thing is or is not beautiful and right, nor will he have right opinion from compulsory association with the user who knows. [CONSULTANT] Then the imitator will neither know nor opine rightly concerning the beauty or the badness of his imitations, but the thing he will imitate will be the thing that appears beautiful to the ignorant multitude. His imitation will be a form of play, not to be taken seriously.³⁸

2.6.5. This business of imitation is then concerned with the third remove from truth, and its function and potency is related to the element in man, or part of the soul that reasons and calculates. The same things appear bent and straight to those who view them in water and out, or concave and convex, owing to similar errors of vision about colors, and there is obviously every confusion of this sort in our souls. [FERRY AESTHETICS VS VR] And so scene painting in its exploitation of this weakness of our nature falls nothing short of witchcraft, and so do jugglery and many other such contrivances. Measuring and numbering and weighing proved to be most gracious aids to prevent the domination in our soul of the apparently greater or less or more or heavier, and to give control to that which has reckoned and numbered or even weighed, i.e. the function of part of the soul that reasons and calculates.³⁹

2.6.6. This isolation of everything from everything else [VS SYS] means a complete abolition of all discourse, for any discourse we can have owes its existence to the weaving together of forms. We have next to consider whether 'not being' blends with thinking and discourse. If it does not blend with them, everything must be true, but if it does, we shall have false thinking and discourse, and if falsity exists, deception is

³⁶Rep. X 595b-598c

³⁷Rep. X 601a

³⁸Rep. 601d-602c

³⁹Rep. 602c-e

possible. And once deception exists, images and likenesses and appearance will be everywhere rampant.⁴⁰

2.6.7. We got hold of, and expressed, the idea that gold is beautiful or not beautiful according as it is placed in an appropriate setting, and similarly with everything else to which this qualification can be added. Now consider this appropriateness, [AESTHETICS] and reflect on the general nature of the appropriate, and see whether it might not be beauty. The question is whether we define the appropriate as that which by its presence causes the things in which it becomes present to *appear* beautiful, or causes them to *be* beautiful, or neither. If it is that which makes things to appear beautiful. But then the appropriate is a kind of fraud in relation to beauty. If the appropriate causes things both to be and to appear beautiful, then it is our conclusion that all established usages and all practices which are beautiful are regarded as beautiful by all men, [KANT AESTHETIC TASTE] and always appear so to them, while we think the exact opposite, that ignorance of them is prevalent, and that these are the chief of all objects of contention and fighting, both between individuals and between states. Ignorance would not prevail if the appearance of beauty were but added to such usages and practices and moreover caused them to *appear* as well as *be* beautiful. It follows that if the appropriate is that which causes things to be in fact beautiful, then it would be that beauty for which we are looking, but still it would not be that which causes them to appear beautiful. If, on the other hand, that which causes things to appear beautiful is the appropriate, it is not that beauty for which we are looking. That for which we are looking makes things beautiful, but the same cause never could make things both appear and be either beautiful of anything else. [KANT AESTHETIC BRIDGE] Let then instead assume that whatever is useful is beautiful, [FUNCTIONALISM] since we do not say that eyes are beautiful when they appear to be without the faculty of sight, but when they have this faculty. [FUNCTIONALISM] Similarly we say that the whole body is beautifully made, sometimes for running, sometimes for wrestling, and we speak in the same way of all animals. A beautiful horse, or cock, or quail, and all utensils, and means of transport both on land and on sea, merchant vessels and ships of war, and all instruments of music and of the arts generally, and if you like, practices and laws—we apply the word 'beautiful' to practically all these in the same manner. In each case we take as our criterion the natural constitution or the workmanship or the form of enactment, and whatever is useful we call beautiful in that respect in which it is useful and for the purpose for which and at the time at which it is useful. And that which has the power to achieve its specific purpose is useful for that purpose. Then power is a beautiful thing, and the lack of it ugly???[p. 1549 - §295e]⁴¹

2.6.8. Concluding commentary

2.6.8.1. These statements expose a theory of art and aesthetics that became more controversial after Kant. In any case the theory of appearance as related to reality which is highly relevant to work in visual reality (VR) is far from resolved in present conceptions of aesthetics or their simplifications in design theory with references to improvisation, pluralistic perspectives, viewpoints, frameworks, and such⁴². That "mimetic art is far removed from the truth, and this is the reason why it can produce everything, because it touches or lays hold of only a small part of the object" is highly relevant to computerization in general where it is sometimes wrongly equated with

⁴⁰Soph. 258c-260a

⁴¹Hipp.maj. 293e-

⁴²{Ferry, 1990 #2456; Ivanov, 1998 #2407}

"cognitization" or narrow use of only the cognitive faculties of the soul. Such conception of mind is indeed a "corruption of the mind of all who do not possess as an antidote a knowledge of its real nature" or, does not have an adequate definition of cognition as related feeling and intuition and to other faculties of the soul or mind. *Measuring and numbering and weighing* which "proved to be most gracious aids to prevent the domination in our soul of the apparently greater or less or more or heavier" have been reduced, in many computer applications to only numbering, applied to implicit models that are sheer assumed images of reality. In visual interfaces and virtual reality numbering, represented by cartesian analytic geometry, is further masked and further removed from reality with an appeal to aesthetic intuition and assumed rightness of feeling.⁴³ The statement that "a good painter, by exhibiting at a distance his picture of a carpenter he would deceive children and foolish men, and make them believe it to be a real carpenter" is relevant to the discussion on expert systems, the implication being that the imitation of an expert tends to be most successful with children and foolish men that lack a critical appreciation of reality⁴⁴.

2.6.8.2. The statement that there are three arts concerned with everything, the user's art, the maker's, and the imitator's, is interesting not only for its problematization of the absent "designer" but also for its conclusion that the maker will then have right belief, but the user will have true knowledge. The playing down of truth in our postmodern and late theories of design amounts then to a questioning of the knowledge of the user, while at the same time the designer claims to be a self-appointed representative of the user, if not also of the maker. This is consistent also with the abandonment in the IT-field of Marxist theories of users and their political representation – not to mention the connections with design theories of "Arts and crafts" and "Bauhaus" – in favor of rhetoric emphasis on skill and design. If the designer is equated with the role of imitator (of users and makers) then design reveals itself close if not identical to sophistry.

2.7. Body: senses and pleasures

2.7.1. Those who have no experience of wisdom and virtue but are ever devoted to feasting and that sort of thing are swept downward, it seems, and back to the center, and so sway and roam to and fro throughout their lives, but have never transcended all this and turned their eyes to the true upper region nor been wafted there, not ever been really filled with real things, nor ever tasted stable and pure pleasure, but with eyes ever bent upon the earth and heads bowed down over their tables, they feast like cattle, grazing and copulating ever greedy for more of these delights, and in their greed kicking and

⁴³There are, however, suggestion about how measuring could be introduced in computer applications {Ivanov, 1993 #1743; Ivanov, 1992 #1746}.

⁴⁴Cf. a critical appreciation of a virtual, supposedly ideally planned version – Karlskrona 2 – of the Swedish Karlskrona city {Allerholm, 1999 #2457, in Swedish}: "Karlskrona 2" ska vara ett "frirum" i bemärkelsen att den digitala versionen av staden inte behöver lyda de lagar och sociala regler som gäller i den fysiska staden. Lite elakt kunde man säga att deras projektbeskrivningar bitvis påminner om den sorts nybyggaranda som ofta dyker upp i diskussioner om Internet, där just ord som "frizon" och "nytt demokratiskt verktyg" florerar flitigt. Dessa eurforiska ordsvall brukar ignorera det faktum att den digitala världen knappast har någon självständig existens utanför den vanliga världen, utan i högsta grad är beroende av befintliga ekonomiska och politiska strukturer. Such criticism is usually dismissed by claiming that the purpose of such projects is to foster citizens' "discussions about the (im)possibility of form" and "confrontation with question on regulations, legislation and ethics". The rather childish naiveté of such an urban design in the context of the "Republic" is evidenced empirically by accounts of modern urban problems {Anonym, 1999 #2458} as well as by analyses of Internet's economy {Anonym, 1996 #2445}.

butting one another with horns and hoofs of iron they slay one another in sateless avidity, because they are vainly striving to satisfy with things that are not real the unreal and incontinent part of their souls.⁴⁵

2.8. Bricolage, Improvisation, empirical pragmatic "Schön-paradox"

2.8.1. I maintain that medicine is under the sole direction of the god of love, as are also the gymnastic and the agronomic arts [cf. cultivation-bricolage]. And it must be obvious that the same holds good of music—which is, perhaps, what Heraclitus meant us to understand by the rather cryptic pronouncement 'The one in conflict with itself is held together, like the harmony of the bow and of the lyre.' Of course it is absurd to speak of harmony as being in conflict, or arising out of elements which are still conflicting, but perhaps he meant that the art of music was to create harmony by resolving the discord between the treble and the bass. There is a kind of discord which it is not impossible to resolve, and here we may effect a harmony—as, for instance, we produce rhythm by resolving the difference between fast and slow. And just as the concord of the body was brought about by the art of medicine, so this other harmony is due to the art of music, as the creator of mutual love and sympathy. And so we may describe music too, as a science of love, or of desire—in this case in relation to harmony and rhythm. It is easy enough to distinguish the principle of Love in this rhythmic and harmonic union, nor is there so far any question of Love's dichotomy. But when we come to the application of rhythm and harmony to human activities—as for instance the composition of a song, or the instruction of others in the correct performance of airs and measures which have already been composed—then we meet with difficulties which call for expert handling. And this brings us to the conclusion that we are justified in yielding to the desires of the temperate—and of the intemperate in so far as such compliance will tend to sober them, and to this Love we must hold fast, for he is the fair and heavenly one. But as for that other, the earthy Love, whatever we have to do with him we must be very careful not to add the evils of excess to the enjoyment of th pleasures he affords—just as, in my own profession, it is an important part of our duties to regulate the pleasures of the table so that we may enjoy our meals without being the worse for them. And so in music, in medicine, and in every activity, whether sacred or profane, we must do our utmost to distinguish the two kinds of Love, for you may be sure that they will both be there.⁴⁶

2.8.2. God is altogether simple and true in deed and word, and neither changes himself nor deceives others by visions or words or the sending of sings in waking or in dreams. This is our second norm or canon for speech and poetry about the gods—that neither are they wizards in shape shifting [JUNGIAN TRICKSTER] nor do they mislead us by falsehoods in words or deed. Furthermore, if our guardians of the state are to be brave, we must extend our prescription of their education to include the sayings that will make them least likely to fear death. [cf. JULLIEN CHINA MANIPULATION] We must exercise supervision in matters of tales about the underworld, over those who supply them and request them not to dispraise in a indiscriminating fashion the life in it.⁴⁷

2.8.3. The overseers of our state must cleave and be watchful against its insensible corruption. They must throughout be watchful against innovation in music and gymnastics counter to the established order, and to the best of their power guard against them, fearing that anyone says that that song is most regarded among men 'which

⁴⁵Rep. 586a-b

⁴⁶Symp. 186e-187e

⁴⁷Rep. III 382e-386a (note missing paragraphs)

hovers newest on the singer's lips', lest haply it be supposed that the poet means not new songs but a new way of song and is commending this. But we must not praise that sort of thing nor conceive it to be the poet's meaning. For a change to a new type of music is something to beware as a hazard of all our fortunes. *For the modes of music are never disturbed without unsettling of the most fundamental political and social conventions.*⁴⁸

2.8.4. Whenever we have to accord praise or blame to an argument on the score of its length or its brevity we must never forget the second section of the art of measuring, and it is this standard we must always apply in judgments like these—the standard of suitability [FITNESS-RIGHT FEELING]. But even "suitability" is not in every case an adequate criterion. For instance, we shall not look for such length in an argument as is 'suitable' for giving pleasure, except as a very incidental consideration. Again, ease and speed in reaching the answer to the problem propounded are most commendable, but our principle requires that this be only a secondary, not a primary reason for commending an argument. What we must value first and foremost, above all else, is the philosophical method itself, and this consists in ability to divide according to real forms. If, therefore, either a full-length statement of an argument or an unusually brief one leaves the hearer more able to find real forms, it is this presentation of it which must be diligently carried through; there must be no expression of annoyance at its length or at its brevity as the case may be. Furthermore, if we find a man who criticizes the length of an argument while a discussion like the present one is in progress and refuses to wait for the proper rounding-off of the process of reasoning, he is not to be permitted to escape thus with a mere grumble that 'these discussions are long drawn out'; he must be required to support his grumble with a proof that a briefer statement of the case would have left him and his fellow disputants better philosophers, more able to demonstrate real truth by reasoned argument. Blame and praise on other grounds, aimed at other merely incidental traits in our discourse, we must simply ignore and act as though we had not heard them at all.⁴⁹

2.8.5. We may divide the knowledge involved in our studies into technical knowledge, and that concerned with education and culture. Then taking the technical knowledge employed in handicraft, let us consider whether one division is more closely concerned with knowledge, and the other less so. We should then mark off the superior types of knowledge in the several crafts. If, for instance, from any craft you subtract the element of numbering, measuring, and weighing, the remainder will be almost negligible. For after doing so, what you would have left would be guesswork and the exercise of your senses on a basis of experience and rule of thumb, involving the use of that ability to make lucky shots which is commonly accorded the title of art or craft, when it has consolidated its position by dint of industrious practice. We find plenty of it, to take one instance, in music, medicine, agriculture, navigation, and military science. Building, however, makes a considerable use of measures and instruments, and the remarkable exactness thus attained makes it more scientific than most sorts of knowledge. Let us then divide the arts and crafts so called into two classes, those akin to music in their activities and those akin to carpentry, the two classes being marked by a lesser and a greater degree of exactness, respectively. We find fixity, purity, truth, and what we have called perfect clarity in those things that are always, unchanged, unaltered, and free from all admixture, or in what is most akin to them. Everything else must be called inferior and of secondary importance. The names of reason and

⁴⁸Rep IV 424b-c

⁴⁹Statesm. 286c-

intelligence, that command the greatest respect can be properly established in usage as precisely appropriate to thought whose object is true being. Then, here, we have at hand the ingredients, intelligence and pleasure ready to be mixed, in the materials in which, or out of which, we as builders are to build our structure. But to mix with reason the pleasures that always go with folly and all other manner of evil would surely be the most senseless act for one who desired to see a mixture and fusion as fair and peaceable, so that he might try to learn from it what the good is, and what form he should divine it to possess. In our present discussion we have then created what might be called an incorporeal ordered system [cf. SYSTEM] for the rightful control of a corporeal substance in which dwells a soul. But any compound, whatever it be, that does not by some means or other exhibit measure and proportion, is the ruin both of its ingredients and of itself. So now we find that the good has taken refuge in the character of the beautiful [cf. ethics vs. aesthetics], for the qualities of measure and proportion invariably, I imagine, constitute beauty and excellence. And of course we said that truth was included along with these qualities in the mixture. Then if we cannot hunt down the good under a single form, let us secure it by the conjunction of three, beauty, proportion, and truth, and then, regarding these three as one, let us assert that *that* may most properly be held to determine the qualities of the mixture, and that because that is good the mixture itself has become so. Is it then pleasure or intelligence that is more akin to the highest good? If we examine each of our three forms, beauty-truth-measuredness, separately in relation to pleasure and reason, we will find that reason is the more akin to truth. The first possession is secured for everlasting tenure somewhere in the region of measure—of what is measured or appropriate, or whatever term may be deemed to denote that kind of quality. The second lies in the region of what is proportioned and beautiful, and what is perfect and satisfying—whatever terms denote that kind of quality. If we put reason and intelligence third, you won't be very wide of the truth. Nor again, if beside these three you put as fourth what we have recognized as belonging to the soul itself, sciences and arts and what we called right opinions, inasmuch as these are more akin than pleasure to the good. And as fifth, the pleasures which we recognize and discriminate as painless, calling them pure pleasures of the soul itself—some attaching to knowledge, others to sensation. Reason has been found ever so much nearer and more akin than pleasure to the character of the victor, and pleasure will take fifth place. An not first place, no, not even if all the oxen and horses and every other animal that exists tells us so by their pursuit of pleasure. It is the animals on which the multitudes rely, just as diviners rely on birds, when they decide that pleasures are of the first importance to our living a good life, and supposed that animals' desires are authoritative evidence, rather than those desires that are known to reasoned argument, divining the truth of this and that by the power of the Muse of philosophy.⁵⁰

2.8.6. One who is to be an intelligent judge of any representation, whether in drawing, in music, or in any other branch or art, must have three qualifications. He must understand, first, what the object reproduced is, next, how correctly, and third and last, how well a given representation has been effected, in point of language, melody, or rhythm. Now we must not omit the full explanation of the difficulty of music. There is much talk about musical imagery than about any other kind, and this is the very reason why such imagery demands more cautious scrutiny than any other. It is here that error is at once more dangerous, as it encourages morally bad dispositions, and most difficult to detect, because our poets are not altogether on the level of the Muses themselves. They

⁵⁰Phil. 55d-64b-67b

would never make a pretended presentation of a single theme out of a medley of human voices, animal cries, and noises of machinery. Whereas our mere human poets tend to be only too fond of provoking the contempt of those of us who, in the phrase of Orpheus, are 'ripe for delight', by this kind of senseless and complicated confusion. In fact, not only do we see confusion of this kind, but our poets go still further. They divorce rhythm and figure from melody, by giving metrical form to bare discourse, and melody and rhythm from words, by their employment of cithara and flute without vocal accompaniment, though it is the hardest of tasks to discover what such wordless rhythm and tune signify, or what model worth considering they represent. Nay, we are driven to the conclusion that all this so popular employment of cithara or flute, not subordinated to the control of dance or song for the display of speed and virtuosity, and the reproduction of the cries of animals, is in the worst of bad taste; the use of either as an independent instrument is no better than unmusical legerdemain. So much for the theory of the thing. But, after all, the question for ourselves is what kind of music our citizens are to practice, not what they are to avoid. The general public are simply ridiculous in their belief that men are adequate judges of what is good or otherwise in melody and rhythm, if they have merely been drilled into singing the flute and marching in step, though it never occurs to them that they do the acts without understanding anything about them. Whereas, of course, any tune is correct if it has the proper constituents, incorrect if it has unsuitable ones.⁵¹

2.8.7. One type of physician treats us, when we call him in, in one way, and a second in another—but let us remind ourselves of the difference between the two methods. There are physicians, and again there are physicians' assistants, whom we also speak of as physicians. All bear the name, whether free men or slaves who gain their professional knowledge by watching their masters and obeying their directions in empirical fashion, not in the scientific way in which free men learn their art and teach it to their pupils. You have observed that as there are slaves as well as free men among the patients of our communities, the slaves, to speak generally, are treated by slaves, who pay them a hurried visit, or receive them in dispensaries. A physician of this kind never gives a servant any account of his complaint, nor asks him for any; he gives him some empirical injunction with an air of finished knowledge, in the brusque fashion of a dictator, and then is off in hot haste to the next ailing servant—that is how he lightens his master's medical labors for him. The free practitioner, who, for the most part attends free men, treats their diseases by going into them thoroughly from the beginning in a scientific way, and takes the patient and his family into his confidence. Thus he learns something from the sufferers, and at the same time instructs the invalid to the best of his powers. He does not give his prescriptions until he has won the patient's support, and when he has done so, he steadily aims at producing complete restoration to health by persuading the sufferer into compliance. [cf. participation-implementation]. Now, which of the two methods is that of the better physician or director of bodily regimen? That which effects the same result by a twofold process or that which employs a single process, the worse of the two, and exasperates its subject?⁵²

2.8.8. That was no unhappy simile by which we liken all existing legislation to the treatment of unfree patients by unfree physicians. You may be sure that were one of these empirical practitioners of the healing art, so innocent of the theory of it, to discover a free physician conversing with his free patient, to hear him talking almost

⁵¹Laws II 669a-670c

⁵²Laws IV 720a-e

like a philosopher, tracing the disorder to its source, reviewing the whole system [SYSTEM] of human physiology, his merriment would be instantaneous and loud. His language would be no other than that which comes so pat from the lips of our so-styled physicians. This is not to treat the patient, fool, but to educate him—as though he wanted to be made a medical man, not to recover its health! The speaker might be in the right of it, if only he also understood that any man who treats of law in the style we are now adopting, means to educate his fellow citizens rather than to lay down the law to them. We are fortunate in our present position, because we are under no obligation to lay down the law. We are free to pursue our own reflections on all points of political theory, to ask either what would be the ideally best legislation, or what is indispensably requisite as a minimum. We are not in the position of the statesman driven by the stress of some dire necessity to produce his laws on the instant, because tomorrow will be too late. Our case, is more like that of a stonemason or some such workers at the beginning of their operations. We are free to collect our materials in the mass before we proceed to select those which will suit the future construction, and we can make the selection itself at our leisure. So we will take ourselves to be erecting or present edifice, not under pressure, but with undiminished leisure to lay up some of our material for future employment while we work the rest into our fabric. Thus we may rightly think of our body of law as composed partly of statutes actually imposed, partly of material for statutes. At all events, our digest of law will be more scientific, and we will give serious attention to the compositions of others.⁵³

2.8.9. If one slay a free man by one's own act but the deed be done in *passion*, there are, first, two cases to be distinguished. It is an act of passion when a man is done away with on the impulse of the moment [IMPROVISATION], by blows or the like, suddenly and without any previous purpose to kill, and remorse instantly follows on the act. It is also an act of passion when a man is roused by insult in words or dishonoring gestures, pursues his revenge, and ends by taking a life with purpose to slay and without subsequent remorse for the deed. I take it we cannot treat these as two distinct forms of homicide; both may fairly be said to be due to passion and to be partially involuntary [cf. WILL]. Not but what each of them has a resemblance to one extreme. The man who nurses his passion and takes his revenge not at the moment and on the spot, but afterwards and of set purpose, bears a resemblance to the deliberate manslayer. He who does not bottle up his wrath but expends it all at once, on the spot, without premeditation, is like the involuntary homicide; still we cannot say that even he is altogether an involuntary agent, though he is like one. Hence the difficulty of deciding whether homicides of passion should be treated in law as intentional or, in some sense, unintentional. However the best and soundest procedure is to class each sort with that which it resembles, discriminating the one from the other by the presence or absence of premeditation, and legally visiting the slaughter where there is premeditation as well as angry feeling with a severer, that which is committed on the spur of the moment and without purpose aforethought with a milder, sentence. That which is like the graver crime should receive the graver punishment, that which resembles the lighter, a lighter.⁵⁴

2.8.10. No law or ordinance whatever has the right to sovereignty over true knowledge. 'Tis is a sin that understanding should be any creature's subject or servant; its place is to be ruler of all, if only it is indeed, as it ought to be, genuine and free. But, as things are,

⁵³Laws IX 857c-858d

⁵⁴Laws IX 866d-867c

such insight is nowhere to be met with, except in faint vestiges, and so we have to choose the second best, ordinance and law. Now they can consider most cases and provide for them, but not all, and this is why I have said what I have. You and I are about to fix the penalty of fine to be inflicted on him who wounds another or does him a hurt. Now it is, of course, a proper and obvious comment to make at this point, to say, Wounds? Yes, but wounds whom, and where and how and when? The different cases are countless and their circumstances are widely unlike. So it is equally impossible to leave everything to the discretion of the courts and to leave nothing. One issue, indeed, we cannot avoid leaving to their discretion in all cases, that of occurrence or nonoccurrence of the alleged event. In a state where the courts of law are poor-spirited and inarticulate, where their members keep their convictions to themselves and reach their verdict by a secret vote, where, worst of all, they do not even listen to the case in silence, the legislator is compelled to restrict the court's discretion and to do most the work himself by express statute. But in a community where the constitution of the courts is thoroughly sound, it will be entirely right and fitting that they should be allowed a wide discretion in assessing the fines or other penalties of offenders, but an outline of the law with samples of penalties should be set before the judges as a model to keep them from any infringement of the bounds of right.⁵⁵

2.8.11. In our inquiry on how to get wisdom it eludes us altogether as soon as we turn to any of the branches of understanding that make up the so-called arts, forms of understanding, or other such fancied sciences. The production of barley and wheat and the making of food from them will never make a man wholly wise. It is not so much from science as from a native instinct implanted by God that we all seem to have taken the soil in hand. We may say so much of building in its various forms, and the manufacture of all sorts of furniture, smithwork, carpentry, pottery, weaving, and equally of the provision of tools of every sort; all this is serviceable enough, but it is not imputed as virtue. It is true, again, of the chase in all its forms. The art of the prophet or his interpreter, again, fails us, he knows only what his oracle says—whether it is true is more than he can tell. Now since our necessities are provided by art, but by arts none of which can make a man wise, all that is left over is play, imitative play for the most part, but of no serious worth. For imitation is effected by a great variety of instruments, and likewise of attitudes and those none too dignified, of the body itself in declamation and the different forms of music and all the offshoots of the art in drawing with the numerous variegated patterns they produce in fluid or solid mediums, but none of these branches of imitation makes the practitioner in the least wise, no matter how earnestly he labors. When all is done, what is left on our hands proves to be defense, of a host of clients by a host of means. Its most highly considered and most comprehensive form, the science of war stands highest in repute for its usefulness, but is most dependent on good fortune, and, from the nature of the case, is assigned rather to courage than to wisdom. As for what is known as the art of medicine, it is also a form of defense. But none of their devices can bestow reputation for the truest wisdom; they are at sea on an ocean of fanciful conjecture, without reduction to rule. We may also give the name to defender to sea captains, but none of them *know* of the fury or kindness of the winds, and that is the knowledge coveted by every navigator. Nor yet can we give the title to those who profess to defend us by their eloquence in the law courts, and devote themselves to a study of human character based on memories and empirical fancies, while they are far astray from true comprehension of genuine rights. We have still left

⁵⁵Laws IX 875c-876e

one claimant to the title of wisdom—a curious capacity which would commonly be spoken rather as native endowment than as wisdom—that seen in the man who learns whatever he studies with facility, has a capacious and trustworthy memory, recalls the relevant and appropriate steps in every situation, and does so without delay. All this will be ascribed by some to a native endowment, by others to wisdom, by others to natural sagacity, but no right-judging man will ever consent to call a person wise on the strength of any of these gifts. And yet there must be some knowledge or other, the possession whereof will bestow wisdom which is wisdom. Then, we must begin for preference, if only we can find a single name for it, by stating what wisdom this is which we hold to be wisdom indeed. As a second best course, if the other prove quite impossible, we must say what and how many are the forms of wisdom by gaining which a man will be wise by our account of the matter. The next, we can raise no objection if our legislator goes on to an imaginative presentation of the gods nobler and better than those which have been given in the past. He may make the adoration of them, so to say, a noble pastime, and so pass his own life in worshipping them.⁵⁶

2.8.12. Concluding commentary

2.8.12.1. The consideration of music in resolving conflicts recalls the late interest for bricolage, play and improvisation, not the least musical improvisation in jazz, or in dance, as a sort of theorizing in IT and design. What this text in its shortness shows is the possibility of a different, deeper theorizing than the one which has been present in IT, in the sense that the emphasis on music appears as an alternative to the emphasis on architecture which has been common in IT, and Plato does not show in this context of musical "aesthetics" his usual diffidence towards imitative aesthetics. At the same time, however, "improvisation" has not a self-evident legitimate place in this context as is often claimed in the jazz improvisation adduced in IT, while play has its legitimate place, but as in the sense of playing music, not of playing games⁵⁷—Improvisation is indeed outright banned insofar it be equated to "innovation". The text suggests further a necessary differentiation between more superficial "fun" and legitimate aesthetic appreciation as in the differentiation between two different types of love.

2.8.12.2. What appears here is the well-known priority established by Platon for mathematics, geometry and astronomy, and the religious soul over the body and other empirical knowledge, as well as the diffidence towards aesthetics as represented by the so-called imitative arts. Such a statement will sharpen the possible understanding and evaluation of the Kantian and post-Kantian romantic or postmodern conceptions of aesthetics and their further applications to the relation to science in general, and IT in particular. The diffidence towards ad-hoc empirical knowledge or so-called silent knowledge can still stand today when the ambitions of such forms of knowledge are extended to cover what Plato thought of as wisdom.

2.9. ≈Mind and necessity

2.9.1. There are works of intelligence and things which come into being through necessity, for the creation of this world is the combined work of necessity and mind. Mind, the ruling power, persuaded necessity to bring the greater part of created things to perfection, and thus this universe was created through necessity made subject to reason.

⁵⁶Epin. 974b-980b

⁵⁷Plato return to such a problematization of music and play in Laws VII 802a-804b, as, of course, in the classical and for "improvisation" critical quotation in Rep IV 424b-c

But if a person will truly tell of the way in which the work was accomplished, he must include the variable cause as well, and explain its influence⁵⁸.

2.9.2. If mind and true opinion are two distinct classes, then I say that there are self-existent ideas unperceived by sense, and apprehended only by the mind; if, however, as some say, true opinion differs in no respect from mind, then everything that we perceive through the body is to be regarded as most real and certain. But we must affirm them to be distinct, for they have a distinct origin and are of a different nature. The one is implanted in us by instruction, the other by persuasion; the one is always accompanied by true reason, the other is without reason. the one cannot be overcome by persuasion, but the other can. And lastly, every man may be said to share in true opinion, but mind is the attribute of the gods and of very few men. Wherefore also we must acknowledge that one kind of being is the form which is always the same, uncreated and indestructible, never receiving anything into itself from without, not itself going out to any other, but invisible and imperceptible by any sense, and of which the contemplation is granted to intelligence only. And there is another nature of the same name with it, and like to it, perceived by sense, created, always in motion, becoming in place and again vanishing out of place, which is apprehended by opinion jointly with sense. And there is a third nature, which is space and is eternal, and admits not of destruction and provides a home for all created things, and is apprehended, when all sense is absent, by a kind of spurious reason⁵⁹.

2.9.3. Concluding commentary

2.9.3.1. Design as works of intelligence in terms of mind and necessity epitomizes the decision-theoretical approach with its distinction between controllable and non-controllable environmental variables. Creative man was created at the image of God. The theological implications have been noted in the context of bases of design theory as a difference between God in Thomas of Aquinas and Plato's Demiurge who is limited by what he finds by way of formal possibilities and material medium. Cf. what today is called ideal design and the problems of implementation where play, bricolage, improvisation in a sort of evolutionary process have been substituted for prayer and grace within a Christian framework of ethical action. See further the reference to Aubenque {, 1993 #2376} in Ivanov {, 1997 #2408}.

2.9.3.2. The reference to self-existent ideas unperceived by sense, and apprehended only by the mind, gives some philosophical basis for what elsewhere, without such a basis, has been called *figures of thought*. Jungian inborn archetypes dwell in an unconscious realm and are seen as original formal structures to be filled in by instruction and experience. Plato offers an alternative conception requiring only instruction. Learning theories espoused in Western educational applications of IT with their emphasis on learning and persuasion in place of teaching and proof, refer often to democratic advantage of discussion and debate which work for persuasion rather than authoritarian instruction.

2.9.3.3. The rest of the details of the argument point to possibility that the present infatuation with "change" is conditioned by a disregard for the stable realm of (right and good) ideas and the consequent dependence upon what is "always in motion, becoming in place and again vanishing out of place, which is apprehended by opinion jointly with sense".

⁵⁸Tim. 47e.

⁵⁹Tim. 51d-52b

2.10. Use, participation, democracy

2.10.1. Therefore, when the rhetorician is more convincing than the doctor, the ignorant is more convincing among the ignorant than the expert. Is not the position of the rhetorician and of rhetoric is the same with respect to other arts also? It has no need to know the truth about things but merely to discover a technique of persuasion, so as to appear among the ignorant to have more knowledge than the expert? Must the prospective pupil in rhetoric bring with him knowledge of what is right or wrong. And if he is ignorant will his teacher of rhetoric teach him these things, or will he be utterly unable to teach him rhetoric if he does not beforehand know the truth about these matters? Now the rhetorician must necessarily be just, and the man must wish to do just actions, but it has been said that we should not blame our trainers. If a boxer practices his art in a wrongful manner and does injury, and so too if a rhetorician makes wrongful use of his rhetoric, we should not censure or banish his instructor but rather the guilty man who wrongly employs rhetoric. And in our earlier discussion it was stated that rhetoric is concerned with words that deal, not with the odd and even, but with right and wrong. Now, at the time when this was stated, I considered that rhetoric could never be a thing of evil, since its discourse is always concerned with justice. But when a little later it was said that the rhetorician might actually make an evil use of rhetoric, I was surprised, and considered that what was said was inconsistent, and thought that it was of value to be refuted.⁶⁰

2.10.2. Just as wisdom when it governs our psychological impulses turns them to advantage, and folly turns them to harm, so the mind by its rights use and control of the material assets like wealth and health makes them profitable, and by wrong use renders them harmful. And the right user is the mind of the wise man, the wrong user the mind of the foolish.⁶¹

2.10.3. A thing would give no benefit, if we only had it but did not use it. But that is not enough to make a man happy, to possess and use good things. He must use them aright. It is, indeed, more harmful if one uses anything wrongly and if one leaves it alone—the first is bad; the second is neither bad nor good. It is knowledge that produces right use of equipment, and it is knowledge that is the guide which directs action. Then knowledge provides not only good fortune, but also good doing. No benefit comes from possessions, without intelligence and wisdom. A man would not benefit from possessing plenty and doing much, if he had no sense. He would benefit more by doing little with sense. If he did less he would make fewer mistakes, and would do less badly, and be less miserable. And a poor, weak, coward or idle man would be likely to do less. To sum it up, the truth is that all those things that to begin with seem good, the question is not how they are in themselves good, but the point is the following. If ignorance leads them, they are greater evils than their opposites, inasmuch as they are more able to serve the leader which is evil; but if intelligence leads, and wisdom, they are greater goods, while in themselves neither kind is worth anything at all. It then follows from what has been said that none of the things is either good or bad, except these two, and of these wisdom if good, and ignorance is bad.⁶² It seems that there is no benefit in any other knowledge, of business, or of physics for example, or anything else which knows how to

⁶⁰Gorg. 459b-

⁶¹Meno 88d-

⁶²Euthyd. 280c

make something but not how to use what it makes. Then we need such a knowledgeable combines both how to make something and how to use what is made.⁶³

2.10.4. The one who is to determine whether the proper form is given to the shuttle is not the carpenter who makes, but rather the weaver who uses it. And the one who will be best able to direct the legislator in his work of giving names, will also be the user, and this is who knows to ask and answer questions, and him we would call a dialectician.⁶⁴

2.10.5. There are some three arts concerned with everything, the user's art, the maker's, and the imitator's. Now, the excellence, the beauty, the rightness of every implement, living thing, and action, refer solely to the use for which each is made or by nature adapted. It quite necessarily follows, then that the user of anything is the one who knows most of it by experience, and that he reports to the maker the good or bad effects in use of the thing he uses. As, for example, the flute player reports to the flute maker which flutes respond and serve rightly in flute playing, and will order the kind that must be made, and the other will obey and serve him. The one, then, possessing knowledge, reports about the goodness or the badness of the flutes, and the other, believing, will make them. Then in respect of the same implement, the maker will have right belief about its excellence and defects from association with the man who knows and being compelled to listen to him, but the user will have true knowledge. And the imitator will neither know nor opine rightly concerning the beauty or the badness of his imitations, but, as it seems, the thing he will imitate will be the thing that appears beautiful to the ignorant multitude.⁶⁵

2.10.6. We were unconscious victims of a mistake universal to mankind. Men are perpetually fancying they have discovered some splendid creation which might have worked wonders if only someone had known the proper way—whatever it may be—to use it. When anyone sees something big, strong, and powerful, he feels at once that if the owner of such a marvelous thing knew how to use it, he could effect wonders with it, and so achieve felicity. There is a certain desire, which is universal in all men, that events shall fall out in accord with the bidding of a man's own soul, all of them, if possible, but if not, at least those which depend on human agency. But the object of a man's prayers and endeavors should not be that the universal course of events should conform to his own wishes, unless his wishes further conform to his sober judgment. It is the possession of intelligence that should be the mark of prayer and aspiration for the community and every individual of us alike.⁶⁶

2.11. Cultivation, care, hospitality

2.11.1. A true shepherd does herd his sheep in his quality of shepherd with regard to what is best for the sheep. Every form of rule in so far as it is a rule considers what is best for nothing else than that which is governed and cared for by it., alike in political and private rule. No one chooses of his own will to hold office of rule. men demand pay, which implies that not to them will the benefit accrue from their holding office but to those whom they rule. No art or office provides what is beneficial for itself—but it provides and enjoins what is beneficial what it beneficial to its subject, considering the

⁶³Euthyd. 289a

⁶⁴Crat. 390b

⁶⁵Rep X 601d-602d

⁶⁶Laws 686c-688a

advantage of that, the weaker, and not the advantage of the stronger. That is why no one of his own will chooses to hold rule and office and take other people's troubles in hand to straighten them out, but everybody expects pay for that, because he who is to exercise the art rightly never does what is best for himself but what is best for the subject. That is the reason why pay must be provided for those who are to consent to rule, either in the form of money or honor or a penalty if they refuse. To be covetous of honor and of money is said to be and is a reproach. That is why the good are not willing to rule wither for the sake of money or of honor. They do not wish to collect pay openly for their service of rule and be styled hirelings, nor to take it by stealth from their office and be called thieves, nor yet for the sake of honor, for they are not covetous of honor. So there must be imposed some compulsion and penalty to constrain them to rule if they are to consent to hold office. That is perhaps why to seek office oneself and not await compulsion is thought disgraceful. But the chief penalty is to be governed by someone worse if a man will not himself hold office and rule. It is from fear of this that the better sort hold office when they do, and then they go to it not in the expectation of enjoyment nor as to a good thing, but as to a necessary evil and because they are unable to turn it over to better men than themselves or to their like.⁶⁷ And the rulers of the state must be careful of the its interests. But one would be most likely to be careful of that which is loved. And again, one would most likely to love that whose interests he supposed to coincide with his own, and thought that when it prospers he too would prosper and if not, the contrary.⁶⁸

2.11.2. It is true of every seed and growth, whether vegetable or animal, that the more vigorous it is the more it falls short of its proper perfection when deprived of the food, the season, the place that suits it. For evil is more opposed to the good than to the not-good. So, it is natural that the best nature should fare worse than the inferior under conditions unsuited to it. The best endowed souls become worse than the others under a bad education. Or do you suppose that great crimes and unmixed wickedness spring from a slight nature and not from a vigorous one corrupted by its nurture, while a weak nature will never be the cause of anything great, either good or evil?⁶⁹

2.11.3. Concluding commentary

2.11.3.1. This is not an apology for managers or heads of university departments who are eager to return to their doing research, but rather a problematization fo the terms care, hospitality, and cultivation that because of some reason have entered the theorizing in IT during the last years of the 1990s. If it is a question of care and hospitality, and it is not to be equated with friendship, say, in the Aristotelian, then caring tends to be the same as administration as this term has been discussed in so-called administration and organization theory during the 20th century. If hospitality is being used as a term of an attitude of a-priori positive, optimistic acceptance of the offer of new technology, the discussion above has the merit of advancing the importance of payment. The general rule today in the context of acceptance of new IT is, on the contrary, that the ruled institution, and ultimately those who are supposed to rule or to be served by the institution should pay for the experiment or pilot project, instead of being paid for it. The net effect of much talk about care, hospitality, and cultivation is to forget what has been previously discussed under the labels of "sheperd-administration",

⁶⁷Rep. 345c-347d

⁶⁸Rep. 412c-d

⁶⁹Rep. VI 491d

management and politics while at the same time ignoring ethical discussion as presumed in the use of other well established terms like friendship and charity.

2.11.3.2. The other statements remind us that all reference to cultivation presupposes a standpoint on the issue of nature vs. nurture, and an ethical standpoint on what is to be considered a good nature to be fostered by an appropriate nurture. The issue of "hospitality" follows from such considerations inasmuch it can be meaningfully defined, if not as outright Christian "love thy neighbour", as the supply of appropriate nurture. One implication for IT is that the power inherent in technology should be supplied to an organization only after making sure that it has a good nature, whereafter the issue will focus on the latter. If the matter is framed instead in terms of the advantages of "trust" it will not become more simple, reverting ultimately to the same questions of ethics⁷⁰. What does not seem to be justified in the context of IT-design is to talk superficially about cultivation, care or hospitality without anchoring these terms in some definitions that relate them to their historical correspondents or antecedents.

2.12. Market-client orientation

2.12.1. The wise man should exert diligence not for the sake of speaking to and dealing with his fellow men, but that he may be able to speak what is pleasing to the gods, and in all his dealings, to do their pleasure to the best of his ability. For you see, what we are told by those wiser than ourselves is true, that a man of sense ought never to study the gratification of his fellow slaves save as a minor consideration, but that of his most excellent masters. When a man sets his hand to something good, it is good that he should take what comes to him.⁷¹

2.13. Money

2.13.1. First of all, men of Syracuse, accept such laws as you see clearly will not turn your thoughts and desires to money-getting and riches. There are three things, soul, body, and money. Put in the place of the highest honor the excellence of the soul; put next, that of the body, subject, however, to that of the soul; and in the third and last place put the honor paid to money, making it a slave to the body and to the soul. That these words of exhortation from me are true you will know by experience if you put to the test what I have just said about laws. Experience seems to be the surest touchstone for everything.⁷²

2.14. Consultancy

2.14.1. The imitator [VR] will have neither knowledge from experience of whether the thing is or is not beautiful and right, nor will he have right opinion from compulsory association with the user who knows. [CONSULTANT] Then the imitator will neither know nor opine rightly concerning the beauty or the badness of his imitations, but the thing he will imitate will be the thing that appears beautiful to the ignorant multitude. His imitation will be a form of play, not to be taken seriously.⁷³

2.14.2. There is no disgrace in taking money for giving advice, about building, for instance, and the other arts. But when it is a question of how one may become as good

⁷⁰{Huemer, 1998 #2413}

⁷¹Phaedr. 273e-274b

⁷²Epis. VIII 355b-c

⁷³Rep. 602a-c

as possible and best administer his own home or city, it is considered disgraceful to refuse giving advice unless one is paid for it. The reason obviously is that this is the only kind of service which makes its recipient eager to make a like return, so that it is thought to be a good sign when one who has rendered such a kindness receives a like return; but if he does not receive such a return, it is not considered to be a good sign.⁷⁴

3. Thinking: Knowledge and information

3.1. Soul and body

3.1.1. Let the soul be likened to the union of powers in a team of winged steeds and their winged charioteer. With us men, it is a pair of steeds that the charioteer controls; one of them is noble and good, and of good stock, while the other has the opposite character, and his stock is opposite. Hence the task of our charioteer is difficult and troublesome. We divide then each soul into three parts, two like steeds and the third like a charioteer. The good steed that is on the more honorable side is upright and clean-limbed, carrying his neck high, with something of a hooked nose; in color he is white, with back eyes; a lover of glory, but with temperance and modesty; one that consorts with genuine renown and needs no whip, being driven by the word of command alone. The other is crooked of frame, a massive jumble of a creature, with thick short neck, snub nose, back skin, and gray eyes; hot-blooded, consorting with wantonness and vainglory; shaggy of ear, deaf, and hard to control with whip and goad. Now when the driver beholds the person of the beloved, and causes a sensation of warmth to suffuse the whole soul, he begins to experience a tickling or pricking of desire, and the obedient steed constrained now as always by modesty, refrains from leaping upon the beloved. But his fellow, heeding no more the driver's goad or whip, leaps and dashes on, sorely troubling his companion and his driver, and forcing them to approach the loved one and remind him of the delights of love's commerce. For a while they struggle, indignant that he should force them to a monstrous and forbidden act, but at last, finding no end to their evil plight, they yield and agree to do his bidding. And so he draws them on, and now they are quite close and behold the spectacle of the beloved flashing upon them. At that sight the driver's memory goes back to that form of beauty, and he sees her once again enthroned by the side of temperance upon her holy seat; then in awe and reverence he falls upon his back, and therewith is compelled to pull the reins so violently, that he brings both steeds down on their haunches, the good one willing and unresistant, but the wanton sore against his will. And so it happens time and again, until the evil steed casts off his wantonness; humbled in the end, he obeys the counsel of his driver, and when he sees the fair beloved is like to die of fear. Wherefore at long last the soul of the lover follows after the beloved with reverence and awe. Thus the loved one receives all manner of service, as peer of the gods, from a lover that is no pretender but loves in all sincerity; of his own nature too, he is kindly disposed to him who pays such service. As time goes on ripening age and the ordinance of destiny together lead him do welcome the other's society.⁷⁵

3.1.2. The same forms and qualities are to be found in each one of us that are in the state. They could not get there from any other source. It would be absurd to suppose that the element of high spirit was not derived in states from the private citizens who are reputed to have this quality, as the populations of the Thracian and Scythian land and

⁷⁴Gorg. 520d-e

⁷⁵Phaedr. 246a-c, 253c-255b

generally of northern regions, or the quality of love of knowledge, which would chiefly be attributed to the region where we Greeks dwell, or the love of money which we might say is not least likely to be found in Phoenicians and the population of Egypt. But the matter begins to be difficult when you ask whether we do all these things with the same thing or whether there are three things and we do one thing with one and one with another—learn with one part of ourselves, feel anger with another, and with yet a third desire the pleasures of nutrition and generation and their kind, or whether it is with the entire soul that we function in each case when we one begin. That is what is really hard to determine properly. In defining the boundary and deciding whether they are identical with one another, it is obvious that the same thing will never do or suffer opposites in the same respect in relation to the same thing and at the same time, so that even if we find contradictions in the functions of the mind we shall know that it was not the same thing functioning but a plurality. It belongs to the rational part to rule, being wise and exercising forethought in behalf of the entire soul, and to the principle of high spirit [WILL-COURAGE] to be subject to this and be its ally. And these two, thus reared and having learned and been educated to do their own work in the true sense of the phrase, will preside over the appetitive part which is the mass of the soul in each of us and the most insatiate by nature of wealth. They will keep watch upon it, lest, by being filled and infected with the so-called pleasures associated with the body and so waxing big and strong, it may not keep to its own work but may undertake to enslave and rule over the classes with it is not fitting that it should, and so overrun the entire life of all. These two, then, would best keep guard against enemies from without also in behalf of the entire soul and body, the one taking counsel, the other giving battle, attending upon the ruler, and by its courage executing the ruler's designs. Brave, too, then, I take it, we call each individual by virtue of this part in him, when, namely, his high spirit preserves in the midst of pains and pleasures the rule handed down by reason as to what is or is not to be feared. But wise by the small part that ruled in him and handed down these commands, by its possession in turn within it of the knowledge of what is beneficial for each and for the whole, the community composed of the three. [PSYCHOLOGICAL SYSTEM-FREUD/JUNG]⁷⁶

3.1.3. There are two entities. One of them is sovereign over the intelligible order and region, and the other over the world of the eyeball. They are the two types of the visible and the intelligible. As the visible stands to the intelligible so stand the two sections of the visible to each other, objects to their images, and the two sections of the intelligible to each other, the knowledge of truth and the opinions of dialectic. The latter section of the intelligible reason itself lays hold of by the power of dialectic, treating its assumptions not as absolute beginnings but literally as hypotheses, underpinnings, footing, and springboards so to speak, to enable it to rise to that which requires no assumptions and is the starting point of it all, and after attaining to that again taking hold of the first dependencies from it, so to proceed downward to the conclusion, making no use whatever of any object of sense but only of pure ideas moving on through ideas to ideas and ending with ideas. I distinguish the aspect of reality and the intelligible, which is contemplated by the power of dialectic as something truer and more exact than the object of the so-called arts and sciences whose assumptions are arbitrary starting points. And though it is true that those who contemplate them are compelled to use their understanding and not their senses, yet because they do not go back to the beginning in the study of them but start from assumptions I do not think

⁷⁶Rep. 435e-442c

they possess true intelligence about them although the things themselves are intelligible when apprehended in conjunction with a first principle. And I call the mental habit of geometers and their like mind or understanding and not reason because you regard understanding as something intermediate between opinion and reason. And so, we assume that for the four entities or subsections there are four affections occurring in the soul—intellection or reason for the highest, understanding for the second, belief for the third, and for the last, picture thinking or conjecture—and arrange them in a proportion, considering that they participate in clearness and precision in the same degree as their objects partake of truth and reality.⁷⁷

3.1.4. The creator constructed the universe. Now of the divine, he himself was the creator, but the creation of the mortal he committed to his offspring. And they, imitating him, received from him the immortal principle of the soul, and around this they proceeded to fashion a mortal body, and made it to be the vehicle of the soul, and constructed within the body a soul of another nature which was mortal, subject to terrible and irresistible affections – first of all pleasure, the greatest incitement to evil, then pain, which deters from good; also rashness and fear, two foolish counselors, anger hard to be appeased, and hope easily lead astray – these they mingled with irrational sense and with all-daring love according to necessary laws, and so framed man. In the thorax they incased the mortal soul. That part of the inferior soul which is endowed with courage and passion and loves contention, they settled nearer the head, midway between the midriff and the neck, in order that being obedient to the rule of reason it might join with it in controlling and restraining desires when they are no longer willing of their own accord to obey the word of command issuing from the citadel. — The heart was set in place of guard, that, when the might of passion was roused by reason making proclamation of any wrong assailing all the limbs from without or being perpetrated by the desires within, quickly the whole power of feeling in the body, perceiving these commands and threats, might obey and follow through every turn and alley, and thus allow the principle of the best to have the command in all of them. The part of the soul which desires meats and drinks and the other things of which it has need by reason of the bodily nature, they placed between the midriff and the boundary of the navel, contriving in all this region a sort of manger for the food of the body, and there they bound it down like a wild animal which was chained up with man, and must be nourished if man was to exist. And knowing that this lower principle in man would not comprehend reason, and even if attaining to some degree of perception would never naturally care for rational notions, but that it would be especially led by phantoms and visions, planning to make this very weakness serve a purpose, God combined it with the liver, in order that the power of thought, which proceeds from the mind, might be reflected as in a mirror, and so might strike terror into the desires, or render the portion of the soul which resides about the liver happy and joyful, enabling it to pass the night in peace, and to practice divination in sleep, inasmuch as it has no share in mind and reason. For the authors of our being, remembering the command of their father when he bade them create the human race as good as they could, that they might correct our inferior parts and make them to attain a measure of truth, placed in the liver the seat of divination. And herein is a proof that God has given the art of divination not to wisdom, but to the foolishness of man. No man, when in his wits, attains prophetic truth and inspiration, but when he receives the inspired word, wither his intelligence is enthralled in sleep or he is

⁷⁷Rep. VI 509d-511e

demented by some distemper or possession. And for this reason it is customary to appoint interpreters to be judges of the true inspiration.⁷⁸

3.1.5. Riches are for the service of the body, as the body itself for the service of the soul. Since, then, there are goods to which wealth is but a means, it must hold a third place, after goodness of body and soul. From this doctrine, we should learn that the aim of him who would be happy must be not to get riches, but to get such riches as rectitude and self-command will permit.⁷⁹

3.1.6. Concluding commentary

3.2. The will

3.2.1. Do you consider that men will what on any occasion they are doing, or rather for the sake of which they act as they do? For example, do you consider that those who drink medicine at the doctor's orders will what they are doing, namely the drinking of medicine with all its unpleasantness, or the health for the sake of which they drink? Obviously, the health, and so too with those who sail the seas and engage in money-making in general. And this is a general truth. If a man acts with some purpose, he does not will the act, but the purpose of the act. Men perform also indifferent actions for the sake of the good.⁸⁰

3.2.2. What is your attitude to knowledge? Do you share the common view about that? Most people think, in general terms, that it is nothing strong, no leading or ruling element. They hold that it is not the knowledge that a man possesses which governs him, but something else—now passion, now pleasure, now pain, sometimes love, and frequently fear. They just think of knowledge like a slave, pushed around by all other affections. Is this your view too, or would you rather say that knowledge is a fine thing quite capable of ruling a man, and that if he can distinguish good from evil, nothing will force him to act otherwise than as knowledge dictates, since wisdom is all the reinforcement he needs? Most people, however, maintain that there are many who recognize the best but are unwilling to act on it. It may be open to them, but they do otherwise. Whenever I ask what can be the reason for this, they answer that those who act in this way are overcome by pleasure or pain or some other things. Then come with me and try to convince them, and show what happens when they speak of being overcome by pleasure and therefore, though recognizing what is best, failing to do it. If we simply declare, 'You are wrong, and what you say is false,' they will ask us, 'If it is not being overcome by pleasure, what can it be?'⁸¹

3.2.3. The phrase 'master of himself' is an absurdity, is it not? For he who is master of himself would also be subject to himself, and he who is subject to himself would be the master. For the same person is spoken of in all these expressions. But the intended meaning of this way of speaking appears to me to be that the soul of a man within him has a better part and a worse part, and the expression self-mastery means the control of the worse by the naturally better part. It is, at any rate, a term of praise. But when, because of bad breeding or some association, the better part, which is the smaller, is

⁷⁸Tim. 69c-72a

⁷⁹Laws IX 870b-c

⁸⁰Gorg. 467c-468a

⁸¹Protag. 352a-353a

dominated by the multitude of the worse, I think that our speech censures this as a reproach, and calls the man in this plight unself-controlled and licentious.⁸²

3.2.4. There are three classes of error, one of these has a principal source of which we speak as passion and fear. The second has its origin in pleasures and cupidities, and the third, which is of a very different kind, in the loss of sound anticipations [cf. PLANNING VS BRICOLAGE] and convictions about the good. Since the last can be subdivided into three, we get a total of five classes, and for all five we have to make distinct laws under two principal heads. Under one head fall all cases of deeds of open violence; under the other, those of dark and crafty contrivance. Concerning the last source of misconduct above, ignorance, which can be subdivided into three we can say the following. You should note that the legislator will do well to make two kind of it, ignorance pure and simple, which he will regard as a cause of venial offences, and the more complicated condition in which a man's folly means that he is suffering not from ignorance alone, but also from a conceit of his own wisdom, and supposes himself to know all about matters of which he knows nothing whatsoever. When such ignorance is accompanied by exceptional capacity or power the lawgiver will regard the combination as a source of grave and monstrous crime; when it is conjoined with impotence, since the consequent misconduct is puerile or senile, he will treat it as an offense, indeed, and make laws against its perpetrator as an offender, but whose laws will be the mildest and most indulgent of the whole code. Now we all talk of one man as the master of his pleasures or his passion, of another as a slave to them, but we have never heard it said that som-and-so is the master of his ignorance or a slave to it. And yet we speak of all three as frequently impelling a man in one direction at the very time his own will is urging him in the opposite. Now at last we are in a position to explain precisely what it meant by right and wrong. *Wrong* is the name given to the domination of the soul by passion, fear, pleasure or pain, envy or cupidity, alike in all cases, whether damage is the consequence or not. But where there is the conviction that a course is best—wherever a society or private individuals may take that best to lie—where that conviction prevails in the soul and governs a man's conduct, even if unfortunate consequences should arise, all that is done from such a principle, and all obedience of individuals to it, must be pronounced right and for the highest good of human life, though detriment thus caused is popularly taken to be involuntary wrong. Our business at present is not to contend about words, but, in the first place, to get a surermental grasp of the three classes of error.⁸³

3.3. Technique, tool-instruments

3.3.1. The name of a thing is an instrument as the shuttle is an instrument. The shuttle is a weaving instrument, and when we weave we separate or disengage the warp from the woof. When we name we give information [cf. INFORMATION] to one another, and distinguish things according to their natures. Then a name is an instrument of teaching, and of distinguishing natures, as the shuttle is of distinguishing the threads of the web. The shuttle is the instrument of the weaver, who will use it well, as the name is the instrument of the teacher who will use it well. And when the weaver uses the shuttle, he will use well the work of the skilled carpenter, as the teacher, when he gives us a name, uses the work of the skilled legislator. When the carpenter makes the shuttle he will look to that which is naturally fitted to act as a shuttle. He will look to the form

⁸²Rep. 430e-431b

⁸³Laws IX 863c-864c

according to which he made previous shuttles, which might be justly called the true or ideal shuttle. And whatever shuttles are wanted, for the manufacture of garments, thin or thick, of flaxen, woolen, or other material, the form that the maker produces in each case ought to be the form best adapted to each kind of work. And the same holds of other instruments. When a man has discovered the instrument which is naturally adapted to each work, he must express this natural form, and not others which he fancies, in the material, whatever it may be, which he employs. Several forms of shuttles naturally answer to the several kinds of webs, and this is true of instruments in general. Then, as to names, our legislator also ought to know how to put the true natural name of each thing into sounds and syllables, and to make and give all names with a view to the ideal name. And we must remember that different legislators will not use the same syllables. The one who is to determine whether the proper form is given to the shuttle is not the carpenter who makes, but rather the weaver who uses it. And the one who will be best able to direct the legislator in his work of giving names, will also be the user, and this is who knows to ask and answer questions, and him we would call a dialectician. Things, then, have names by nature, and not every man is an artificer of names, but he only who looks to the name which each thing by nature has, and is able to express the true forms of things in letters and syllables.⁸⁴

3.3.2. We have unconsciously embroiled ourselves with a portentous theory, one which is held to be the last word of wisdom. We are told that everything whatever which comes, has come, or will come into existence is a product either of nature, or of art, or of chance. Evidently, so they say, all the grandest and fairest of things are products of nature and chance, and only the more insignificant of art. Art takes over the grand primary works from the hands of nature, already formed, and then models and fashions the more insignificant, and this is the very reason why we all call them artificial. As the primary elements are then the soulless agents in the production of the bodies of the next rank, the earth, sun, moon, and stars. They drifted casually, each in virtue of their several tendencies. As they came together in certain fitting and convenient dispositions, and so on in all the inevitable casual combinations which arise from the blending of contraries, they gave birth to the whole heavens and all their contents, and, in due course, to all animals and plants, not, so they say, by the agency of mind, or any god, or art, but by nature and chance. Art, the subsequent late-born product of these causes, herself as perishable as her creators, has since given birth to certain toys with little real substance in them, simulacra as shadowy as the arts themselves, such as those which spring from painting, music, and the other fellow crafts. Or if there are arts which really produce anything of genuine worth, they are those which lend their aid to nature, like medicine, husbandry [cf. cultivation], gymnastics. Statesmanship in especial, they say, is a thing which has a little in common with nature, but is mainly a business of art [cf. design of social systems]; legislation, likewise, is altogether an affair not of nature, but of art, and its positions are unreal. This party asserts that gods have no real and natural, but only an artificial being, in virtue of legal conventions, as they call them, and thus there are different gods for different places [cf. pluralism and relativism], conformably to the conventions made by each group among themselves when they drew up the legislation. Then they actually declare that the really and naturally laudable is one thing and the conventionally laudable quite another, while as for right, there is absolutely no such thing as a real and natural right, that mankind are eternally disputing about rights and altering them [cf. pluralism and change], and that every change thus made, once made,

⁸⁴Crat. 388a-390e

is from that moment valid, though it owes its being to artifice and legislation, not to anything you call nature. — All these views, my friends, come from men who impress the young as wise, prose writers and poets who profess that indefeasible right means whatever a man can carry with the high hand. Hence our epidemics of youthful irreligion, and hence the factions created by those who seek, on such grounds, to attract men to the "really and naturally right life", that is, the life of real domination over others [cf. action], not of conventional service to them. This is the awful creed, for the general corruption of the young people of whole cities and private households.⁸⁵

3.3.3. Concluding commentary

3.3.3.1. Cf. history of ideas vs. art-technology and design of the artificial. Cf. paradox of "bricolage and marginal cultivation of the logic of the situation"

3.4. Pluralism, relativism, perspectives

3.4.1. We admit, I suppose, that there is such a thing as equality and that we know what it is—not the equality of stick to stick and stone to stone, and so on, but something beyond all that and distinct from it—absolute equality. We got our knowledge from particular examples. Was it not from seeing equal sticks or stones or other equal objects that we got the notion of equality, although it is something quite distinct from them? Is it not true that equal stones and sticks sometimes, without changing in themselves, appear equal to one person and unequal to another. Well now have you ever thought that things which were absolutely equal were unequal, or that equality was inequality? No. never. Then these equal things are not the same as absolute equality.⁸⁶

3.4.2. Only the soul that had beheld truth may enter into this our human form—seeing that man must needs understand the language of forms, passing from a plurality of perceptions to a unity gathered together by reasoning—and such understanding is a recollection of those things which our souls beheld aforetime as they journeyed with their god, looking down upon the things which now we suppose to be, and gazing up to that which truly is.⁸⁷

3.4.3. In respect of the just and unjust, the good and the bad, and all the ideas and forms, the same statement holds, that in itself each is one, but that by virtue of their communion with actions and bodies and with one another they present themselves everywhere, each as a multiplicity of aspects. I set apart the lovers of spectacles and the arts, and men of action, and separate from them again those with whom our arguments are concerned and who alone deserve the appellation of philosophers or lovers of wisdom. The lovers of sounds and sights, delight in beautiful tones and colors and shapes and in everything that art fashions out of these, but their thought is incapable of apprehending and taking delight in the nature of the beautiful itself. He, then, who believes in beautiful things, but neither believes in beauty itself nor is able to follow when someone tries to guide him to the knowledge of it, his life is a dream, whether the man is asleep or awake, mistaking resemblance for identity. The opposite case, the man who recognizes beauty in itself, and is able to distinguish that self-beautiful and the things that participate in it, and neither supposes the participants to be it nor it the participant, his life is a waking state. We can then call the mental state of the one as

⁸⁵Laws X 888d-890b

⁸⁶Phaedo 74a

⁸⁷Phaedr. 249c

knowledge, and that of the other as opinion.⁸⁸ Philosophers are those who are capable of apprehending that which is eternal and unchanging, while those who are incapable of this, but lose themselves and wander amid the multiplicities of multifarious things, are not philosophers.⁸⁹ When the soul is firmly fixed on the domain where truth and reality shine resplendent it apprehends and knows them and appears to possess reason, but when it inclines to that region which is mingled with darkness, the world of becoming and passing away, it opines only and its edge is blunted, and it shifts opinions hither and thither, and again seems as if it lacked reason. This reality, then, that gives their truth to the objects of knowledge and the power of knowing to the knower, is the idea of good, and you must conceive it as being the cause of knowledge and truth. The objects of knowledge not only receive from the presence of the good their being known, but their very existence and essence is derived to them from it, though the good itself is not essence but still transcends essence in dignity and surpassing power.⁹⁰

3.4.4. If what every man believes as a result of perception is indeed to be true for him; if just as no one is better judge of what another experiences, so no one is better entitled to consider whether what another thinks is true or false, and, as we have said more than once, every man is to have his own beliefs for himself alone and they are all right and true – then, my friend, where is the wisdom of Protagoras, to justify his setting up to teach others and to be handsomely paid for it, and where is our comparative ignorance or the need for us to go and sit at his feet, when each of us is himself the measure of his own wisdom? Must we not suppose that Protagoras speaks in this way to flatter the ears of the public?⁹¹

3.4.5. Protagoras would say that each one of us is a measure of what it and of what is not, but there is all the difference in the world between one man and another just in the very fact that what is and appears to one is different what what is and appears to the other. And as for wisdom, and the wise man, Protagoras would be very far from saying they do not exist. Be a wise man he would mean precisely a man who can change any one of us, when what is bad appears and is to him, and make what is good appear and be to him. To the sick man his food appears sour and is so; to the healthy man it is and appears the opposite. Now there is no call to represent either of the two as wiser. What is wanted is a change to the opposite condition, because the other state is better [for...?]. And so too in education a change has to be effected from the worse condition to the better; only, whereas the physician produces a change by means of drugs, the Sophist does it by discourse. It is not that a man makes someone who previously thought what is false think what is true, for it is not possible to think anything but what one experiences, and all experiences are true. Rather, when someone by reason of a depraved condition of mind has thoughts of a like character, one make him, by reason of a sound condition, think other and sound thoughts, which some people ignorantly call true, whereas one should say that one set of thoughts is better than the other, but not in any way truer. And as for the wise, he would call them, when they have to do with the body, physicians, and when they have to do with plants, husbandmen. For when plants are sickly and have depraved sensations, husbandmen substitute for these sensations that are sound and healthy, as wise and honest public speakers substitute in the community sound for unsound views of what is right. For whatever practices seem right and laudable to any

⁸⁸Rep. 476a-d

⁸⁹Rep. 484b

⁹⁰Rep. VI 508d-519b

⁹¹Theaet. 161d-e

particular state are so, for that state, so long as it holds to them. In this way it is true both that some men are wiser than others and that no one thinks falsely. The further question whether knowledge is, or is not the same thing as perception, should be considered as a consequence of these principles.⁹²

3.4.6. The followers of Heraclitus, faithful to their own treatises, are literally in perpetual motion, their capacity for staying still to attend to an argument or question or for a quiet interchange of question and answer amounts to less than nothing, or rather even a minus quantity is too strong an expression for the absence of the least modicum of repose in these gentry. When you put a question, they pluck from their quiver little oracular aphorisms to let fly at you, and if you try to obtain some account of their meaning, you will be instantly transfixed by another, barbed with some newly forged metaphor. You will never get anywhere with any one of them; for that matter they cannot get anywhere with one another, but they take very good care to leave nothing settled either in discourse or in their own minds. I suppose they think that would be something stationary—a thing they will fight against to the last and do their utmost to banish from the universe. There is no such thing as a master or pupil among them; they spring up like mushrooms. Each one gets his inspiration wherever he can, and not one of them thinks that another understands anything.⁹³

3.4.7. In the case of objects one does not know and has never perceived, there is, it seems, no possibility of error or false judgment, but it is precisely in the field of objects both known and perceived that judgment turns and twists about and proves false or true—true when it brings impressions straight from their proper imprints, false when it misdirects them crosswise to the wrong imprint. [cf. MEMORY RECALL PERCEPTION]. The difference between true and wrong judgment is said to arise in the following way. When a man hsin his mind a good thick slab of wax, smooth and kneaded to the right consistency, and the impressions that come through the senses are stamped on these tables of the "heart"—Homer's word hints at the mind's likeness to wax—then the imprints are clear and deep enough to last a long time. Such people are quick to learn and also have good memories, and besides they do not interchange the imprints of their perceptions but think truly. These imprints being distinct and well spaced are quickly assigned to their several stamps—the 'real things' as they are called—and such men are said to be clever. When a person has what the poet's wisdom commends as a 'shaggy heart', or when the block is muddy or made of impure wax, or oversoft or hard, the people with soft wax are quick to learn, but forgetful, those with hard wax the reverse. Where it is shaggy or rough, a gritty kind of stuff containing a lot of earth or dirt, the impressions obtained are indistinct; so are they when the stuff is hard, for they have no depth. Impressions in soft wax also are indistinct, because they melt together and soon become blurred. And if, besides this, they overlap through being crowded together into some wretched little narrow mind, they are still more indistinct. All these types, then are likely to judge falsely. When they see or hear or think of something, they cannot quickly assign things to their several imprints. Because they are so slow and sort things into the wrong places, they constantly see and hear and think amiss, and we say they are mistaken about things and stupid. We must, however,

⁹²Theaet. 166d-168b. Socrates, speaking for the absent Protagoras, introduces sophistic arguments that resemble simpler variants of modern pragmatism, and explain the rush for politically motivated "change", as well as the close collaboration between philosophy or science, and politics or economics.

⁹³Theaet. 179e-180c

account for false judgments in some other way than as the misfitting of thought and perception, and we must describe what knowing is like, and what knowledge is.⁹⁴

3.4.8. In our disobedience to Parmenides we have trespassed far beyond the limits of his prohibition. We have shown him results in a field which he forbade us to explore. He said 'Never shall this be proved, that things that are not, are, but keep back thy thought from this way of inquiry.' Whereas we have not merely shown that things that are not, are, but we have brought to light the real character of 'not being'. We have shown that the nature of the different has existence and is parceled out over the whole field of existent things with reference to one another, and of every part of that is set in contrast to 'that which is' we have dared to say that precisely that is *really* 'that which is not'. Then let no one say that it is the contrary of the existent that we mean by 'what is not', when we make bold to say that 'what is not' exists. Existence, having part in difference, will be different from them all, it *is not* any one of them nor yet all others put together, but it is only itself, with the consequence that existence *is not* myriads upon myriads of things, and that all the other kinds in the same way, in many respects *are*, and in many respects *are not*. There is nothing clever in quibbling about these apparent contradictions, but what is hard and worth the pains it to be able to follow our statements step by step and, in criticizing the assertion that a different thing is the same, or the same thing is different in a certain sense, to take account of the precise sense and the precise respect in which they are said to be one or the other. Merely to show that in some unspecified way the same is different or the different is the same, the tall short, the like unlike, and to take pleasure in perpetually parading such contradictions in argument—that is not genuine criticism, but may be recognized as the callow offspring of a too recent contact with reality. And the attempt to separate every thing from every other thing not only strikes a discordant note but amounts to a crude defiance of the philosophical Muse. This isolation of everything from everything else means a complete abolition of all discourse, for any discourse we can have owes its existence to the weaving together of forms. We have next to consider whether 'not being' blends with thinking and discourse. If it does not blend with them, everything must be true, but if it does, we shall have false thinking and discourse, and if falsity exists, deception is possible. And once deception exists, images and likenesses and appearance will be everywhere rampant.⁹⁵

3.4.9. Consider the common statement that all pleasant things are good. What, then is the identical element present alike in the bad pleasures and in the good that makes you use the term "good" in reference to them all? Likewise, knowledge, taken in its entirety will seem to be a plurality. We get this identity of the one and the many cropping up everywhere as the result of the sentences we utter. As soon as a young man gets wind of it, he is delighted as if he had discovered an intellectual gold mine; he is beside himself with delight, and loves to try every move in the game. There is, however, an attractive method or instrument, quite easy to indicate but very far from easy to employ, through which every discovery ever made in the sphere of the arts and sciences has been brought to light. [SCIENTIFIC METHOD] All things, that are ever said to be consist of a one and a many, and have in their nature a conjunction of limit and unlimitedness. This being the ordering of things we ought, whatever it be that we are dealing with, to assume a single form and search for it, for we shall find it there contained.; then, if we have laid hold of that, we must go on from one form to look for two, if the case admits of there being two, otherwise of three or some other number of forms. And we must do the

⁹⁴Theaet. 194a-196d

⁹⁵Soph. 258c-260a. Cf. also Statesm. 284b

same again with each of the "ones" thus reached, until we come to see not merely that the one that we started with is a one and unlimited many, but also just how many it is. But we are not to apply the character of unlimitedness to out plurality until we have discerned the total number of forms the thing in question has intermediate between its one and its unlimited number. It is only then, when we have done that, that we may let each one of all these intermediate forms pass away into the unlimited and cease bothering about them. But your clever modern man, while making his one—or his many, as the case may be—more quickly or more slowly than is proper, when he has got his one proceeds to his unlimited number straightaway, allowing the intermediates to escape him, whereas it is the recognition of those intermediates that makes all the difference between a philosophical and a contentious discussion. This is clear in the case of the alphabet and the letters illustrating it. The sound that proceeds through our mouths is one, and also an unlimited variety. And we have no real understanding if we stop short at knowing it either simply as an unlimited variety, or simply as one. What makes a man "lettered" is knowing the number and the kinds of sounds. And it is just the same sort of thing that makes a man musical.⁹⁶

3.4.10. And thus the theory which declines to separate the pleasant from the just, or the good from the honorable, if it has no other merits, is at least a persuasive to a just and religious life. Hence from the legislator's point of view any theory which denies these positions is highly disgraceful and dangerous, since no one, if he can help it, will let himself be persuaded into following a course not attended by a surplus of pleasure over pain [cf. SIN] It is distance which causes confusion of vision in all of us, and particularly in children, unless the lawgiver will effect a reversal of our judgments and dissipate our darkness, persuading us, as best as he can, by institutions, eulogies, and arguments that right and wrong are like puzzle pictures, wrong-appearing, in the opposite perspective to right, pleasant when viewed from the standpoint of one who is himself unjust and evil, and right most unpleasant, but everything the precise contrary, on both sides, from the point of view of the righteous. And the verdict of the better soul has the more valid claim to be true. Then it is consequently certain that an unjust life is not merely more dishonorable and despicable, but actually more truly unpleasant than a just and religious.⁹⁷

3.4.11. For everything that exists there are three classes of objects through which knowledge about it must come; the knowledge itself is a fourth, and we must put as a fifth entity the actual object of knowledge which is true reality. We have then, (1) a name, (2) a description composed of nouns and verbal expressions like in a definition, (3) an image, and (4) a knowledge and understanding and correct opinion of the object. There is something for instance called a circle, the name of which is the very word I just now uttered. In the second place there is a description of it which is composed of nouns and verbal expressions. For example the description of that which is named round and circumference and circle would run as follows: the thing which has everywhere equal distances between its extremities and its center. In the third place there is a class of

⁹⁶Phil.13a-17b. Cf. the concept of "information" in so-called information or signal transmission theory.

⁹⁷Laws II 663a- Cf. the Swedish translation of a difficult passage in these statements {Platon, 1921-1941 #2460, vol. 5, p. 235}: "Men lagstiftaren får här skingra dunkelheten och ge oss en uppfattning om det rätta förhållandet; han skall på det ena eller andra viset, genom sedvänjor, beröm och läror, övertyga oss om, att rätt och orätt ha något av skuggors väsen: om orätten står på motsatta sidan mot den rättrådige mannen och betraktas från ståndpunkten av sin egen orättrådighet och ondska, så är den angenäm, men rätten ytterst oangenäm. Betraktas allt åter från den rättrådiges ståndpunkt, så blir det ett motsatt resultat i fråga om dem bägge."

object which is drawn and erased and turned on the lathe and destroyed - processes which do not affect the real circle to which all these other circles are all related, because it is different from them. In the fourth place there are knowledge and understanding and correct opinion concerning them, all of which we must set down as one thing more that is found not in sounds nor in shapes of bodies, but in minds, whereby it evidently differs in its nature from the real circle and the aforementioned three. Of all these four, understanding approaches nearest in affinity and likeness to the fifth entity, while the others are more remote from it. The same doctrine holds good in regard to shapes and surfaces, in regard to the good and the beautiful and the just, in regard to all bodies artificial and natural, in regard to every animal and in regard to every quality of character, and in respect to all states active and passive. For if in the case of any of these a man does not somehow or other get hold of the first four, he will never gain a complete understanding of the fifth. Furthermore these four [names, descriptions, bodily forms, concepts] do as much to illustrate the particular quality of any object as they do to illustrate its essential reality because of the inadequacy of language. Hence no intelligent man will ever be so bold as to put into language those things which his reason has contemplated, especially not into a form that is unalterable. The important thing is that there are two things, the essential reality and the particular quality, and when the mind is in the quest not of the particular but of the essential, each of the four confronts the mind with the unsought particular, whether in verbal or in bodily form. Each of the four makes the reality that is expressed in words, or illustrated in objects liable to easy refutation by the evidence of the senses. The result of this is to make practically every man a prey to complete perplexity and uncertainty.

3.4.12. Now in cases where as a result of bad training we are not even accustomed to look for the real essence of anything but are satisfied to accept what confronts us in the phenomenal presentations, we are not rendered by each other—the examined by the examiners who have the ability to handle the four with dexterity and to subject them to examinations. In those cases, however, where we demand answers and proofs in regard to the fifth entity, anyone who pleases among those who have the skill of confutation gains the victory and makes most of the audience think that the man who was first to speak or write or answer has no acquaintance with the matters of which he attempts to write or speak. Sometimes they are unaware what it is not the mind of the writer or speaker that fails in the test, but rather the character of the four—since that is naturally defective. Natural intelligence and a good memory are equally powerless to aid the man who has not an inborn affinity with the subject. The study of virtue and vice must be accompanied by an inquiry into what is false and true of existence in general and must be carried on by constant practice throughout a long period. Hardly after practicing detailed comparisons of names and definitions and visual and other sense perceptions, after scrutinizing them in benevolent disputation by the use of question and answer without jealousy, at last in a flash⁹⁸ understanding blazes up, and the mind, as it exerts all its powers to the limit of human capacity, is flooded with light. For this reason no serious man will ever think of writing about serious realities for the general public so as to make them a prey to envy and perplexity.⁹⁹

⁹⁸Cf. the well established reference to "intuition", and the more recent "flow" where, however, the integration of the four dimensions of knowledge is not considered.

⁹⁹Epis. VII 342a-344c-

3.4.13. Concluding commentary

3.5. Measurement against appearances and perception (VR)

3.5.1. Some reports of our perceptions do not provoke thought to reconsideration because the judgment of them by sensation seems adequate, while others always invite the intellect to reflection because the sensation yields nothing that can be trusted. The experiences that do not provoke thought are those that do not at the same time issue in a contradictory perception [cf. "breakdown"]. Some things are provocative of thought and some not, and we define as provocative things that impinge upon the senses together with their opposites, while those that do not are said that do not tend to awaken reflection. Visual perception especially involves this. For we see the same thing at once as one and as an indefinite plurality.¹⁰⁰

3.5.2. The same magnitude, I presume, viewed from near and from afar does not appear equal. And the same things appear bent and straight to those who view them in water and out, or concave and convex, owing to similar errors of vision about colors, and there is obviously every confusion of this sort in souls. And so scene painting in its exploitation of this weakness of our nature falls nothing short of witchcraft, and so jugglery and many other such contrivances. And have not measuring and numbering and weighing proved to be most gracious aids to prevent the domination of our soul of the apparently greater and less or more or heavier, and to give the control to that which has reckoned and numbered or even weighed? But this surely would be the function of the part of the soul that reasons and calculates. And often when this has measured and declares that certain things are larger or that some are smaller than the others or equal, there is at the same time an appearance of the contrary. But it is impossible for the same thing at one time to hold contradictory opinions about the same thing. The part of the soul, then that opines in contradiction of measurement could not be the same with that which conforms to it. But, further, that which puts its trust in measurement and reckoning must be the best part of the soul. Then that which opposes it must belong to the inferior elements of the soul. Then, in general the mimetic art produces a product that is far removed from truth in the accomplishment of its task, and associates with the part in us that is remote from intelligence, and is its companion and friend for no sound and true purpose.¹⁰¹

3.6. Strong visions supposed to be good visions?

3.6.1. There are two distinct disturbances of the eyes, arising from two causes, according as the shift is from light to darkness or from darkness to light, and, believing that the same thing happens to the soul too, whenever man saw a soul perturbed and unable to discern something, he would not laugh unthinkingly. Then, education is not in reality what some people proclaim it to be. They aver that they can put true knowledge into a soul that does not possess it, as if they were inserting vision into blind eyes. But the true analogy for this indwelling power in the soul and the instrument whereby each of us apprehends is that of an eye that could not be converted to the light from the darkness except by turning the whole body. Even so this organ of knowledge must be turned around from the world of becoming together with the entire soul, like the scene-shifting periactus in the theater, until the soul is able to endure the contemplation of the essence and the brightest region of being. And this, we say, is the good.. There might be

¹⁰⁰Rep. VII 523b-525a

¹⁰¹Rep. X 602c-

an art, an art of the speediest and most effective shifting or conversion of the soul, not an art of producing vision in it, but on the assumption that it possesses vision, but does not rightly direct it and does not look where it should, an art of bringing this about. Then the other so-called virtues of the soul do seem akin to those of the body. For it is true that where they do not pre-exist, they are afterward created by habit and practice. But the excellence of thought, it seems, is certainly of a more divine quality, a thing that never loses its potency, but, according to the direction of its conversion, becomes useful and beneficent, or, again, useless and harmful. Have you never observed in those who are popularly spoken as bad, but smart men how keen is the vision of the little soul, how quick it is to discern the things that interest it, a proof that it is not a poor vision which it has, but one forcibly enlisted in the service of evil, so that the sharper its sight the more mischief it accomplishes?¹⁰²

3.7. Metaphors vs definitions

3.7.1. There is an art of speaking such that one can make the same thing appear to the audience like and unlike, or one and many, or again at rest and in motion. So contending with words is a practice found not only in lawsuits and public harangues but wherever men speak we find this single art, if indeed is an art, which enables people make out everything to be like everything else, within the limits of possible comparison, and to expose the corresponding attempts of others who disguise what they are doing. We are indeed misled when the difference between two things is narrow rather than wide. Well then, if you shift your ground little by little you are more likely to pass undetected from so-and-do to its opposites than if you do so at one bound. It follows that anyone who intends to mislead another without being himself, must discern precisely the degree of resemblance and dissimilarity between this and that. Then if he does not know the truth about a given thing he is not going to discern the degree of resemblance between that unknown and other things.¹⁰³

3.7.2. There are some words about which we all agree, and others about which we are at variance. When someone utters the words 'iron' or 'silver', we all have the same object before our minds. But what about the words 'just' and 'good'? Don't we diverge, and dispute not only with one another but with our own selves? Now, we are more apt to be misled in the case where we fluctuate. Then the intending student of the art of rhetoric ought, in the first place, to make a systematic division of words, and namely in the use of which the multitude are bound to fluctuate, and those in which they are not. And secondly, when he comes across a particular word he must realize what it is, and be swift to perceive which of the two kinds of words the thing he proposes to discuss really belongs to.¹⁰⁴

3.7.3. The followers of Heraclitus, faithful to their own treatises, are literally in perpetual motion, their capacity for staying still to attend to an argument or question or for a quiet interchange of question and answer amounts to less than nothing, or rather even a minus quantity is too strong an expression for the absence of the least modicum of repose in these gentry. When you put a question, they pluck from their quiver little oracular

¹⁰²Rep. X 518a-519a

¹⁰³Phaedr. 261d-262a

¹⁰⁴Phaedr. 263a-c

aphorisms to let fly at you, and if you try to obtain some account of their meaning, you will be instantly transfixed by another, barbed with some newly forged metaphor.¹⁰⁵

3.7.4. We must admit that refutation is the greatest and chiefest of purifications and he who has not been refuted is in an awful state of impurity. He is uninstructed and deformed in those things in which he who would be truly blessed ought to be fairest and purest. I shrink from calling them Sophists for fear of ascribing to them too high a function. And yet the description has some resemblance to them. But so has the dog to the wolf—the fiercest of animals to the tamest. But a cautious man should above all be on his guard against resemblances; they are a very slippery sort of thing.¹⁰⁶

3.8. Science and scientific method

3.8.1. The way to reflect about the nature of anything is as follows: first to decide whether the object in respect of which we desire to have scientific knowledge, and to be able to impart it to others, is simple or complex; secondly, if it is simple, to inquire what natural capacity it has of acting upon another thing, and through what means; or, if it is complex, to enumerate its parts and observe in respect of each what we observe in the case of the simple object, to wit what its natural capacity, active or passive, consists in.¹⁰⁷

3.8.2. The multitude get their notion of probability as the result of a likeness to truth [METAPHOR] and these likenesses can always be best discovered by one who knows the truth. And unless the aspirant to oratory can on the one hand list the various things into their kinds and embrace each individual being under a single form, he will never attain such success as is within the grasp of mankind. Yet he will assuredly never acquire such competence without considerable diligence, which the wise man should exert not for the sake of speaking to and dealing with his fellow men, but that he may be able to speak what is pleasing to the gods, and in all his dealings to do their pleasure to the best of his ability. [ETHICS]¹⁰⁸

3.8.3. But what of science? Science, which is just that, is of knowledge which is just that, or is of whatsoever we must assume the correlate of science to be. But a particular science of a particular kind is of some particular thing of a particular kind. I mean something like this. As there was a science of making a house it differed from other sciences so as to be named architecture. This was by reason of its being of a certain kind such as no other of all the rest. And it was because it was of something of a certain kind that it itself became a certain kind of science. And similarly of the other arts and sciences. This is what I mean by the statement that of all things that are such as to be of something, those that are just themselves only are of things just themselves only, but things of a certain kind are of things of a kind. And I don't mean that they are of the same kind as the things of which they are, so that we are to suppose that the science of health and disease is a healthy and diseased science and that of evil and good, evil and good. I only mean that as science became the science not of just the thing of which science is but of some particular kind of thing, namely of health and disease, the result was that itself became some kind of science and this caused it to be no longer called

¹⁰⁵Theaet. 179e-180a

¹⁰⁶Soph. 230e-231a

¹⁰⁷Phaedr. 270d

¹⁰⁸Phaedr. 272d-e

simply science but, with the addition of the particular kind, medical science.[INFORMATION SCIENCE - INFORMATICS].¹⁰⁹

3.8.4. What is then, the nature of the faculty of dialectic, and into what divisions does it fall? No one will maintain in dispute against us that there is any other way of inquiry that attempts systematically and in all cases to determine what each thing really is. But all the other arts have for their object the opinions and desires of men or are wholly concerned with generation and composition or with the service and tendance of the things that grow and are put together, while the remnant which we said did in some sort lay hold of reality—geometry and the studies that accompany it—are, as we see it, dreaming about being, but the clear vision of it is impossible for them as long as they leave hte assumptions which they employ undisturbed [cf. ALTERNATE GEOMETRIES & FORMAL SCIENCES] and cannot give any account of them. For where the starting point is something that the reasoner does not know [cf. DESCARTES] and the conclusion and all that intervenes is a tissue of things not really known, what possibility is there that assent in such cases can ever be converted into true knowledge or science? Dialectic, then, is the only process of inquiry that advances in this manner, doing away with hypotheses, up to the first principle itself in order to find confirmation there. And it is literally true that when the eye of the soul is sunk in the barbaric slough of the Orphic myth, dialectic gently draws it forth and leads it up [ENLIGHTENMENT], employing as helpers and co-operators in thsi conversion the studies and sciences which we enumerated, which we called sciences often from habit, though they really need some other designation, connoting more clearness than opinion, and more obscurity than science. 'Understanding', I believe, was the term we employed. But I presume we shall not dispute about the name when things of such moment lie before us for consideration. We call, then the first division of dialectics science, the second understanding, the third belief, and the fourth conjecture or picture thought—and the last two collectively opinion, and the first two intellection, opinion dealing with generation, and intellection with essences, and this relation being expressed in the proportion: as essence is to generation, so is intellection to opinion, and as intellection is to opinion, so is science to belief, and understanding to image thinking or surmise. But the relation between their objective correlates and the divison into two parts of these, the opinable, namely, and the intelligible, let us dismiss, lest it involve us in a too long discussion.¹¹⁰

3.8.5. We conclude that neither perception, nor true belief, nor the addition of an 'account' [DEFINITION] to true belief can be knowledge. [INFORMATION] Then supposing you should ever henceforth try to conceive afresh, if you succeed, your embryo thoughts will be the better as a consequence of today's scrutiny, and if you remain barren [cf. vs. CREATIVITY] you will be gentler and more agreeable to your companions, having the good sense not to fancy you know what you do not know. [POPPER-FALSIFICATION] For that, and no more, is all that my art can effect; nor have I any of that knowledge possessed by all the great and admirable men of our own day or of the past. But this midwife's art is a gift from heaven; my mother had it for women, and I for young men of a generous spirit and for all in whom beauty dwells.¹¹¹

3.8.6. After finding the Sophist, the task we now have to fce is to search out the statesman. He too must be classified as one of those who possess some kind of expert

¹⁰⁹Rep. 438c-

¹¹⁰Rep. VII 532e-534b

¹¹¹Theaet. 210a-c

knowledge. We must then distinguish the forms of knowledge. We must distinguish the way of the statesman from all the rest by setting upon it the special sign of its distinctive form. All roads divergent from it we must mark out also as one common class. Thus we must bring our minds to conceive of all forms of knowledge as falling under one or the other of these two classes—statecraft and knowledge other than statecraft. Then consider the science of number and certain other sciences closely akin to it. Are they not unconcerned with any form of practical activity, yielding us pure knowledge only? But it is quite otherwise with carpentry and manufacture in general. These possess science embodied as it were in a practical activity and inseparable from it. Their products do not exist before the arts come into operation and their operation is an integral part of the emergence of the products from its unworked state [cf. DESIGN]. We must use this distinction to divide the totality of sciences into two classes. Name one 'applied', the other 'pure'. Are we then to regard the statesman, the kind, the slavemaster, and the master of a household as essentially one though we use all these names for them, or shall we say that four distinct sciences exist, each of them corresponding to one of the four titles? Or suppose we find a medical man who is not himself practicing as a public medical officer but who nevertheless is competent to advise [cf. CONSULTANT] a doctor actually serving in that capacity? Must not the expert knowledge the adviser possesses be described by the same title as that of the functionary whom he is advising? Well then, consider a man who, though himself a private citizen is capable of giving expert advice to the ruler of a country. Shall we not say that he possesses the same science as the ruler himself possesses—or, rather ought to have possessed? The science possessed by the true kind is the science of kingship. The possessor of this science, then, whether he is in fact in power or has only the status of a private citizen, will properly be called a 'statesman' since his knowledge of the art qualifies him for the title whatever his circumstances. Then, consider a further point. The slavemaster and the master of a household are identical. Furthermore, there is no much difference between a large household organization and a small-sized city, so far as the exercise of authority over it is concerned. Well then, one science covers all these several spheres and we will not quarrel with a man who prefers any one of the particular names for it; he can call it royal science, or science of household management. Now comes another point. What a king can do to maintain his rule by using his hands or his bodily faculties as a whole is very slight in comparison with what he can do by mental power and force of personality [cf. E.HALL The SILENT DIMENSION]. So a king's art is closer to theoretical knowledge than to manual work or indeed to practical work in general. Let us go on to the next state and see if we can proceed to a division of the kinds of theoretical knowledge. We must look attentively and see if we cannot discover a natural cleavage within such knowledge. There is an art of counting, that belongs to the class of theoretical sciences. Now when the art of counting has ascertained a numerical difference we do not assign it any further task save that of pronouncing on what has been ascertained. Now consider a master builder. No master builder is a manual worker—he directs the work of others. He provides the knowledge but not the manual labor. So he might fairly be said to possess one of the theoretical forms of science. But it is characteristic of him that when he has delivered a verdict on the facts he has not ended his task in the way the calculator has. The master builder must give the appropriate directions to each of the workmen and see that they complete the work assigned. [IMPLEMENTATION] Therefore all this class of sciences are quite as 'theoretical' as calculation and its kindred sciences are, but the two groups differ from one another in that the latter are content to give a verdict, but the former issue a command for performance of further actions [cf. INFORMATION]. Well, then, we may

claim that it is a sound division to split the whole of theoretical science into two parts and to call one critical and the other directive, and it is much to be desired that those sharing a task should be of one mind. Then the king should not be placed in the critical class—as though he were a mere spectator of truth, but rather in the directive class, as implied by his position in control of men. We must now look further at the directive class and see if we find a cleavage in it somewhere. There is a difference between kings and heralds analogous to [METAPHOR]the difference between the art of the producer-salesman and that of the retailer. Retailers take over what someone else has made and then sell a second time what was first sold to them [DATABASE-COMMUNICATION INFORMATION-SIGNAL THEORY]. Similarly, heralds receive commands which have been thought out and issued by someone else; then they issue them at second hand to others. We are not going to confound the science of kingship with the science of the interpreter, the coxswain, the prophet, or the herald, simply because all of them are concerned, as admittedly they are, with issuing orders. Cannot we think out a name as well, seeing that unfortunately there is no normal description of the general class of 'givers of firsthand orders'? We will make the cleavage at this point and name a 'predirective' class into which we will put the race of kings. Well then, the king's group has been distinguished from the others, the decisive factor being that it issues its own commands, while the other group merely passes commands on. Now we must subdivide the kingly group if we find it susceptible of a division. We must beware lest we break off one small fragment of a class and then contrast it with all important sections left behind. We must only divide where there is a real cleavage between specific forms. The section must always possess a specific form. It is splendid if one really can divide off the class sought for immediately from all the rest—that is, if the structure of reality authorizes such immediate division [cf. SUBSYSTEMS]. But it is dangerous to chop reality up into small portions. It is always safer to go down the middle to make our cuts. The real cleavages among the forms are more likely to be found thus, and the whole art of these definitions consists in finding these cleavages. The principle is that a portion and a subdivision of a class are not identical. Where a true subdivision of a wider class is made, this subdivision must necessarily also be a portion of the total class of which it is declared a subdivision. But the converse is not true, since a portion is not necessarily a true subdivision. Let us avoid making divisions in a desperate hurry and with out attention fixed only on the whole class. Only thus shall we reach the statesman in good time. 'More haste' in our work of correct division means 'less speed' for us.¹¹²

3.8.7. It is difficult to demonstrate anything of real importance without the use of examples. Every one of us is like a man who sees things in a dream and thinks that he knows them perfectly and then wakes up, as it were, to find that he knows nothing. Example has been found to require an example. We have gathered enough information to show how the method of example proceeds. [cf. EXAMPLE] It operates then a factor identical with a factor in a less-known object is rightly believed to exist in some other better known object in quite another sphere of life. This common factor in each object, when it has been made the basis of a parallel examination of them both, makes it possible for us to achieve a single true judgment about each of them as forming one of a pair. We would not be surprised to find our own mind reacting in the same way to the letters with which the universe is spelled out. [METAPHOR] Truth sometimes guides the mind to a comprehension of every member of some groups of things and yet the same mind a moment later is hopelessly adrift in its attempt to cope with the members

¹¹²tatesm. 258b-264b

that make up another group. Somehow or other it makes a right judgment of a particular combination of elements but when it sees the same elements transferred to the long and very difficult syllabs of everyday existence, it fails to recognize again the very elements it discerned a moment before.¹¹³

3.8.8. We divide the art of measurement into a section concerned with the relative greatness or smallness of objects and another section concerned with their size in relation to the fixed norm to which they must approximate if they are to exist at all. It is the standard of due measure which marks off good men from bad in human society. We must not assert that the only standard possible is that of relative comparison. Such standard will remain, but we must acknowledge a second standard, which is a standard of comparison with the due measure. If a man refuses to admit the possibility of a 'greater' except in relation to a 'lesser' he will rule out all possibility of relating to a due measure. We are not prepared to for the consequences of such a refusal, the abolition of the arts and all their products, since such arts guard against exceeding the due measure or falling short of it. It is precisely by this effort they make to maintain the due measure that they achieve effectiveness and beauty [cf. DESIGN] in all that they produce. Measurement is involved in all that is brought into being.¹¹⁴

3.8.9. Though a person holding any opinion at all must hold it in fact,[PHENOMENOLOGICAL POSTMODERN FACT-JUNG] yet it might sometimes have reference to what was not a fact, either of the present, the past, or the future. And there alay the source of our false opinion, of our holding opinions falsely.¹¹⁵

3.8.10. We may divide the knowledge involved in our studies into technical knowledge, and that concerned with education and culture. Then taking the technical knowledge employed in handicraft, let us consider whether one division is more closely concerned with knowledge, and the other less so. We should then mark off the superior types of knowledge in the several crafts. If, for instance, from any craft you subtract the element of numbering, measuring, and weighing, the remainder will be almost negligible. For after doing so, what you would have left would be guesswork and the exercise of your senses on a basis of experience and rule of thumb, involving the use of that ability to make lucky shots which is commonly accorded the title of art or craft, when it has consolidated its position by dint of industrious practice. We find plenty of it, to take one instance, in music, medicine, agriculture, navigation, and military science. Building, however, makes a considerable use of measures and instruments, and the remarkable exactness thus attained makes it more scientific than most sorts of knowledge. Let us then divide the arts and crafts so called into two classes, those akin to music in their activities and those akin to carpentry, the two classes being marked by a lesser and a greater degree of exactness, respectively. We find fixity, purity, truth, and what we have called perfect clarity in those things that are always, unchanged, unaltered, and free from all admixture, or in what is most akin to them. Everything else must be called inferior and of secondary importance. The names of reason and intelligence, that command the greatest respect can be properly established in usage as precisely appropriate to thought whose object is true being.¹¹⁶

¹¹³Statesm.277d-278c

¹¹⁴Statesm. 283d-

¹¹⁵Phil. 40c-d

¹¹⁶Phil. 55d-59d

3.8.11. Concluding commentary

3.8.11.1. Cf. the empirical trap, action research, loss of time to prevent thinking
Plato's warnings of running after self-illuded change

3.9. Figures of thought

3.9.1. I compare our nature in respect to education and its lack to such an experience as this. Picture men dwelling in a sort of subterranean cavern with a long entrance open to the light on its entire width. Conceive them as having their legs and necks fettered from childhood, so that they remain in the same spot, able to look forward only into the cavern, and prevented by the fetters to turn their heads. Picture further the light from a fire burning higher up and at a distance behind them, and between the fire and the prisoners and above them a road along which a low wall has been built, as the exhibitors of puppet shows have partitions before the men themselves, above which they show the puppets. See also, then, men carrying past the wall implements of all kinds that rise above the wall, and human images and shapes of animals as well, wrought in stone and wood and every material, some of these bearers presumably speaking and others silent. These men would never have seen anything of themselves or of one another, or of the objects carried past them, except the shadows cast from the fire on the wall of the cave that fronted them. They would suppose that in naming the things that they saw they were naming the passing objects. And if their prison had an echo from the wall opposite them, when one of the passer-by uttered a sound, they would suppose that the passing shadow to be the speaker. In every way such prisoners would deem reality to be nothing else than the shadows of the artificial objects. Consider, then, what would be the manner of the release and healing from these bonds and this folly if in the course of nature one of them was freed from his fetters and compelled to stand up suddenly and turn his head around and walk and to lift up his eyes to the light, and in doing all this felt pain and, because of the dazzle and the glitter of the light, was unable to discern the objects whose shadows he formerly saw. If someone then told him that what he had seen before was all a cheat and illusion, but that now, being nearer to reality and turned toward more real things, he saw more truly, and pointed out to him each of the passing objects and constrained him by questions to say what it is, do you not think that he would be at loss and that he would regard what he formerly saw as more real than the things now pointed out to him? And there would be need of habituation to the light of the sun to enable him to see the things higher up, and in due time to see that it presides over all things in the visible region and is in some sort the cause of all these things that he had seen. And if he should be required to contend with the perpetual prisoners in 'evaluating' the shadows while his vision was still dim and before his eyes were accustomed to the dark—and this time required for habituation would not be very short—would he not provoke laughter, and would it not be said of him that he had returned from his journey with his eyes ruined and that it was not worth while even to attempt the ascent? And if it were possible to kill the man who tried to release them and lead them up, would they not kill him? This image then we must apply as a whole to all that has been said, likening the region revealed through sight to the habitation of the prison, and the light of the fire in it to the power of the sun. My surmise is that the ascent and the contemplation of the things above is the soul's ascension to the intelligible region. Only God knows whether it is true, but, at any rate, my dream as it appears to me is that in the region of the known the last thing to be seen and hardly seen is the idea of good, and that when seen it must needs point us to the conclusion that this is indeed the cause of all things of all that is right and beautiful, giving birth in the

visible world to light, and the author of light and itself in the intelligible world being the authentic source of truth and reason, and that anyone who is to act wisely in private or public must have caught sight of this.¹¹⁷

3.9.2. I am unable to suppose that any other study turns the soul's gaze upward than that which deals with being and the invisible. But if anyone tries to learn about the things of sense, whether gaping up or blinking down, I would never say that he really learns—for nothing of the kind admits of true knowledge—nor would I say that his soul looks up, but down, even though he study floating on his back on sea or land. Astronomy ought to be taught contrary to the present fashion if it is to be learned in a way conducive to our purpose. These sparks that paint the sky as the fairest and most exact of material things, but we must recognize that they fall far short of the truth, the movements, namely, of real speed and real slowness in true number and in all true figures both in relation to one another and as vehicles of the things they carry and contain. These can be apprehended only by reason and thought, but not by sight. Then, we must use the blazonry of the heavens as patterns to aid in the study of those realities, just as one would do who chanced upon diagrams drawn with special care and elaboration by Daedalus or some other craftsman or painter. For anyone acquainted with geometry who saw such designs [cf. DESIGN-REENGINEERING] would admit the beauty of the workmanship, but would think it absurd to examine them seriously in the expectation of finding in them the absolute truth with regard to equals or double or any other ratio. The one who was an astronomer would feel in the same way when he turned his eyes upon the movements of the stars. He will be willing to concede that the artisans of heaven fashioned it in the best possible manner for such a fabric. But when it comes to the proportions of day and night, and of their relation to the month, and that of the month to the year, and of the other stars to these and one another he will regard as a very strange fellow the man who believes that these things go on forever without change or the least deviation—though they possess bodies and are visible objects—and that his unremitting quest is the realities of these things. It is by means of problems, then, as in the study of geometry, that we will pursue astronomy too, and we will let be the things in heaven, if we are to have a part in the true science of astronomy and so convert to right use from uselessness that natural indwelling intelligence of the soul; useful, say I, for the investigation of the beautiful and the good, but otherwise, useless. And if the investigation of all these studies goes far enough to bring out their community and kinship with one another, and to infer their affinities, then to busy ourselves with them contributes to our desired end, and the labor taken is not lost, but otherwise it is vain.¹¹⁸

3.9.3. The very law which dialectic recites, of which, though it belongs to the intelligible, we may see as an imitation in the progress of the faculty of vision. What is the nature of this faculty of dialectic? Into what divisions does it fall? I call the first division science, the second understanding, the third belief, and the fourth conjecture or picture thought—and the last two collectively opinion, and the first two intellection, opinion dealing with generation, and intellection with essences, and this relation being expressed in the proportion: as essence is to generation, so is intellection to opinion, and as intellection is to opinion, so is science to belief, and understanding to image thinking or surmise. But the relation between their objective correlates and the division into two

¹¹⁷Rep. VII 514a-517c

¹¹⁸Rep. VII 529b-531d

parts of these, the opinable, namely, and the intelligible, let us dismiss, lest it involve us in a too long discussion.¹¹⁹

3.9.4. I think that the likeness of a statesman has not been perfectly drawn yet. [METAPHOR] Sculptors sometimes rush at their work in ill-timed enthusiasm and then elaborate details of the work to such an extent that they have to bring in extra material to complete it and this in the end slows down their progress. [DESIGN-IMPLEMENTATION] Something like this happened earlier in our discussion, when we wanted to make it immediately clear where we were mistaken and to give a really impressive demonstration of the point. Supposing that where a king was concerned only large-scale illustrations could be suitable, we reared our massive myth and then had to use more myth material than the occasion warranted; thus our demonstration became too long and we did not give the myth a complete form after all. Our definition, too, seems to me like a portrait which is as yet an outline sketch and does not represent the original clearly because it has still to be painted in colors properly balanced with one another. *Remember, however, that a definition couched in words is a better description of a living creature than a drawing or any model can be—a better description, I mean, for those capable of following such a definition; for those who cannot do so the model or visible illustration is appropriate enough.* [My italics] ¹²⁰

3.9.5. It is memory and perception that give raise to opinion and to the attempt we make to reach a judgment. It seems that at such times our soul is like a book. The conjunction of memory with sensation, together with the feelings consequent upon memory and sensation, may be said as it were to write words in our souls. And when this experience writes what is true, the result is that true opinion and true assertions spring up in us. But there is an artist in our souls at such a time, a painter, who comes after the writer and paints in the soul pictures of these assertions that we make.¹²¹

3.10. Small smart minds

3.10.1. Whatever is your aim let virtue be the condition of the attainment of your aim, and know that without this all possessions and pursuits are dishonorable and evil. For neither does wealth bring honor to the owner if he be a coward. Nor do beauty and strength of body, when dwelling in a base and cowardly man, appear comely, but the reverse of comely, making the possessor more conspicuous, and manifesting forth his cowardice. And all knowledge, when separated from justice and virtue, is seen to be cunning and not wisdom.¹²²

3.10.2. A good judge must not be a youth but an old man, a late learner of the nature of injustice, one who has not become aware of it as a property in his own soul, but one who has through the long years trained himself to understand it as an alien thing in alien souls, and to discern how great an evil it is by the instrument of mere knowledge, and not by experience of his own. That is the noblest kind of judge, and a good one. For he who has a good soul is good. But that cunning fellow quick to suspect evil, and who has himself done many unjust acts and who thinks himself a smart trickster, when he associates with this like does appear to be clever, being on his guard and fixing his eyes on the patterns within himself. But when the time comes for him to mingle with the

¹¹⁹Rep. VII 532a-534b

¹²⁰Statesm. 277a-c

¹²¹Phil. 38b

¹²²Menex. 246d-247a

good and his elders, then on the contrary he appears stupid. He is unseasonably distrustful and he cannot recognize a sound character because he has no such pattern in himself. But since he more often meets with the bad than the good, he seems to himself and to others to be rather wise than foolish. Such a one, then, must not be our ideal of the good and wise judge, but the former. For while badness could never come to know both virtue and itself, native virtue through education will at last acquire the science of both itself and badness.¹²³

3.10.3. Some virtues of the soul do seem akin to those of the body. For it is true that where they do not pre-exist, they are afterward created by habit and practice. But the excellence of thought, it seems, is certainly of a more divine quality, a thing that never loses its potency, but, according to the direction of its conversion, becomes useful and beneficent, or, again, useless and harmful. Have you never observed in those who are popularly spoken as bad, but smart men how keen is the vision of the little soul, how quick it is to discern the things that interest it, a proof that it is not a poor vision which it has, but one forcibly enlisted in the service of evil, so that the sharper its sight the more mischief it accomplishes?¹²⁴

3.11. Against philosophy

3.11.1. [Socrates utters in "Gorgias":] I think that I am one of very few Athenian, not to say the only one, engaged in the true political art, and that of the men of today I alone practice statesmanship. Since therefore when I speak on any occasion it is not with a view to winning a favor, but I aim at what is best, not what is most pleasant, and since I am unwilling to engage in dainty devices, I shall have nothing to say for myself in court. My trial will be like that of a doctor prosecuted by a cook before a jury of children. Just consider what kind of defense such a man could offer in such a predicament, if the plaintiff should accuse him in these terms: Children of the jury, this fellow has done all of you abundant harm, and the youngest among you he is ruining by surgery and cautery, and he bewilders you by starving and choking you, giving you bitter draughts and compelling you to hunger and thirst, whereas I used to feast you with plenty of sweetmeats of every kind. What do you think a doctor could find to say in such a desperate situation? If he spoke the truth and said, All this I did, children, in the interests of health, what a shout do you think such a jury would utter? Would it not be a loud one?¹²⁵

3.11.2. So cruel is the condition of the better sort in relation to the state that there is no single thing like it in nature. But to find a likeness for it, and a defense for them, picture a shipmaster in height and strength surpassing all others on the ship, but who is slightly deaf and of similarly impaired vision, and whose knowledge of navigation is on a par with his sight and hearing. Conceive the sailors to be wrangling with one another for control of the helm, each claiming that it is his right to steer though he has never learned the art. And what is more, they affirm that it cannot be taught at all, but they are ready to make mincemeat of anyone who says that it can be taught, and meanwhile they are

¹²³Rep. III 409b-d

¹²⁴Rep. VII 518d-519a

¹²⁵Gorg. 521d-522a. Compare the text above with the common statement today that a test of good and "aesthetic" design knowledge is that it must be fun, possibly with the remarkable argument of Greek philosophy's convergence of the true, the good, and the beautiful. Cf. Rep. VI 494d "And if to a man in this state of mind someone gently comes and tells him what is the truth, that he has no sense and sorely needs it, and that the only way to get it is to work like a slave and win it, do you think it will be easy for him to lend an ear to the quiet voice in the midst of and in spite of these evil surroundings?"

always clustered about the shipmaster importuning him and sticking at nothing to induce him to turn over the helm to them. And they take command of the ship, consume its stores and, drinking and feasting, they praise and celebrate as a navigator, a pilot, a master of shipcraft, the man who is most cunning to lend a hand in persuading or constraining the shipmaster to let them rule, while the man who lacks this craft they censure as useless. They have no suspicion that the true pilot must give his attention to the time of the year, the seasons, the sky, the winds, the stars, and all that pertains to his art if he is to be a true ruler of the ship, and that he does not believe that there is any art or science of seizing the helm with or without the consent of others, or any possibility of mastering this alleged art at the same time with the science of navigation. With such goings on aboard the ship do you not think that the real pilot would in very deed be called a stargazer, an idle babbler, a useless fellow, by the sailors in ships managed after this fashion? To begin, then, teach this parable to the man who is surprised that philosophers are not honored in our cities, and tell him that he is right in affirming that the finest spirits among the philosophers are of no service to the multitude. But bid the blame for this uselessness those who do not know how to make use of them. For it is not the natural course of things that the pilot should beg the sailors to be ruled by him or that the wise men should go to the doors of the rich. But the true nature of things is that the sick man be rich or poor he must needs to be governed to the door of the physician, and everyone who needs to be governed to the door of the man who knows how to govern. But you will make no mistake in likening our present political rulers to the sort of sailors we were just describing, and those whom these call useless and stargazing ideologists to the true pilots.¹²⁶

3.11.3. Can the multitude possibly tolerate or believe in the reality of the beautiful in itself as opposed to the multiplicity of beautiful things, or can they believe in anything conceived in its essence as opposed to the many particulars? It is inevitable that those who philosophize should be censured by them, and so likewise by those laymen who, associating with the mob, desire to curry favor with it. From this point of view, do you see any salvation that will suffer the born philosopher to abide in the pursuit and persevere to the end? Even as a boy among boys such a one will take the lead in all things, especially if the nature of his body matches the soul. His kinsmen and fellow citizens, then, will desire, I presume, to make use of him when he is older for their own affairs. They will fawn upon him with petitions and honors, anticipating and flattering the power that will be his. How, then, do you think such a youth will behave in such conditions? Will his soul not be filled with unbound ambitious hopes, and will he not think himself of managing the affairs of both Greeks and barbarians, and thereupon exalt himself, haughty of mien, and stuffed with empty pride and void of sense? And if to a man in this state of mind someone gently comes and tells him what is the truth, that he has no sense and sorely needs it, and that the only way to get it is to work like a slave to win it, do you think it will be easy for him to lend an ear to the quiet voice in the midst of and in spite of these evil surroundings? Such, my good friend, is the destruction and corruption of the most excellent nature, which is rare enough in any case. And it is from men of this kind that those spring who do the greatest harm to communities and individuals, and the greatest good when the stream is channeled into that channel, while a small nature never does anything great to a man or a city. Those, then, to whom philosophy properly belongs, thus falling away and leaving her [cf. the university] forlorn and unwed, themselves live and unreal and alien life, while other

¹²⁶Rep VI 488a-489c

unworthy wooers rush in and defile her as an orphan bereft of her kin, and attach to her such reproaches as her revilers taunt her with, declaring that some of her consorts are of no account and the many accountable for many evils. And, plausibly, other manikins, observing that the place is unoccupied and full of fine terms and pretensions, just as men escape from prison to take sanctuary in the temples, so these gentlemen joyously bound away from the mechanical arts to philosophy [or the other way round, cf. IT], those that are most cunning in their little craft. For in comparison with the other arts the prestige of philosophy even in her present low estate retains a superior dignity, and this is the ambition and aspiration of that multitude of pretenders unfit by nature. Is not the picture they present, precisely that of a little bald-headed tinker who has made money, and just freed from bonds and had a bath and is wearing a new garment and has got himself up like a bridegroom and is about to marry his master's daughter who has fallen into poverty and abandonment?¹²⁷ The disesteem that has fallen upon philosophy is caused by the unfitness of her associates and wooers.¹²⁸

3.11.4. A maidservant exercised her wit at the expense of Thales, when he was looking up to study the stars and tumbled down a well. She scoffed at him for being so eager to know what was happening in the sky that he could not see what lay at his feet. Anyone who gives his life to philosophy is open to such mockery. And so, on a public occasion or in private company, in a law court or anywhere else, when he is forced to talk about what lies at his feet or is before his eyes, the whole rabble will join the maidservants in laughing at him, as from inexperience he walks and stumbles into every pitfall. His terrible clumsiness makes him seem so stupid. He cannot engage in an exchange of abuse, for, never having made a study of anyone's peculiar weaknesses, he has no personal scandals to bring up; so in his helplessness he looks a fool. When people vaunt their own or other men's merits, his unaffected laughter makes him conspicuous and they think he is frivolous. In all such matters the world has the laugh of the philosopher, partly because he seems arrogant, partly because of his helpless ignorance in matters of daily life. On the other hand, when the philosopher drags the other upward to a height at which he may consent to drop the question 'What justice have I done to you or you to me', and to think about justice and injustice in themselves, what each is, and how they differ from one another and from anything else, or to stop quoting poetry about the happiness of kings or of men with gold in store and think about the meaning of kingship and the whole question of human happiness and misery, what their nature is, and how humanity can gain the one and escape the other—in all this field, when the small, shrewd, legal mind has to render an account, then the situation is reversed. Now it is he who is dizzy from hanging at such an unaccustomed height and looking down from mid-air. Lost and dismayed and stammering, he will be laughed at, not by maidservants or the uneducated—they will not see what is happening—but by everyone whose breeding has been the antithesis of a slave's.¹²⁹

3.12. System

3.12.1. The way to reflect about the nature of anything is as follows: first to decide whether the object in respect of which we desire to have scientific knowledge, and to be able to impart it to others, is simple or complex; secondly, if it is simple, to inquire what natural capacity it has of acting upon another thing, and through what means; or, if it is

¹²⁷Rep. 493e-495e

¹²⁸Rep 535c-

¹²⁹Theaet. 174a-175d

complex, to enumerate its parts and observe in respect of each what we observe in the case of the simple object, to wit what its natural capacity, active or passive, consists in.¹³⁰

3.12.2. Let us create a city from the beginning, in our theory. Its real creator, as it appears, will be our needs: food, housing, raiment, etc. One man is naturally fitted for one task, and another for another. If one lets slip the right season, the favorable moment in any task, the work is spoiled. The result, then is that more things are produced, and better and more easily when one man performs one task according to his nature at the right moment, and at leisure from other occupations. [SYSTEM]¹³¹

3.12.3. A thing, then, that in its contribution to the excellence of a state vies with and rivals its wisdom, its soberness, its bravery, is the principle of everyone in it doing his own task. The having and doing of one's own and what belongs to oneself would admittedly be justice.¹³²

3.12.4. The object on which we fixed our eyes in the establishment of our state was not the exceptional happiness of any one class but the greatest possible happiness of the city as a whole. For we thought that in a state so constituted we should be most likely to discover justice as we should injustice in the worst governed state. Our first task, then, we take it, is to mold the model of a happy state—we are not isolating a small class in it and postulating their happiness, but that of a city as a whole. But the opposite type of state we will consider presently. It is as if we were [METAPHOR] coloring a statue and someone approached and censured us, saying that we did not apply the most beautiful pigments to the most beautiful parts of the image, since the eyes, which are the most beautiful part, have not been painted with purple but with black. We should think it a reasonable justification to reply, Don't expect us quaint friend, to paint the eyes so fine that they will not be like eyes at all, [LIKENESS-MIRROR-CORRESPONDENCE] nor other parts, but observe whether by assigning what is proper to each we render the whole beautiful. And so in the present case you must not require us to attach to the guardians of the laws of the state a happiness that will make them anything but guardians. For in like manner we could clothe the farmers in robes of state and deck them with gold and bid them cultivate the soil at their pleasure, and we could make the potters recline on couches from left to right before the fire drinking toasts and feasting with their wheel alongside to potter with when they are so disposed, and we can make all the others happy in the same fashion, so that thus the entire city may be happy. But urge us not to this, since, if we yield, the farmer will not be a farmer nor the potter a potter, nor will any other of the types that constitute a state keep its form. However, for the others it matters less. For cobblers who deteriorate and are spoiled and pretend to be the workmen that they are not are no great danger to a state. But guardians of laws and of the city who are not what they pretend to be, but only seem, destroy utterly, I would have you note, the entire state, and on the other hand they alone are decisive for its good government and happiness. Consider, then, whether our aim in establishing the guardians is the greatest possible happiness among them or whether that is something we must look to see develop in the city as a whole, but these herpers and guardians are to be constrained and persuaded to do what will make them the best craftsmen in their

¹³⁰Phaedr. 270d

¹³¹Rep. 369c

¹³²Rep. IV 433d-

own work, and similarly all the rest. And so, as the entire city develops and is ordered well, each class is to be left to the share of happiness that its nature comports.¹³³

3.12.5. Is there any science in the city just founded by us residing in any of its citizens which does not take counsel about some particular thing in the city but about the city as a whole [WHOLE] and the betterment of its relations with itself and other states? Yes, it is the science of guardianship or government and it is to be found in those rulers to whom we give the name of guardians in the full sense of the word. These rulers would be the smallest of all the groups of those who possess special knowledge and receive distinctive appellations. Then it is by virtue of its smallest class and minutest part of itself, and the wisdom that resides therein, in the part which takes the lead and rules, that a city established on principles of nature would be wise as a whole. And as it appears these are by nature the fewest, the class to which it pertains to partake of the knowledge which alone of all forms of knowledge deserves the name of wisdom.¹³⁴

3.12.6. If unity is adequately seen by itself or apprehended by some other sensation, it would not tend to draw the mind to the apprehension of essence. But if some contradiction is always seen coincidentally with it, so that it no more appears to be one than the opposite, there would forthwith be need of something to judge between them, and it would compel the soul to be at a loss and to inquire, by arousing thought in itself, and to ask, whatever then is the one as such, and thus the study of unity will be one of the studies that guide and convert the soul to the contemplation of true being.[BREAKDOWN]¹³⁵

3.12.7. The youngsters who are given preference to become rulers will receive greater honors than the others, and they will be required to gather the studies which they disconnectedly pursued as children in their former education into a comprehensive survey of their affinities with one another and with the nature of things. It is the chief test of the dialectic nature and its opposites. For he who can view things in their connection is a dialectician; he who cannot is not. When they have passed the thirtieth year the task will be to promote them, by a second selection to still greater honors, and to prove them by the power of dialectic to see which of them is able to disregard the eyes and the other senses and go on to being itself in company with truth.¹³⁶

3.12.8. We are willing to admit that there exists an art of higher order also concerned with the process of acquiring special skills. This second art is the one whose province is to decide whether or not we ought to learn any particular art, and is to have control of the art which actually teaches us the skill. The province of the really kingly art is not to act for itself but rather to control the work of the arts which instruct us in the methods of action. It is concerned with the laws and with all that belongs to the life of the community [cf. cyber-coomunities]. It weaves all into its unified fabric with perfect skill. It is a universal art and so we call it by a name of universal scope, "statesmanship". When all classes of arts active in the government of the state have been distinguished, we shall go on to scrutinize statesmanship and base our scrutiny of it on the art of weaving which provides our example for it. The usual kind of statement is that all several parts of goodness are in mutual accord, but we must consider instances drawn from all levels of existence of things which we regard as excellent and yet

¹³³Rep. IV 420b-421c

¹³⁴Rep. IV 428c-429a

¹³⁵Rep. VII 524d-525a

¹³⁶Rep. 537b--d. Cf. also Rep. 531c-d

classify as mutually opposed, for instance, swiftness-speed and gentleness-quietness. Men react to situations in one way or the other according to the affinities of their own dispositions. They favor some forms of action as being akin to their own character, and they recoil from acts arising from opposite tendencies as being foreign to themselves. Thus men come into violent conflict with one another on many issues. Considered as a conflict of temperament, this is a mere trifle, but when the conflict arises over matters of high public importance it becomes the most inimical of all the plagues which can threaten the life of a community. We find that important parts of goodness are at variance with one another and that they set at variance the men in whom they predominate, even if no art which works by combining materials deliberately chooses to make any of its products, even the least important of them, out of a combination of good material with bad. Every art rejects bad material as far as possible and uses what is good and serviceable. The materials may be alike or dissimilar, but surely it is desirable that they should be sound, so that the art may combine them to form one product and fashion [cf. design] them to a structure proper to their specific function. The statesman will take all those who, under the training process, do achieve sufficient nobility of character to stand up the royal weaving process and yet submit to it while it combines them all scientifically into a unity. He sets about his task of combining and weaving together groups exhibiting mutually opposed characters. He first unites that element in their souls which is supernatural by a divine bond, since this element in them is akin to the divine. When arises in the soul of men a right opinion concerning what is good, just, and profitable, and what is the opposite of these—an opinion based on absolute truth and settled as an unshakeable conviction—I declare that such a conviction is a manifestation of the divine. After this supernatural link will come the natural bond, human ties to supplement the divine ones. There is no difficulty in forging the human bonds if the divine bond has been forged first. That bond is a conviction about values and standards shared by all types of good characters.¹³⁷

3.12.9. Each of the present days' framers of codes of legislation frames any additional paragraph he finds necessary—one a section on estates and their heiresses, another one on assault and battery, others, others of the same kind, in indefinite number. But we contend that the right procedure for the framer of a legislation [ORGANIZATION] is to make a beginning with supreme virtue and virtue as a whole, not one fragment of it.¹³⁸

3.12.10. To the man who pursues his studies in the proper way, all geometric constructions, all systems of numbers, all duly constituted melodic progressions, the single ordered scheme of all celestial revolutions, should disclose themselves, and disclose themselves they will, if a man pursues his studies aright with his mind's eye fixed on their single end. As such a man reflects, he will receive the revelation of a single bond of natural interconnection between all these problems. And piety itself forbids us to disregard the gods, now that the glad news of them all has been duly revealed. Him who has mastered all these lessons I account in truth as wisest; when death has put the end to his allotted term, if he may be said to endure beyond death, he will no longer be subject, as he is now, to a multitude of perceptions; he will have but one allotted portion, even as he has reduced the manifold within himself to unity, and in it will be happy, wise, blessed, all in one.¹³⁹

¹³⁷Statesm. 304b-310e

¹³⁸Laws 630c-631a

¹³⁹Epin. 991e-992b

3.12.11. Concluding commentary

3.12.11.1. Cf. Design and Corinth letter.

4. Implementation

4.1. Leisure

4.2. Success: profit, power and ethics

4.2.1. A flight or pursuit has so often gone unrecorded, and will in the future; this shows that we cannot regard victory or defeat in the field as more than a very dubious test of the laudability of a practice. No, we must leave victories and defeats out of court for the present, and discuss the various social practices on their own merits, in the hope of convincing ourselves that some are laudable and others the reverse. It is highly improper to undertake to condemn or approve such a practice out of hand, on the bare mention of its name. This is as though one who had heard wheat, for instance, as a wholesome article of diet should denounce it out of hand, without any inquiry into its effects, of the matter of its administration—I mean, how it is administered, and to whom, or with what accompaniments, in what form it is to be served, and to persons in what state of health.¹⁴⁰

4.2.2. If you follow up the story we have just set before ourselves for consideration, you will directly discover that the cause of the ruin of the three kings and their whole design was no cowardice and no military ignorance on the part of commanders or commanded; what ruined them was their abundant vices of other kinds, and, above all, their folly in the supreme concerns of man.¹⁴¹

4.2.3. But the end of an enterprise is never reached by the mere performance of the act, acquisition of the possession, or establishment of the foundation; we must never take ourselves to have done all there was to do until we have provided a complete and permanent guarantee of the preservation of our work. Until then we should regard our whole achievement as unfinished.¹⁴²

4.2.4. You must bear in mind on both sides of the controversy and keep recalling how many times, first in one camp then in the other, you have had great expectations and have supposed again and again that now only some little thing stood between you and complete success. Above all be mindful that in each case that little thing turns out to be a source of woes unnumbered; no goal is ever reached, but to the supposed end of the old is linked again and again the budding of a fresh beginning—a vicious circle that threatens to involve both parties, that of the tyrant and that of the people, in total destruction.¹⁴³

4.3. Action

4.3.1. Among the various arts there are some that consist for the most part of action and have little need of words, and some in fact have no need, but their function can be achieved in silence, as for instance painting and sculpture and many others. I fancy it is

¹⁴⁰Laws I 638a-c

¹⁴¹Laws III 688c-d

¹⁴²Laws 960b

¹⁴³Epis. VIII 353c-d. Cf. Ivanov {, 1991 #1443, chap. on Cooperative work: Examples of problems, pp. 55-76}

with such arts that rhetorics is said to have no concern. But there are other arts that secure their result entirely through words and have practically no need, or very little need of action—arithmetic for instance, and calculation and geometry and the game of draughts and many other arts, some of which involve almost as many words as actions, and many of them far more, their whole achievement and effect in general being due to words. It is to this kind of art, I believe that rhetoric is assigned. Rhetoric then is one of those arts that for the most part employ words, and there are other such arts also. Should one call arithmetic rhetoric?¹⁴⁴

4.3.2. A pattern, was what we wanted when we were inquiring into the nature of ideal justice and asking what would be the character of the perfectly just man, supposing him to exist, and, likewise, in regard to injustice and completely unjust man. We wished to fix our eyes upon them as types [TYPES] and models, so that whatever we discerned in them of happiness or the reverse would necessarily apply to ourselves in the sense that whosoever is likest them will have the allotment most like theirs. Our purpose was not to demonstrate the possibility of the realization of these ideals. Do you think, that he would be any the less a good painter, who, after portraying a pattern of the ideally beautiful man and omitting no touch required for the perfection of the picture, should not be able to prove that it is actually possible for such a man to exist? [ART-AESTHETICS-VIRTUAL REALITY VR-IDEAL PLANNING] Then we trying to create in words the pattern of a good state and our words are not any the less well spoken if we find ourselves unable to prove that it is possible for a state to be governed in accordance with out words. But if we must do our best to show how most probably and in what respect these things would be most nearly realized it must be granted that action partakes of exact truth less than speech, even if some deny it. Then don't insist that I must exhibit as realized in action precisely what we expounded in words. But if we can discover how a state might be constituted most nearly answering to out description, you must say that we have discovered the required possibility of realization. We must try to discover and point out what it is that is now badly managed in our cities, and that prevents them from being so governed, and what is the smallest change that would bring a state to this manner of government, preferably a change in one thing, if no, then in two, and failing that, the fewest possible in number and the slightest in potency. There is one change, then, which I think we can show would bring about the desired transformation. It is not a slight or an easy one but it is possible. I am on the very verge of what we likened to the greatest wave of paradox. But say it I will, even if, to keep the figure, it is likely to wash us away on billows of laughter and scorn. Unless either philosophers become kings in our states or those whom we now call our kings and rulers take to the pursuit of philosophy seriously and adequately, and there is a conjunction of these two things, political power and philosophical intelligence [PHILOSOPHICAL PRAGMATISM], while the motly horde of the natures who at present pursue either apart from the other are compulsorily excluded, there can be no cessation of troubles. But this is the thing that has made me so long shrink from speaking out, because I saw that it would be a very paradoxical saying. For it is not easy to see that there i no other way of happiness either for private or public life.¹⁴⁵

4.3.3. There might be an art, an art of the speediest and most effective shifting or conversion of the soul, not the art of producing vision in it, but on the assumption that it possesses vision but does not rightly direct it and does not look where it should, an art

¹⁴⁴Gorg. 450c-451b

¹⁴⁵Rep. V 472c-473e

of bringing this about. The other so-called virtues of the soul do seem akin to those of the body. For it is true that were they do not pre-exist, they are afterward created by habit and practice. But the excellence of thought is certainly of a more divine quality, a thing that never loses its potency, but, according to the direction of its conversion becomes useful and benificent, or useless and hamful. Have you never observed in those who are popularly spoken of as bad, but smart men how keen is the vision of the little soul, how quick it is to discern the things that interest it, a proof that it is not a poor vision which it has, but one forcibly enlisted in the service of evil, so that the sharper its sight the more mischief it accomplishes?¹⁴⁶

4.3.4. The greater and more advanced part of geometry and calculation tends to facilitate the apprehension of the idea of good. That tendency is to be found in all studies that force the soul to turn its vision round to the region where dwells the most blessed part of reality. Then if it compels the soul to contemplate essence, it is suitable: if genesis, it is not. The science of geometry is in direct contradiction with the language employed by its adepts. Their language is most ludicrous, though they cannot help it, for they speak as if they were doing something and as if all their words were directed toward action. For all their talk is of squaring and applying and adding and the like, whereas in fact the real object of the entire study is pure knowledge, that which always is, and not something which at some time comes into being and passes away, for geometry is the knowledge of the eternally existent. Then, it would tend to draw the soul to truth, and would be productive of a philosophical attitude of mind, directing upward the faculties that now wrongly are turned earthward. Even the byproducts of this study are not slight, as its uses in war. Then we can lay this down as a branch of study for our lads, and astronomy. The quickness of perception about the seasons and the course of the months and the years is serviceable not only to agriculture and navigation, but still more to the military art, but the mention of this discloses an apparent fear lest the multitude may suppose us to be recommending useless studies. It is indeed no trifling task, but very difficult to realize that there is in every soul an organ or instrument of knowledge that is purified and kindled afresh by such studies when it has been destroyed and blinded by our ordinary pursuits, a faculty whose preservation outweighs ten thousand eyes.¹⁴⁷

¹⁴⁶Rep. VII 518d-519a

¹⁴⁷Rep. VII 526d-527e . George Nelson, {Nelson, 1957 #2462} as referenced by R. Buchanan {, 1995 #2394} argues that the design process is integrated in the principle of appropriateness, and he grounds this principle in the model provided by God and natural order [law?].... The spiritual feature of Nelson's work is sometimes neglected by design critics and historians who interpret "function" in a narrow, mechanistic way, rather than as a connection between human beings, products, and the broader system of nature and the universe [cf. Singer functional, morphological, teleological classes]. ...For example, he offers harsh criticism of excessively narrow concepts of "functional" design; so called "good" design, as judged by aesthetic standards such as those once promoted by Edgar Kaufman, Jr. at the New York Museum of Modern Art; the pretensions of design for design's own sake; and equally the pretentious idea of the designer as creator and purveyor of social meanings. Yet, he argues for a vision of design as communication and of the designer as artist. The only explanation is that he regards the designer as an artist in the Platonic sense, as enlightened practitioner seeking unity and harmony among disparate elements of every product. Indeed he argues that products which internally achieve harmony and balance serve the ethical life of human beings...The elements of Hellenism and Hebraicism [Greek Hebrew] which are balanced in Nelson's work -- a concern for right thinking and for right acting, consciousness and conscience -- are echoed whenever the origins of design are traced to the creation of the universe. The principle lies in spiritual life and the natural order [law]. Unfortunately, scholars have exercised little ingenuity in exploring the rich, complex theory of design provided by Plato in the TIMAEUS and the

4.3.5. The man who professes to be able, by a single form of skill, to produce all things, that when he creates with his pencil representations bearing the same name as real things [VR-METAPHORS], he will be able to deceive the innocent minds of children, if he shows them his drawings at a distance, into thinking that is is capable of creating, in full reality, anything he chooses to make. Then we must expect to find a corresponding form of skill in the region of discourse, making it possible to impose upon the young who are still removed from the reality of things, by means of words that cheat the ear, exhibiting images of all things in a shadow play of discourse, so as to make them believe that they are hearing the truth. Is it not inevitable that, after a long enough time, as these young hearers advance in age and, coming into closer touch with realities, are forced by experience to apprehend things clearly as they are, most of them should abandon those former beliefs, so that what seemed important will now appear trifling and what seemed easy, difficult, and all the illusions created in discourse will be completely overturned by the realities which encounter them in the actual conduct of life? That is why all of us here must try, as we are in fact trying, to bring you as close as possible to the realities and spare you the experience.¹⁴⁸

4.3.6. I take it to always the most equitable course in dealing with a plan for the future that he who exhibits the model on which and undertaking should be fashioned should abate nothing of perfect excellence and absolute truth, while one who finds it impossible to compass some point of this perfection should decline to put it into practice, and contrive the realization of the remaining possibility which approximates most nearly to what ought to be done, and is most akin to it in character. But he should allow the legislator to perfect the delineation of his heart's desire; only when that has been done should he begin to discuss with him which of his legislative proposals are expedient and which involve difficulties. For self-consistency, you know, must be aimed at in everything, even by the artificer [DESIGNER] of the paltriest object, if he is to be of any account.¹⁴⁹

4.4. Management and change

4.4.1. Too many of our modern philosophers in their search after the nature of things, are always getting dizzy from constantly going round and round, and then they imagine that the world is going round and round and moving in all directions. And this appearance, which arises out of their own internal condition, they suppose to be a reality of nature; they think that there is nothing stable or permanent, but only flux and motion, and that the world is always full of every sort of motion and change.¹⁵⁰

4.4.2. The nobler and clearer way to learn things is not to learn of the images, but to learn of the truth. How real existence is to be studied or discovered is, we suspect, beyond us, but we admit so much, that the knowledge of things is not to be derived from names. They must be investigated in themselves. Let us not be imposed upon by the appearance of a multitude of names given under the mistaken opinion of the idea that all things are in motion and flux. Having fallen into a kind of whirlpool themselves, the givers of names are carried round and want to drag us in after them. Then let us seek the true beauty, not asking whether a face is fair, or anything of that sort, for all such

REPUBLIC, or in rethinking the Christian tradition represented, for example, by St. Augustine (The Republic II 369c ff.; On Christian Doctrine, New York: Bobbs-Merrill, 1958, 9-10).

¹⁴⁸Soph. 234b-e

¹⁴⁹Laws V 746b-

¹⁵⁰Crat. 411b-c

things appear to be in flux, but let us ask whether the true beauty is not always beautiful.¹⁵¹

4.4.3. Although we speak of an individual as being the same so long as he continues to exist in the same form, and therefore we assume that a man is the same person in his dotage as in his infancy, yet, for all we call him the same, every bit of him is different, and every day he is becoming a new man, while the old man is ceasing to exist, as you can see from his hair, his flesh, his bones, his blood, and all the rest of his body. And not only his body, for the same thing happens to his soul. And neither his manners, nor his disposition, nor his thoughts, nor his desires, nor his pleasures, nor his sufferings, nor his fears are the same throughout his life, for some of them grow, while others disappear. And the application of this principle to human knowledge is even more remarkable, for not only do some things we know increase, while some of them are lost, so that even in our knowledge we are not always the same, but the principle applies as well to every single branch of knowledge. When we say we are studying, we really mean that our knowledge is ebbing away. We forget, because our knowledge disappears, and we have to study so as to replace what we are losing, so that the state of our knowledge may seem, at any rate, to be the same as it was before.¹⁵²

4.4.4. We proposed as sufficient mark of real things the presence in a thing of the power of being acted upon or of acting in relation to however insignificant a thing. To that some reply that a power of acting and being acted upon belongs to becoming, but neither of these powers is compatible with real being. But they acknowledge that the soul knows and the real being is known. They would say that if knowing is to be acting on something, it follows that what is known must be acted upon by it, and so, reality when it is being known by the act of knowledge must, in so far as it is known, be changed owing to being so acted upon—ant that, we say, cannot happen to the changeless. But we cannot be so easily convinced that change, life, soul, understanding have no place in that which is perfectly real—that it has neither life nor thought, but stands immutable in solemn aloofness, devoid of intelligence. But if it has intelligence it has life, and then it has soul. But then, if it has intelligence, life, and soul, then we cannot say that a living thing remains at rest in complete changelessness, and we must admit that what changes and change itself are real things. From this, however, follows, first, that if all things are unchangeable, not intelligence can really exist anywhere in anything with regard to any object. And, on the other hand, if we allow that all things are moving and changing, on that view equally we shall be excluding intelligence from the class of real things. Then, all the force of reasoning must be enlisted to oppose anyone who tries to maintain any assertion about anything at the same time that he suppresses knowledge or understanding or intelligence.¹⁵³

4.4.5. In all cases of multifarious minor details, it is inevitable that the legislator should make omissions for which those who have regular yearly experience of them should learn by practice to provide by regulations and annual amendments until a sufficient rule for such observances and customs is felt to have been reached. So a moderate but definite time to allow for the experiment to cover each and all of the details would be a ten-years' cycle, within which the various magistracies—acting in concert with the original legislator, if he is still alive, or alone if he is deceased—may report omissions in their several departments to the curators of laws, and attempt amendments until the

¹⁵¹Crat. 439a-d

¹⁵²Symp. 207-d

¹⁵³Soph.248c-249c

various regulations are felt to have been brought to perfection. They should then declare them incapable of modification and thereafter enforce them with the rest of the laws originally established by the legislator's imposition. On these statutes they must in no case make any willful innovation, but if they should ever judge themselves under the stress of absolute necessity, they are to consult the advice of all magistrates, the whole popular assembly, and all the oracles, and make such modifications as are unanimously approved by all these authorities, but no other changes whatever.¹⁵⁴

4.4.6. As I considered these matters, as well the sort of men who were active in politics, and the laws and the customs, the more I examined them and the more I advanced in years, the harder it appeared to me to administer the government correctly. For one thing, nothing could be done without friends and loyal companions, and such men were not easy to find ready at hand, since our city was no longer administered according to the standards and practices of our fathers. Neither could such men be created afresh. Furthermore the written law and the customs were being corrupted at an astounding rate. The result was that I, who had at first been full of eagerness for a public career, as I gazed upon the whirlpool of public life and saw an incessant movement of shifting currents, at last felt dizzy, and, while I did not cease to consider means of improving this particular situation and indeed reforming the whole constitution, yet, in regard to action, I kept waiting for favorable moments, and finally saw clearly in regard to all states now existing that without exception their system of government is bad. Their constitution are almost beyond redemption except through some miraculous plan accompanied by good luck. Hence I was forced to say in praise of the correct philosophy that it affords a vantage point from which we can discern in all cases what is just for communities and for individuals, and that accordingly the human race will not see better days until either the stock of those who rightly and genuinely follow philosophy acquire political authority, or else the class who have political control be led by some dispensation of providence to become real philosophers.¹⁵⁵

5. Education

5.1. Socratic method, seminars, and mentorship

5.1.1. Anyone who is close to Socrates and enters into conversation with him is liable to be drawn into an argument, and whatever subject he may start, he will be continually carried round and round by him, until at last he finds that he has to give an account of his present and past life, and when he is once entangled, Socrates will not let him go until he has completely sifted him. I think that there is no harm in being reminded of any wrong think which we are, or have been, doing; he who does not fly from reproof will be sure to take more heed of his afterlife.¹⁵⁶

5.1.2. I have a way, when anybody else says anything, of giving close attention to him, especially if the speaker appears to me to be a wise man. Having a desire to understand, I question him, and I examine and analyze and put together what he says, in order that I may understand, but if the speaker appears to me to be a poor hand, I do not interrogate

¹⁵⁴Laws VI 772a-

¹⁵⁵Epis. VI 325c-326c

¹⁵⁶Laches 187e-188a

him, or trouble myself about him. I am very attentive and ask questions of him, in order that I may learn and be improved by him.¹⁵⁷

5.1.3. I do not speak with any pretense to knowledge, but I am searching along with you, and so if there appears to be anything in what my opponent say, I shall be the first to yield to him. But I say this only if you think that the debate should be carried through to the end. If you do not wish it, let us drop and take our departure.¹⁵⁸

5.1.4. If I were confident that I was speaking with knowledge, it would be an excellent encouragement. For there are both safety and boldness in speaking the truth with knowledge about our greatest and dearest concerns to those who are both wise and dear. But to speak when one doubts himself and is seeking while he talks, as I am doing, is a fearful and slippery venture. The fear is not to be laughed at, for that is childish, but, lest, missing the truth. I fall down and drag my friends with me in matters where it most imports not to stumble. For, indeed, I believe that involuntary homicide is a lesser fault than to mislead opinion about the honorable, the good, and the just. This is a risk that is better to run with enemies than with friends, so that your encouragement is none.¹⁵⁹

5.2. Basic undergraduate education

5.3. Teaching, learning, instructing

5.3.1. [Meno:] "Socrates, even before I met you they told me that in plain truth you are a perplexed man yourself and reduce the others to perplexity. At this moment I feel you are exercising magic and witchcraft upon me and positively laying me under your spell until I am just a mass of helplessness. In several respects you are exactly like the flat sting ray that one meets in the sea. Whenever anyone comes into contact with it, it numbs him, and that is the sort of thing that you seem to be doing to me now. My mind and my lips are literally numb, and I have nothing to reply to you.' [Socrates:] 'If the sting paralyzes others only through being paralyzed itself, then the comparison is just, but not otherwise. It isn't that, knowing the answers myself, I perpel other people. The truth is rather that I infect them also with the perplexity I feel myself.'¹⁶⁰

5.3.2. Thus the soul, since it is immortal and has been born many times, and has seen all things both here and in the other world, has learned everything that is. So we need not be surprised if it can recall the knowledge of virtue or anything else which, as we see, it once possessed. All nature is akin, and the soul has learned everything, so that when a man has recalled a single piece of knowledge—*learned* it, in ordinary language—there is no reason why he should not find out all the rest, if he keeps a stout heart and does not grow weary of the search, for seeking and learning are in fact nothing but recollection.¹⁶¹

5.3.3. So a man who does not know has in himself true opinions on a subject without having knowledge [cf. PERSONAL SILENT KNOWLEDGE]. At present these opinions, being newly aroused, have a dreamlike quality. But if the same questions are put to him on many occasions and in different ways, you can see that in the end he will

¹⁵⁷Hipp.min. 369d

¹⁵⁸Gorg. 506a

¹⁵⁹Rep. V 450d-e

¹⁶⁰Meno 79e-80c, piece of dialogue between Meno and Socrates.

¹⁶¹Meno 81c-d

have a knowledge on the subject as accurate as anybody's. This knowledge will not come from teaching but from questioning. He will recover it for himself.¹⁶²

5.3.4. You must learn, first of all, the right use of words. People use the the word *learn* in two senses—first when one has no knowledge at the beginning of something, and then afterward gets the knowledge, and second, when one already having knowledge uses this knowledge to examine this same thing done or spoken. The second is called understanding, rather than learning, but sometimes is also called learning.¹⁶³

5.3.5. Although we speak of an individual as being the same so long as he continues to exist in the same form, and therefore we assume that a man is the same person in his dotage as in his infancy, yet, for all we hall him the same, every bit of him is different, and every day he is becoming a new man, while the old man is ceasing to exist, as you can see from his hair, his flesh, his bones, his blood, and all the rest of his body. And not only his body, for the same thing happens to his soul. And neither his manners, nor his disposition, nor his thoughts, nor his desires, nor his pleasures, nor his sufferings, not his fears are the same throughout his life, for some of them grow, while others disappear. And the application of this principle to human knowledge is even more remarkable, for not only do some things we know increase, while some of them are lost, so that even in our knowledge we are not always the same, but the principle applies as well to every single branch of knowlledge. When we say we are studying, we really mean that our knowledge is ebbing away. We forget, because our knowledge disappears, and we have to study so as to replace what we are losing, so that the state of our knowledge may seem, at any rate, to be the same as it was before.¹⁶⁴

5.3.6. Concerning the manner in which a state that occupies itself with philosophy can escape destruction: at present those who take it up are youths, just out of boyhood, who in the interval before they engage in business and money-making approach the most difficult part of it – that is, discussion. These are regarded forsooth as the best exemplars of philosophy. In later life they think they have done much if, when invited, they deign to listen to the philosophical discussion of others. That sort of thing they think should be bywork. And toward old age, with few exceptions, their light is quenched completely. What they should do is instead the reverse. While they are lads they should occupy themselves with and education and culture suitable to youth, and while their bodies are growing to manhood take right good care of them, thus securing a basis and support for the intellectual life. But with the advance of age, when the soul begins to attain its maturity, they should make its exercises more severe, and when the bodily strength declines and they are past the age of political and military service, then at last they should be given free range of the pasture and do nothing but philosophize.¹⁶⁵

5.3.7. The greatest thing to learn is the idea of good by reference to which just things and all the rest become useful and beneficial.¹⁶⁶

5.3.8. 'Having' seems to me different from 'possessing'. If a man has bought a coat and owns it, but is not wearing it, we should say he possesses it without having it about him. Now consider whether knowledge is a thing you can possess in that way without having it about you, like a man who has caught some wild birds—pigeons or whatnot—and

¹⁶²Meno 85c-d

¹⁶³Euthyd. 277e-278a

¹⁶⁴Symp. 207-d

¹⁶⁵Rep. 497d-498c

¹⁶⁶Rep. VI 505a

keeps them in an aviary he has made for them at home. In a sense, of course, we might say that he 'has' them all the time inasmuch as he possesses them. But in another sense he 'has' none of them, though he has got control [cf. CONTROL] of them, now that he has made them captive in an enclosure of his own; he can take and have hold of them whenever he likes by catching any bird he chooses, and let them go again, and it is open to him to do that as often as he pleases. [cf. HEIDEGGER READY-AT-HAND]. Let us suppose that every mind contains a kind of aviary stocked with birds of every sort, some in flocks apart from the rest, some in small groups, and some solitary, flying in any direction among them all. When we are babies we must suppose this receptacle empty, and take the birds to stand for pieces of knowledge. Whenever a person acquires any piece of knowledge and shuts it up in his enclosure, we must say he has learned or discovered [cf. vs. CONSTRUCT] the thing of which this is the knowledge, and that is what "knowing" means. When a man has in his control pieces of knowledge and hands them over, we call it "teaching", and when the other takes them from him, that is 'learning', and when he has them in the sense of possessing them in that aviary of his, that is 'knowing'. Our illustration from hunting pigeons and getting possession of them will enable us to explain that the hunting occurs in two ways—first, before you possess your pigeon in order to have possession of it, secondly, after getting possession of it, in order to catch and hold in your hand what you have already possessed for some time. In the same way, if you have already possessed pieces of knowledge about things you have learned and know, it is still possible to get to know the same things again, but the process of recovering the knowledge of some particular thing and getting hold of it. It is knowledge you have possessed for some time, but you had not got it handy in your mind. Having drawn a distinction between possessing knowledge and having it, we avoid the result that a man should not know what he does know, but we say that it is possible for him to get hold [make] a false judgment about it. For he may not have about him the knowledge of that thing, but a different piece of knowledge instead of it. In this way both true and false judgments can exist.¹⁶⁷

5.3.9. A division of ignorance into two halves will certainly imply that the art of instruction is also twofold, answering to the two divisions of ignorance. I do seem to myself to see one very large and bad sort of ignorance, which is quite separate, and may be weighed in the scale against all other sorts of ignorance put together. It is when a person supposes that he knows, and does not know; this appears to be the great source of all the errors of the intellect. And this is the kind of ignorance which specially earns the title of stupidity. The sort of instruction which gets rid of this is not the teaching of handicraft arts, but what, thanks to us, has been termed education in this part of the world. Of education, one method appears to be rougher, and the other smoother. There is a time-honored mode with our fathers commonly practiced toward their sons, and which is still adopted by many—either of reproving their errors, or of gently advising them—which varieties may be correctly included under the general term of admonition. But whereas some appear to have arrived at the conclusion that all ignorance is involuntary, and that no one who thinks himself wise is willing to learn any of those things in which he is conscious of his own cleverness, and that the admonition sort of education gives much trouble and does little good, accordingly, they set to work to eradicate the spirit of conceit in another way. They cross-examine a man's words, when he thinks that he is saying something and is really saying nothing, and easily convict

¹⁶⁷Theaet. 197c-199c. Please note that the argument continues and qualifies the quoted statements, as it is usual in Plato's texts.

him of inconsistencies in his opinions; these they then collect by the dialectic process, and placing them side by side, show that they contradict one another about the same things, in relation to the same things, and in the same respect. He, seeing this, is angry with himself, and grows gentle toward others, and thus is entirely delivered from great prejudices and harsh notions, in a way which is most amusing to the hearer, and produces the most lasting good effect on the person who is the subject of the operation. The purifier of the soul is conscious that his patient will receive no benefit from the application of knowledge until he is refuted, and from refutation learns modesty; he must be purged of his prejudices first and made to think that he knows only what he knows, and no more.¹⁶⁸

5.3.10. But are we willing to admit that there exists an art of a higher order also concerned with the process of acquiring special skills? This second art is the one whose province is to decide whether or not we ought to learn any particular art.¹⁶⁹

5.3.11. He who is to be good at anything as a man must practice that thing from early childhood, in play as well as in earnest, with all the attendant circumstances of the action. We would seek to use games as a means of directing children's tastes and inclinations toward the station they are themselves to fill when adult. So we may say, in fact, that the sum and substance of education is the right training which effectually leads the soul of the child at play on to the love of the calling in which he will have to be perfect, after its kind, when he is a man. Let us further guard against leaving our account of what education is too indeterminate. When we are to express approval or censure of a man's training, we correctly speak of one of ourselves as educated and another as uneducated—and the reference is sometimes to the business of a huckster or a supercargo—and of other such fellows of mighty fine education. But our present discourse is in place only of the lips of one who holds that education is none of these things, but rather that schooling from boyhood in goodness which inspires the recipient with passionate and ardent desire to become a perfect citizen, knowing both how to wield and how to submit to righteous rule. Our argument would isolate this training from others and confine the name education exclusively to it; any training which has as its end wealth, or perhaps bodily strength or some other accomplishment unattended by intelligence and righteousness, it counts vulgar, illiberal, and wholly unworthy to be called education.¹⁷⁰

5.3.12. The act of learning is attended by a kind of gusto, but it is the truth of what is learned which gives it its rightness and utility, its goodness and nobility.¹⁷¹

5.3.13. For everything that exists there are three classes of objects through which knowledge about it must come; the knowledge itself is a fourth, and we must put as a fifth entity the actual object of knowledge which is true reality. We have then, (1) a name, (2) a description composed of nouns and verbal expressions like in a definition, (3) an image, and (4) a knowledge and understanding and correct opinion of the object. There is something for instance called a circle, the name of which is the very word I just now uttered. In the second place there is a description of it which is composed of nouns and verbal expressions. For example the description of that which is named round and circumference and circle would run as follows: the thing which has everywhere equal

¹⁶⁸Soph. 229b-230d

¹⁶⁹Statesm. 304b

¹⁷⁰Laws I 643b-644a

¹⁷¹Laws II 667c

distances between its extremities and its center. In the third place there is a class of object which is drawn and erased and turned on the lathe and destroyed - processes which do not affect the real circle to which all these other circles are all related, because it is different from them. In the fourth place there are knowledge and understanding and correct opinion concerning them, all of which we must set down as one thing more that is found not in sounds nor in shapes of bodies, but in minds, whereby it evidently differs in its nature from the real circle and the aforementioned three. Of all these four, understanding approaches nearest in affinity and likeness to the fifth entity, while the others are more remote from it. The same doctrine holds good in regard to shapes and surfaces, in regard to the good and the beautiful and the just, in regard to all bodies artificial and natural, in regard to every animal and in regard to every quality of character, and in respect to all states active and passive. For if in the case of any of these a man does not somehow or other get hold of the first four, he will never gain a complete understanding of the fifth. Furthermore these four [names, descriptions, bodily forms, concepts] do as much to illustrate the particular quality of any object as they do to illustrate its essential reality because of the inadequacy of language. Hence no intelligent man will ever be so bold as to put into language those things which his reason has contemplated, especially not into a form that is unalterable. The important thing is that there are two things, the essential reality and the particular quality, and when the mind is in the quest not of the particular but of the essential, each of the four confronts the mind with the unsought particular, whether in verbal or in bodily form. Each of the four makes the reality that is expressed in words, or illustrated in objects liable to easy refutation by the evidence of the senses. The result of this is to make practically every man a prey to complete perplexity and uncertainty.

5.3.14. Now in cases where as a result of bad training we are not even accustomed to look for the real essence of anything but are satisfied to accept what confronts us in the phenomenal presentations, we are not rendered by each other—the examined by the examiners who have the ability to handle the four with dexterity and to subject them to examinations. In those cases, however, where we demand answers and proofs in regard to the fifth entity, anyone who pleases among those who have the skill of confutation gains the victory and makes most of the audience think that the man who was first to speak or write or answer has no acquaintance with the matters of which he attempts to write or speak. Sometimes they are unaware what it is not the mind of the writer or speaker that fails in the test, but rather the character of the four—since that is naturally defective. Natural intelligence and a good memory are equally powerless to aid the man who has not an inborn affinity with the subject. The study of virtue and vice must be accompanied by an inquiry into what is false and true of existence in general and must be carried on by constant practice throughout a long period. Hardly after practicing detailed comparisons of names and definitions and visual and other sense perceptions, after scrutinizing them in benevolent disputation by the use of question and answer without jealousy, at last in a flash¹⁷² understanding blazes up, and the mind, as it exerts all its powers to the limit of human capacity, is flooded with light. For this reason no serious man will ever think of writing about serious realities for the general public so as to make them a prey to envy and perplexity.¹⁷³

¹⁷²Cf. the well established reference to "intuition", and the more recent "flow" where, however, the integration of the four dimensions of knowledge is not considered.

¹⁷³Epis. VII 342a-344c-

5.4. Writing

5.4.1. The god Theuth had invented number and calculation, geometry and astronomy, not to speak of draughts and dice, and above all writing. Now the Egyptian king Thamus asked what was the use of them all, and praised what he thought the good. On each art Thamus had plenty of views for and against. But when it came to writing Theuth said, 'Here, O king, is a branch of learning what will make the people of Egypt wiser and improve their memories; my discovery provides a recipe for memory and wisdom.' But the king answered and said, 'O man full of arts, to one it is given to create the things of art, and to another to judge what measure of harm and of profit they have for those that shall employ them. And so it is that you, by reason of your tender regard for the writing that is your offspring, have declared the very opposite of its true effect. If men learn this, it will implant forgetfulness in their souls; they will cease to exercise memory because they rely on that which is written, calling things to remembrance no longer from within themselves, but by means of external marks. What you have discovered is a recipe not for memory, but for reminder. And it is no true wisdom that you offer your disciples, but only its semblance, for by telling them of many things without teaching them you will make them seem to know much, while for the most part they know nothing, and as men filled, not of wisdom, but with the conceit of wisdom, they will be a burden to their fellows.' Then, anyone who leaves behind him a written manual, and likewise anyone who takes it over from him, on the supposition that such writing will provide something reliable and permanent, must be exceedingly simple-minded, imagining that written words can do anything more than remind one who knows that which the writing is concerned with. That's the strange thing with writing, which makes it truly analogous to painting. The painter's products stand before us as though they were alive, but if you question them. They maintain a most majestic silence. It is the same with written words; they seem to talk to you as though they were intelligent, but if you ask them anything about what they say, from a desire to be instructed, they go on telling you the same thing forever. And once a thing is put in writing, the composition, whatever it may be, drifts all over the place, getting into the hands not only of those who understand it, but equally of those who have no business with it; it doesn't know how to address the right people, and not address the wrong. And when it is ill-treated and unfairly abused it always needs its parent to come to its help, being unable to defend or help itself. But the living speech, brother to the written speech, goes together with knowledge, and is written in the soul of the learner, and can defend itself, and knows to whom it should speak and to whom it should say nothing. It is the living speech, the original of which the written discourse may be fairly called a kind of image.¹⁷⁴

5.4.2. One statement at any rate I can make in regard to all who have written of who may write with a claim to knowledge of the subjects to which I devote myself—no matter how they pretend to have acquired it, whether from my instruction or from others or by their own discovery. Such writers can in my opinion have no real acquaintance with the subject. I certainly have composed no work in regard to it, nor shall I ever do so in the future, for there is no way of putting it in words like other studies. Acquaintance with it must come rather after a long period of attendance on instruction in the subject itself and of close companionship, when, suddenly, like a blaze kindled by a leaping spark, it is generated in the soul and at once becomes self-sustaining. If there were to be a treatise or a lecture on this subject, I could do it best. I do not, however, think the

¹⁷⁴Phaedr. 274c-276a

attempt to tell mankind of these matters a good thing, except in the case of some few who are capable of discovering the truth for themselves with a little guidance. In the case of the rest to do so would excite in some an unjustified contempt in a thoroughly offensive fashion, in others certain loftly and vain hopes, as if they had acquired some awesome lore. No serious man will ever think of writing about serious realities for the general public so as to make them a prey to envy and perplexity. In a word, it is an inevitable conclusion that when anyone sees anywhere the written word of anyone, the subject treated cannot have been his most serious concern—that is, if he is himself a serious man. His most serious interests have their abode somewhere in the noblest region of the field of his activity. If, however, he really was seriously concerned with these matters and put them in writing, 'then surely' not the gods, but mortals 'have utterly blasted his wits.'¹⁷⁵

¹⁷⁵Epis. 341b-344d