looking for writer's "picture of reality„ [1]

This study discusses the problems involved in disintering a writer's picture of some aspect of his thought-world from his writings, and, in particular, of disintering it in such a way that the predilections and sensitivities of the person doing the disintering distort that picture as little as possible. The writer is John the Lydian (490-c.554 A.D.), an academic and a bureaucrat who had a middle-level career within the Secretariate of the Praetorian Prefecture at Constantinople and who wrote a three-book treatise, known as the *De Magistratibus,* on the Prefecture in which he served.[2] As our assumptions and preconceptions about such basic things as the structure of an opinion and the working of a bureaucracy tend to be culture-bound because of the omnipresent influence of our own high-energy, high-information society,[3] possibilities for unwitting distortion are truly enormous in such an undertaking.

An approach involving extensive use of comparative analysis screened out much of the analyst's own idiosyncratic picture of reality and led to

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quite an amount of new findings. Basically the procedure was to repre-
sent the "facts" given by John, grouping them under headings, them-
selves arrived at by comparative analysis, which seemed appropriate for
his time and society,[4] and to contrast these with the "facts", similarly
sifted out, given by other contemporaries. The particular pattern of
facts upon which John had chosen to focus, as in a response to a *Ror-
schach* test, thus emerged in its singularity, telling much about the writer
who had provided it. Uniformities which emerged when contemporaries
"pictures" were cross-compared, suggested something of the spirit of
John's age, the political culture of his environment or whatever one might
call the mix of beliefs and practices in which he and his contemporaries
were enmeshed. If one attempts to do this sort of thing simply by wide
background reading aimed at gathering a general impression, one is sub-
ject to all the vagaries normal to the individual perceptual system in un-
directed play upon a vast, formless and heterogeneous mass of data, often
in parts meretriciously presented. The frame of reference develops as one
reads, so one winds up looking for and with subtly different insights.One's
own psychological quirks conspire with patches of vivid writing to give
more salience to certain passages than they merit. Memory plays tricks — if
only by concealing the operation of some such principle as "read between
breakfast and lunch, best remembered". We are all familiar with the con-
sequences : the two "obvious", "common-sense" — and diametrically
opposed — ,interpretations of the same body of evidence; the two em-
battled schools of thought each citing three striking examples which res-
pectively "prove" each case against the contending view.

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In the clusters of images which go to make up a man's picture of his world those involving space and time seem to be basic and primary.[5] And, in looking for a writer's picture of something, it helps to start by scanning for that part of that something of which he probably did have a visual (as opposed to verbal) picture. So we will commence by seeing how John refers to his geographical and topographical environment.[6] Not only does one have a better chance when looking for the fairly obvious and the rather sharply delineated, but one also effects an entry into the writer's attitudinal world : how he speaks of what he "sees" tellingly indicates patterns of perception, values and assumptions. Guidelines emerge which can be of help in interpreting other aspects of his world-picture which have less imageability[7] or are less salient.

Now John's references to the geographical world around him are so many and various that, if one is not to be submerged under a flood of citations, some way of ordering them must be found. Internal evidence (a collation of geographers' names dropped anywhere within the entire *corpus* of John's surviving writings) indicated that his background frame of reference was formed by Ptolemy's map, so his references were plotted on to that.[8] As the *De Magistratibus* is a historical work and thus represents many of the geographical horizons of John's sources, an attempt was made to sift for these by separating out three maps.[9] The first mapped the place-names connected, in his descriptions of or references to them, with the period prior to the Dominate.[10] A third mapped place-names similarly connected with incidents or personalities of John's lifetime. The

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second mapped such references if they dealt with the period intervening — after the establishment of the Dominate but prior to John's day.[11]

Three different "worlds" appeared : the first was Mediterranean-litoral and urban; the second was Central and N.W. European and tribal; the third — and this was the contemporary world, formed by topical or recent areas of preoccupation — had its attention centred on the Danube, Caucasus and Anatolia, and that from a military strategist's viewpoint.

Areas on which John's attention centred were discovered by frequency of mention of individual place-names, combined with detailed or striking reference to individual places, and by the clustering of references, which effectively picked out certain regions only for coverage in depth, as it were. These patterns showed *where* he was looking and *what*, typically, he was looking *at* (e.g. military strong-points, not commercial centres). It emerged that he tended to see a city in which he is known to have lived in a particular way : he related the lines of the buildings in the streets to a back drop of high ground. From such insights a little could be gleaned about his travels; this eked out the meagre autobiographical details given in his writings.

Everyday experience tells us that within the same culture and time-period people tend to differ in their ability to think in pictures.[12] But there is empirical evidence that the human mind tends to think in patterns[13] and that from person to person images of a certain (quite extensive) to-

pographical area have elements and a feeling for form in common. The work of K. Lynch, to which the present writer is indebted for numerous insights, is most instructive in this regard.[14] Certainly the world pictured in the official writings of a bureaucrat contemporary to John (Cassiodo-rus', in his *Letters*)[15] is of the same nature, though differing in detail. Cassiodorus' span of attention is much narrower, almost limited to Italy (where it focusses on the Central and especially on the Southern regions). It is that of a country-man, not a townee (there are no lovingly-depicted rural panoramic vistas in John). The peripheral areas (the head of the Adriatic and the Alps) are seen from a military strategist's viewpoint. Both seem to be thinking in terms of a heart-land, containing metropolis and place of writer's nativity, with peripheral frontier zone; the in-group is well seen, out-groups dimly and negatively.[16]

As the last paragraph indicates, a switch from analysis of one universe of data to comparison of two or more such universes involved shifting the span of analytical operations : the switch was from a microscopic analysis of data to a macroscopic analysis for patterns within the data.[17] For ins-tance, one might ask : does the writer see his geographic environment, or sectors of it, from afar or at close-quarters ? Does he see it as a whole or is a particular region or certain type of detail salient (e.g. in John's pic-ture of Anatolia, does he see the *massif* as a whole, focus on the frontier zone, or dwell upon his home-town area, Philadelphia) ? Is his impres-sion favourable or unfavourable, intensely or neutrally perceived ?

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Clearly, the step is a short one from analysis of spatial to analysis of the temporal concepts in a writer's work. What types of events and personalities and at what periods, with what intensity, frequency and bias, occur in Rome's history as John portrays it ? It emerges that, across the flow of time, the regal period, late Republic, early Principate and (Eastern) Dominate are highly salient (lots of detail, frequent references) and that the late Republic and Eastern Dominate are particularly salient in his thinking, which is conducted in authoritarian stereotypes, from a viewpoint biassed in favour of the Praetorian Prefecture. Errors involve anachronisms, incorrect timing of events in sequences, mistakes over *minutiae* and retrojection of assumptions peculiar to the culture of his own day. The establishment of the Eastern Dominate marks something of a watershed : errors are much more frequent prior to this and tend to worsen with chronological distance. Study of the depiction of an historical personality across the centuries, however, shows that John's part in the transmission was not merely the acceptance of conventional wisdom. Though (typically) distorting it in keeping with the assumptions which come to him from his own culture, he reacts away from an unfairly drawn characterization in view of insights gained from his specialist bibliography.[18]

This latter study however indicated that John's depiction showed many of the effects of terminal position on a communications chain[19] and thus indicates a need for some appraisal of the shaping influence of e.g. shifts in word-meaning across the stream of language in time. Now it would appear that, in the Graeco-Roman world at any rate, change in word-

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meaning occurred faster at some times than at others and that some periods were much more aware that such change was in progress than were others.[20] John's was a society with its eyes fixed rigorously upon the past; its educational system imbued its products with the aim of writing in the Classical language, which had long passed out of colloquial use.[21]

The effect of all this on John can be seen in the numerous etymological interpretations of word-meanings which adorn his narrative and in his resolute maintainance of a style and diction appropriate to his *genre*.[22] The effect of all this on the language in which he wrote was that it was highly resistant to change. Though not existing in a monolingual culture (Greek currently had to acknowledge important literary traditions in Latin, Hebrew and Persian), his language merely incorporated individual words for exotic products and was surprizingly resistant to the admission of new concepts (e.g. the system of B.C./A.D. dating was invented in John's lifetime : there is not an inkling of this in John, who is on occasion much exercised by dating systems). Thus, though the words he was using did not change appreciably in meaning across his lifetime,[23] John's insensitivity to such behaviour in words limited his range of vision by an unseen pair of blinkers as it were. Much the same, incidentally, seems to hold for Cassiodorus, the bureaucratic contemporary with whom John has already been contrasted; expectably, as both were nurtured within the same Great Tradition and similar governmental institutions.

It was fortunate that John's voluminous and discursive narrative took so

many large issues within its purview : a short study rigorously restricted in scope by limitations set by *genre* would not have provided a viable sample. Documents vary, in their fulness as samples, between such extremes. Boulding's study indicates ten dimensions along which variation is possible. Unless these dimensions are analyzable in a work its world view is not discernible. But the types of questions one can ask are independent of the amount of detail the writer has to provide, because his failure to provide detail (as long as this failure is not caused by limitations of *genre*) shows that the issue concerned — all are primary, basic aspects of any picture of reality — is relatively less important for him and this in itself is a vital aspect of the picture one is bent on reconstructing. Detail can be elicited along a range : very full, fairly full, neutral (awareness appears but does not activate the mix), fairly skimpy, non-existent. The aim is simply to establish at what point along this scale awareness of a particular aspect falls in the writer's picture of his world.

For the "in-the-big" analysis of issues which are not at the centre of a writer's attention, the work of H.R. Isaacs offers a multitude of insights.[24] One tries to assess the writer's references in broad, general outline : is his picture of e.g. an Indian a picture made up of sweeping generalizations or of particular, discrete details ? Is it an imaginative (romantic, picturesque) impression or one made up of details drawn realistically from experience ? From here the step to inquiry into the writer's associational field is a small one. What are the words found in the neighbouring context when an Indian is mentioned in the writer's work ? Are there any clusters of words that crop up, when all his references are put together, from pas-

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sage to passage ?   Are there any key words that stand out across the body
of his writings ?   For instance, is it maharajahs, cobras, pig-sticking and
snake-charmers or poverty, slum-life in Calcutta, water-borne diseases and
the town-village culture-lag around which his thoughts revolve ?   Or is one
of these sets characteristic of his earlier works, another of his later wri-
tings ?

In eliciting from a writer his views on the spatial-temporal aspects of his
world-picture much more has emerged : in-groups and out-groups; heroes
and villains(and the value systems to which these attach); ignorances and
awarenesses of important social and political institutions or events. Testing
along others of the dimensions indicated by Boulding continues this pro-
cess (the above are in fact instances meaningful in assessing others of his
dimensions). This allows patterns to emerge : themes may easily cross the
threshold of verbalization or balk elusively at it; quality and quantity of
awareness may vary strikingly.[25] Such patterns indicate the psychologic of
the writer; they may approximate classical syndromes — in John's case
that of authoritarianism.[26] In such a case there are strategies for inquiring
for laten structure, and theory to suggest aspects to which the analyst's
attention may profitably be directed.[27]

But important though it may be to discover that e.g. John is, compared
with contemporaries, not an extreme authoritarian,[28] this is a finding of
such generality as still to leave us with more specific questions unanswered.
Yet we have by now arrived at a stage of analysis at which we can review
what happens to a member of items across a flow of time. This is an ele-

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mentary form of multivariate analysis. With a tool like this specific questions can be tackled.

Take the charge that Cassiodorus was "a political acrobat". Now he headed three different *bureaux,* under four monarchs. There was rivalry between the *bureaux,* caused by disputes over overlapping spheres of authority. There was bitter ill-feeling among the monarchs, not one uniform line of policy. So if one selects from his official correspondence one book of letters written in each one of his three capacities so that each book is written under a different monarch, the demands emanating both from the job-situation and from the ruler change for each book. Thus, if any theme or themes appear throughout, this should reflect the one set of interests that does not vary — Cassiodorus'. Across-the-board preoccupation with the concept *civilitas* indicates that Cassiodorus is using his positions to further a principle rather than opportunistically serving any cause merely to stay in a position of eminence.[29]

In practice, one generally uses this type of inquiry to establish a writer's viewpoint or frame of reference as an essential preliminary to use of his writings.[30] This is a much less clear-cut operation than the analysis of a single well-defined problem of the type just considered. It usually involves a number of such analyses, of not one but of several problems — so inter-related that investigation of one prompts a hypothesis which is tested by further analysis and so on. Take John, our bureaucrat : one cannot proceed directly to the use of his writings on the bureaucracy without an eva-

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luation of the distortions arising therein from personal animosities, defence of special interests, occupational blind-spots and so on. Consequently, one has to probe for his reactions to a cluster of related issues involving the above. As his emphases on these issues are relative one to another, only a *total* patterning of their mutual interplay makes his frame of reference clear,[31] by showing the variety of influence exerted by the preoccupations which keep cropping up.

There is, clearly, no one perfect way of doing this. There are however (at least) two strategies of approach which suit that being suggested here in general terms. One is A.L. Baldwin's "personal structure analysis".[32] This extracts words which occur with high frequency from the entire body of a writer's work and checks among them for contingencies, then for interrelationships. Separate clusters of concepts which repeatedly occur together are thus made to emerge from beneath the writer's threshold of awareness, indicating critical preoccupations and their several associational fields. In John's case a check through his works, which are in different *genres,* if producing such correlationships in spite of differences in stylistics and subject matter, would strikingly delineate these preoccupations.[33]

The other approach, that of Isaacs (hopefully, this is not too gross an oversimplification of an unusually sensitive and perceptive analysis) is to check out a writer's attitudes on a cluster of inter-related issues which have been empirically established as meaningful indicators of a man's political stance

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at the time and place involved. The picture is obtained by sketching in an outline and then trying to fill it out with details. Blank spots and hazinesses are as important as spotlighted areas. Equally important is the fact that the framework and issue-areas have been selected in the light of work on perception which indicates non-culture-bound areas of bias and stereotypy.[34] Further, there is ample empirical evidence that in this type of analysis, try as he may, the perceiver selectively perceives from the total possible range of aspects before him.[35] Again empirically, people fall at different points about the two axes, tough....tender-minded, left....right of (social) centre.[36] Isaacs indicates the general area in which he himself would fall (mine is rather similar) — a piece of information necessary to the reader's appraisal of Isaacs' findings (or of mine).

How would this work in John's case ?   Supposing one visualizes these issues as a heap of discs, all overlapping, the centrally-positioned one topmost and the others jutting out beneath it, the lowest furthermost out (see Figure 1). Let the central issue be John's views on policy. Put this way, it soon appears that John has few views on policy : such as he holds are general except as concerns the Prefect's staff; here however his views are limited in scope but clear and strongly expressed (the objective is to regain more effective power in jurisdiction and administration, with resulting increase in affluence for the staff). Taking the discs (= issue-areas) to the right, as it were, of this central issue, one might look at John's attitudes to public figures (who is mentioned, who is not; what kinds of figures receive favourable, neutral or negative attention; who is allocated most/least mention among these, and so on); at his authorities (a similar type of analysis), and

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at his views on time (is he past-, present-, or future-oriented; how does he perceive change; what length of time-span does he think in terms of, and so on). To the left of the central disc — to keep up the imagery — one would probe for his knowledge of current affairs (where is this full, meagre or absent; what issues are seen as important; where are the attention-areas and blind spots, and so on), and for his opinions of the possible (a similar type of analysis).

Now, clearly, this last type of analysis is of a very different order of objectivity to the first one described. If one visualizes them as falling along a range between the poles objectivity....subjectivity, the operations here described have been gradually falling more and more towards the latter end of the range. The last operation combined the subjectivity involved in analysis of each issue-area (however objectively set out, analysis inevitably involves the use of a subjective "feel" in putting the ten percent or so of very hazily expressed passages on one side or the other of a dividing scale) with the subjectivity of inter-relating the findings in each into a total picture. It is in view of such criticisms that it is sometimes urged that, because of the subjectivity of this procedure, methodological approaches *per se* are pretentious. Before reverting to earlier impressionistic methods of investigation, however, it is worth realizing that the degree of "objectivity" in the approaches cited above varies (consider the "political acrobat" one for instance), so discrimination is called for. These are problems which have somehow to be tackled. An intuitivist approach may appear sophisticated because it does not have laboriously to specify the crucial problems of its

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analytical infra-structure and how far these can be met. But this sophisti-
cation results in imperfect retrieval (and, generally, inconsistent weighting)
of data pertinent to an (idiosyncratic) assemblage of issues at its (possibly
fluctuating) focus of attention.[37]

Two critical problems here involve the significance of frequency and the
appropriateness of the weighting system, the latter a perennial difficulty in
appraising "emotionality" in writing. Work on content analysis has howe-
ver resulted in empirical findings which are helpful. It appears, for instance,
that frequency of mention does correlate with the importance of the con-
cept or issue mentioned for the writer.[38] With words, two crucial thres-
holds are involved. Until the word has appeared once, there is no evidence
that it belongs to the *repertoire* of the writer's active vocabulary. Once
used, however, it tends to recur – but not beyond a limited number of re–
petitions, as over-recurrence is felt to be stylistically inept.[39] Moreover cer-
tain modes of appraisal — the evaluative, concerning potency, con-
cerning activity — feature prominently in the way people "see" things,
and at least five varieties of warmth, or lack of it, have to be allowed
for in emotional reactions.[40] One strategy for avoiding idiosyncra-
cies in weighing is to combine several individuals' weighings (of the same
words/themes) into a kind of highest common frequency scale. Another
is to consult the "dictionaries" so laboriously evolved by the computerized
content analysts : much Heuristic theory and empirical evidence is stored
therein.[41] Merely in terms of information costs it is prohibitively exhaus-
ting of intellectual resources to tackle this whole complex of analytical

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problems by one's own unaided initiative and thus compound the totality of problems in the operation : attention over-load must result at some point.[42]

Moreover, some of the problems of subjectivity become lessened when one moves from the analysis of one writer's picture of an event to that of several writers.[43] What is generally employed in such cases is some form of matrix analysis. Thus, to consider the possibility that Justinian's policies were not understood by contemporaries whose writings now survive, one might review "change" as perceived by Justinian (in the *Institutes*, say), Procopius (in the *Secret History*) and our bureaucrat John the Lydian (in *On the Magistracies*). "Change" would be broken down into a number of less hazy components which work on the authoritarian personality has shown likely to be significant and not to be culture-bound : e.g. time-focus; views on tradition, innovation and causation; motivation ascribed as underlying change; beneficiaries and effects of change. This generates a matrix of (7 x 3) 21 "boxes". If John and Procopius hold similar views and thus together differ from Justinian on any one issue, this could simply be a coincidence, but if this pattern repeatedly recurs (actually, in regard to every single component) this cannot be coincidence.[44] The point is that enough details are cross-compared within the one frame of reference for patterns to reveal themselves independently of further manipulation of the data by the analyst.

The usual procedure involves comparison of two matrices, thus : to see

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what is the difference in the picture of the bureaucracy in the head of an aristocratic minister as opposed to a middle-ranking member of the clerical staff, one might take the writings of Cassiodorus and of John respectively and consider in each case the following issues in regard to the following degrees of saliency :

Table 1

ISSUES

	Frequency of mention	Emotionality of mention	Favourable/ unfav. view	Vested or general interests assumed
Implementation of policy				
Taxation activities				
Judicial activities				
Loyalties				
Perquisites				

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Or one might want to consider how much difference there was between a bureaucrat's image of what the Emperor was doing and the picture in the head of a non-bureaucrat. In this case one would list all reforms mentioned by either (if one named seven, the other thirteen, with an overlap of five, this would generate *one* column of fifteen heads for both matrices : gaps are significant), indicating in each case how the reform was treated in terms of the above scale of saliency.

In this way one analyses all the relevant data in terms of the same frame of reference for both cases, reducing a sprawling mass of details into two comparable and easily scanned bodies of data such that patterns can stand out amid the complexity and be seen in general outline in spite of the complexity. This is a classical, if elementary, instance of multivariate analysis as a technique.[45]

Now this is a laborious undertaking and becomes more so in proportion as the categories of analysis themselves are more complicated. Often one operates with larger or more clear-cut categories for an in-the-big analysis.[46] Thus one might be looking for the first mention of each of a particular set of concepts across a period of writing. If these develop from one another over time the following picture (an ideal type-reality is generally messier) would emerge[47] :

Table 2 :

ISSUES		WRITERS					
		A	B	C	D	E	F
	1	x	x	x	x	x	x
	2		x	x	x	x	x
	3			x	x	x	x
	4				x	x	x
	5					x	x
	6						x

Or one might be trying to establish changes in the way an issue or concept is viewed across a period of time. The subject under analysis would then be broken down into aspects, only high saliency on each aspect being noted and plotted down. This isolation-out, from a vast body of writings, of a uniform body of inter-related data enables patterns, if they exist, to be discerned amid complexity,[48] thus :

(Analysis for areas of attention)

Table 3 :

ASPECTS OF THE ISSUE   WRITERS

	A	B	C	D	E	F	G	H
1	x	x	x	x			x	x
2		x	x					
3	x	x	x		x	x	x	x
4	x			x	x	x		
5			x	x	x	x	x	x
6				x		x		

Operations of the last two types can be relatively quickly performed, by rough work, as a check on hypotheses on might form as one is working on a text. There are a large number of other such in-the-big analyses which can be performed with this simple matrix lay-out. Again, a sketchy first survey will indicate whether an hypothesis is worth proceeding with, as the matrix will quickly indicate exceptions to the theory if they are there. This rapid testing process is impossible by impressionistic reading methods, which cannot guarantee either full retrieval of all relevant instances or uniform over-all frame of reference. In fact, the argument-supported-by-three-extreme-cases represents what is here designated as an hypothesis worthy of rapid-testing to see whether it deserves full detailed analysis.

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Let us look at some of these matrices which have been designated as suitable for rapid testing of hypotheses. Isaacs finds two groups of image-components, a positive and a negative, to be held by Americans in their attitudes to Indians. He takes the most frequently recurring image-component and establishes the fact that it is a uniform feature underlying various American stereotypes of Indians by showing that it is widely present across American class-lines through time.[49] A first check in the following fashion :

Table 4 :

CLASS-RANKING	TIME-SCALE	
	1950's	1920's
High		
Middle		
Low		

based on two individuals in each category at each time point, and simply checking to see whether the image occurs or not, would indicate in outline who held to this stereotype and when. Once it is established that there is some factual basis for the hypothesis, more detailed analysis — to indicate e.g. prominence or emotionality of this component in the general picture — can proceed without the risk of expending time and labour on a dead-end investigation.

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To take an enquiry which is more central to the historical focus of this article, one might wish to explore components of the image of Justinian to see how these were affected by the passage of time. Investigation might concern whether historians, church fathers and poets (down) at about 550 and 600 A.D. (across) mention Justinian as e.g. a great conqueror, legal reformer, builder and religious moderator (one matrix per image component) — proceeding as above. My *impression* is that the first component is salient and with time becomes dominant for historians, the other components decreasing to marginality, whereas for church fathers the last component develops from salience to dominance, and building activities may play a central role for the metropolitan man-about-town world of contemporary poets. But it is always disconcerting to discover the extent to which such general impressions, gained in the normal course of reading, are disconfirmed by more directed, quantified analysis.

Operations of a similar nature occur when one wishes to check whether an attitude to an issue relates to personality type : e.g. one might examine strongly favourable, neutral and highly negative attitudes (across) by right or left of centre/authoritarian or liberal disposition or other- versus innerdirection or what have you (down). Again one might investigate supporters, neutrals and critics (down) in terms of authoritarianism, other-direction, socio-economic status, experience, communications read etc. (across). The latter operation is, of course, running a whole series of tests.

Generalizations on "the world of the nth century" are in fact based on

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some such type of appraisal of source material originating in the century involved. Clearly, if one is trying to assess developments in thinking concerning an issue across a flow of time, or trying to trace the ebb and flow of awareness in relation to an issue or issues through time, impressionistic reading cannot cope with the complexities involved in abstracting fully and uniformly from the mass of varied data and in synoptically presenting the results for testing by various cross-comparisons.

Intuitivist rejection of this method requires a demonstration that the method is thoroughly understood, that it is being rejected in favour of methods which, in objective terms, do not have its disadvantages or which confer advantages it cannot give, and finally that the problem of selective perception has been understood and somehow controlled for.

A social scientist will take tremendous pains to generate data such that he can perform the operations of multivariate analysis upon it. "Raw" data is rarely so amenable to manipulation. Conceivably however an historian or literary critic might obtain materials upon which the so-called "panel method"[50] could be used, so, for completeness, it will be briefly mentioned. Supposing that a Canadian historian, as does happen, were to gain access to several family collections of letters (kept initially by relatives in England and eventually consigned to the settler's end of the family in Canada) dating across one particular period in time. He might wish to determine the state of feeling about affairs contemporary to the letter-writers. The method could be applied in the following way :

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Table 5 :

GOVERNOR 1

ISSUE A	WRITERS
Affect	A B C D E
positive	
neutral	
negative	

ISSUE B	
Affect	
positive	
neutral	
negative	

GOVERNOR 2

ISSUE A	WRITERS
Affect	A B C D E
positive	
neutral	
negative	

ISSUE B	
Affect	
positive	
neutral	
negative	

More issues/Governors could be considered, as the material allowed. This analysis would enable our historian to decide which issues were uniformly salient across time and what the emotions that they engendered were. By reviewing the references to the Governor in the letters before and after a crisis (i.e. replacing the headings across by "Time-period 1" and "Time-period 2" and the headings "Issue A", "B" by a single heading "Governor"), he could likewise trace changes in the public image of the Governor (or Governorship).

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Alas, it all too rarely happens that the data the humanist has to deal with are as amenable as this. He in fact needs an analytical tool adapted rather to the exigencies of scanning *meagre* data. A form of analysis which is complementary to that which has been variously considered to date involves centering one's interest on a writer's focus of attention. If the previous tool was macroscopic, this one is microscopic. What the first type of approach aimed to do was to set out, in tabular form, all of the information that could be coaxed from a set of data according to a uniform framework of categories. The type now under discussion aims to isolate out just those aspects of an issue which are at the centre of a writer's attention. First, let us consider a case in which this type of analysis has particular utility. Take the history of Justinian's reign. Reviewed in overall terms, from above as it were, there is much that perplexes. This is not unusual when the politics of bureaucratic societies are under review : one is looking for uniformities that are not there.[51] Supposing, however, one reviews the swirl of events from the point of view of a key sector of the administrative bureaucracy. (We know the ethics of this group as result of seeing something of John the Lydian's picture of his world earlier in the present study.) This will not explain all, but it will explain many individual unanticipated consequences and shed a great flood of light on the way the game of politics was played. In fact one way of understanding events would be to analyse out first Justinian's focus of attention, then that of a key bureaucrat and then to consider the overall flow of events in terms of the working out of these two sets of clashing interests. Only by looking from the inside outwards can one begin to structure this type of politics into meaningful forms.

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Let us briefly see what sort of returns this type of analysis yields in a specific situation. To take our bureaucrat, John : we have already conducted an analysis as to which of the Emperor's reforms he "saw", and we compared the findings with those on which reforms were "seen" by Procopius (close to the vested interests of the military landed aristocracy). At the time critical bureaucratic perquisites were special advantages at law, purchasable office and "rights" to various fees. Supposing one were to select, out of all mentions of reforms by either writer, those mentions alone which connect with any one of these three perquisites. This would select out three-quarters of John's references but only maybe a third of Procopius', a very striking demonstration of the selective effect of a writer's focus of attention.[52] Supposing then one were to contrast how John handles these passages (general length, degree of emotionality, saliency in terms of striking expressions etc., positive or negative bias) and how he handles the other quarter of his references. This would give an idea of how the bureaucracy reacted to reforms which threatened its vested interests as opposed to those which did not. In process this analysis yields insights into strategies of resistance, sabotage and working of the letter of the law to produce effects directly counter to its spirit. A general over-all survey of the period gives us as it were a from-the-shore view of swimmers' heads in a patch of water : This is the shark's-eye view of the swimmers, large against the surface of that patch of water. Consequences become less unanticipated — and more explicable.

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This type of analysis is the kind which characteristically turns up the findings "no contemporary aristocrat thought/was aware of issue X" (which the text-book history regards as having been a burning question) or "such and such an aspect of the issue was never raised by contemporaries".[53] Such findings can move discussion on to a different level of understanding. The mechanics of the process are simple. Analysis of a particular writer's focus of attention regularly suggests, by the blanks it reveals, that a check for the existence of a specific key item be made right across the universe of data — an operation which can be very speedily effected.

A simple illustration of the process of analysis to see what a writer's attention focusses on is as follows. Typically, an historian is confronted by a generally accepted reconstruction of the events of a reign or period which is a pastiche of gleanings from all sorts of contemporary and later sources, whether full or fragmentary, vague or specific. This composes his frame of reference when he looks at some issue in the reign or period and, precisely because it is the framework through which he sees things within the time-span covered, he can easily be oblivious to that framework and its effect upon his range of vision. Now supposing he takes one, or better (for purposes of comparative analysis) two or more writers whose works fall within the period concerned and checks, against an outline list of all the hypothetical major issues of the textbook reconstruction of the period, to see just what in fact are the issues to which each writer makes reference. If he has, say, three writers and the issues which

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they regard as salient largely overlap, leaving whole areas of the textbook reconstruction unnoticed, this preliminary check will have indicated parts of the frame of reference where anachronism may well be latent. The initial hypothesis testing can often be conducted "in the big", by simply checking off whether an issue is in fact mentioned. However, it frequently happens by serendipity effect that even a rapid search of this kind reveals that the relative emphases of the issues to which reference *is* made is quite different from that hypothesized by the textbook réconstruction. In such a case, the follow-up analysis bears in detail on the quality of reference to each of the group of issues whose relative eminence seems to need re-ordering.[54]

The latter type of operation is in fact a good way of seeing, across a group of contemporary writers, how far their impressions agree in centering on particular issues in particular ways : the problem of discerning patterns amid complexity which has been considered before. Consider the following visual impression of three viewpoints of a cluster of inter-related issues :

Table 6

ISSUES   WRITERS

	X		Y		Z	
	amount said	emotionality	amount	emotion	amount	emotion
1						
2						
3						
4						

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As Figure 1 indicates, I have used this technique for examining how the historical character (here thought of as "a cluster of inter-related issues") of a politician appeared to a succession of different writers. The objective was to date accretions to, distortions of and omissions from the image apparent in the work of a contemporary and to identify writers influential in the transmission of a tradition, against a background of theory on the distortions resultant upon the transmission of a complex issue through a series of communicators.[55]

Analysis could proceed in terms of frequency of mention of the particular issue in a writer's works combined with amount of emotion shown (in e.g. colourful words or imagery or in appeals to emotion rather than rationality in arguing to the issue). One might plot in high, medium or low scores on these counts or only register high scores, adapting the level of analysis as the material suggests. In computerized content analyses in fact the findings may simply appear as columns of figures. The document, in such cases, is prepared (this may involve removal of some word-endings or stating word-relationships by a code of numbers, the appropriate numbers being inserted after the word), then a tag tally program (called a "dictionary"; this represents various content analysis categories related to the dictionary's coverage — e.g. political terminology— called "tags"; related words are grouped under these tags, are "tagged" that is) counts words which have been tagged along various dimensions (related to the semantic differential, mentioned above) and points out the numbers of words in each dimension (e.g. positive/negative, strong/

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weak, active/passive) — down — referring to each issue — across. Trends within the text show up as patterns in the matrix thus generated.[56]

Another way of looking at a writer's attention focus is well illustrated by Isaacs in his demonstration of the insights into a writer's thought-world which are provided by the way he approaches an issue. Taking my bureaucrat, for instance : he could look upon Persia as an object to be exploited in the interests of Constantinople; or he could see Persia as one of many elements towards which Constantinople (another object) has to align herself in a state of balance of power politics; or he could have a picture of Persia as a monstrous threat towering over Constantinople. The first viewpoint regards interactions between the self and others from a self-centered, exploitative point of view, the second is a more detached, strategist's viewpoint, the third contains much of an authoritarian's projections of his own repressed hostilities.[57] Such analysis of how a writer looks at a thing (rather than of what parts of the thing he "sees") cannot be carried out without a very sharp delineation between *what* is at the writer's focus of attention and *how* he orients himself to this. I have no study bearing on John with which to illustrate this type of approach but have employed this technique in a word-study relating to an earlier period. The idea was to identify who used a particular word and to whom it was used : i.e. was it used in the speech-pairs male:male, male:female or female:female; what was its social direction : superior to inferior, peer to peer, or inferior to superior, and so on. In one case,

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a word which appeared to be quite neutral (*quaeso*) was found to have a strong feeling-tone and limited conversational usage (to brusque, emotional interchanges involving high status male peers).[58]

This type of analysis involves great specificity and precision. The analyst must focus his attention unwaveringly on the interactions in process, rather than the — much more distractingly visible — objects linked. Hence conscious acquaintance with methods evolved for such analyses is highly desirable. Berne's popular book, *Games People Play*,[59] outlines the conceptual and analytical framework relevant to transactionalist investigations. Again, I have no case-study directly bearing on John's period to cite by way of illustration. However, a comparison of the transactions in the historical novels of Achilles Tatius and Niketas Eugenianos (who modelled himself upon the former) would do much to indicate differences in everyday personal relationships in Roman as compared to Byzantine times. The advantage conferred by this type of analysis is that it effects entrance into the world of antiquity in an area not otherwise reachable. The historians, for instance, do not often concern themselves with such mundane goings-on, and without the tool it is difficult to bring into focus these areas of a writer's thought-world, for they are simply taken for granted and hence marginal to the presentation of his theme.

Any reader who cares to follow up leads provided in this study will find how flexible these analytical tools can be in the hands of imaginative and

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experienced practitioners.[60] Only a limited insight into their potential usefulness has been given, because, as with typing or driving, the written word is a cumbersome means of describing manipulative operations. The study will have served its purpose if readers do in fact try out the tools to see if they work in practice on their own specific problems. Dexterity grows with practice and familiarity. While the facility gained in analysis cannot provide the all-important insight or "feel for the situation" which is so striking a feature of sensitive work in the humanities, it can provide an ease in testing and in formulating hypotheses which gives additional range and penetration to those insights. And it is perhaps worth repeating the observation that a typical reaction of humanists who have gone to the trouble involved in shaping up their projected research so that it could be quantified in one or other of the above ways is one of gratification at the greater clarity and increased extent of their findings.
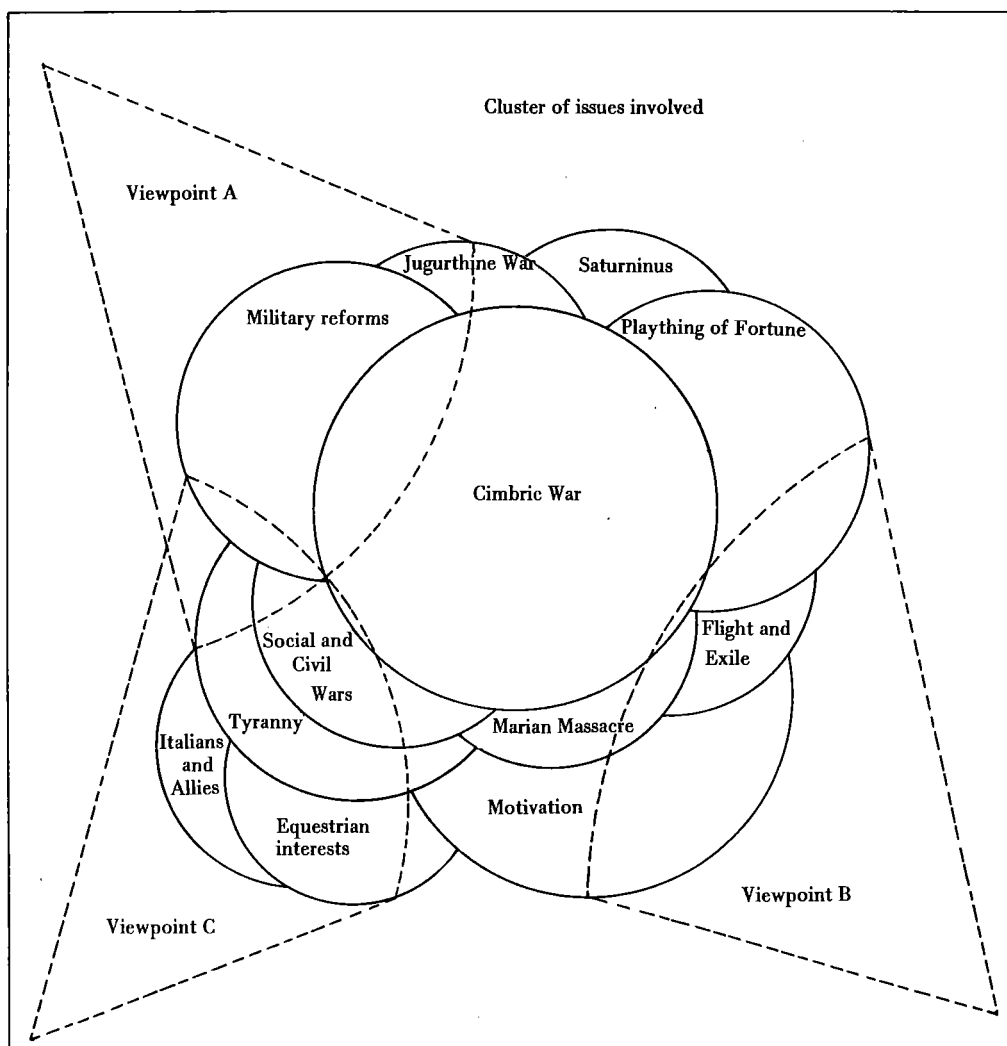
T.F. CARNEY,

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NOTES

Figure 1 : Different Pictures of MARIUS, *Consul VII* .

Cluster of issues involved

Viewpoint A

Jugurthine War   Saturninus

Military reforms   Plaything of Fortune

Cimbric War

Social and
Civil
Wars   Flight and
                                    Exile
Tyranny
Italians   Marian Massacre
and
Allies
                    Motivation
Equestrian
interests   Viewpoint B

Viewpoint C

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1. For the concept, see R.E. Lane & D.O. Sears, *Public Opinion,* Foundations of Modern Political Science Series, 1964, 40; the chapters on "Portrait of an Opinion" and "Group Influence" present a conceptual framework which greatly facilitates the kind of analysis described in this study.

2. For the most recent and the fullest account of John's life and work, see *Der Kleine Pauly,* Lydos 38, s.4175; for a translation, see T.F. Carney, *John the Lydian, On the Magistracies of the Roman Constitution,* (Sydney, Wentworth Press) 1965; the present work draws heavily on findings currently available in the form of a comparative Administration Group *Occasional Paper* for April 1967, "A Traditional Bureaucracy : Roman-Byzantine Reactions to Reform".

3. See the suggestive article " An·Information-Engergy Model" by J.T. Dorsey Jr. pp. 37-57 in F. Heady & S.L. Stokes, *Papers in Comparative Public Administration,* 1962; also relevant are the comments on "pre-print man" in M. McLuhan, *The Gutenberg Galaxy,* 1962, pp. 28, 90, 92-3 & 99. Use of the techniques discussed in this study compels one consciously to examine the appropriateness of one's assumptions in regard to economic and psychological models; my thinking in this area has been much influenced by K. Polanyi *et alii, Trade and Market in the Early Empires,* 1957 and E.E. Hagen, *On the Theory of Social Change,* 1962.

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4. Cross-cultural comparisons have indicated the types of issues normally to the fore in a pre-industrial bureaucratic society : see e.g. S.N. Eisenstadt, Bureaucracy and Bureaucratization, *Current Sociology* 7, 1958, 99-165. A large-scale model showing how these are systematically interconnected occurs in F.W. Riggs' study Agraria and Industria (in W.J. Siffin ed., *Toward the Comparative Study of Public Administration,* 1957 and now refined as the "prismatic" model in *Administration in Developing Societies : The Theory of Prismatic Society,* 1964). The models were then tried for goodness of "fit" on the most recent and complete historical work bearing on the period, A.H.M. Jones, *The Later Roman Empire,* 284-602. *A Social Economic and Administrative Survey,* 1964.

5. These are e.g. the components initially outlined by K.E. Boulding when he attempts to define an image (*The Image : Knowledge in Life and Society,* 1961, 3-4); see also E.E. Maccoby, T.M. Newcomb & E.L. Hartley, *Readings in Social Psychology,* 1958, 60. They seem to tap deeply-rooted variations in the personality structure when different ethic/national groups are compared : Lane & Sears, *op. cit.,* 40-41. K. Lynch (*The Image of the City,* 1960, 4-5 & 123-8) suggests some of the reasons.

6. Based on my study "The World of a Bureaucrat in Ancient Times" forthcoming in *Studies in Ancient Bureaucracy.*

7. Term and concept are Lynch's (*op.cit.* 9-13) : he defines it as "that quality in a physical object which gives it a high probability of evoking a strong image in any given observer."   .

8. Incidentally, it thereupon emerged that J. was probably in fact using the earlier, inferior but easier (and possibly more readily available) map of Strabo : his place-names etc. map on to this and almost fill it, whereas they leave large areas of Ptolemy's map unused). A failing often suspected in the self-styled polymath J. has been that of claiming to have read a wider range of authors than he had in fact read. A fringe benefit of the study was that it indicated gaps in J.'s awareness that were incommensurate with certain of his bibliographical claims. Also, a cross-comparison of his claimed reading with that of contemporaries suggested books which every school-boy of his time had read, what was currently obtainable, and what the *litterati* ought — as opposed to the actuality — to have read.

9. This was done by a manual content analysis (on this technique see B. R. Berelson, *Content Analysis in Communication Research,* 1952 and I. de S. Pool (ed.), *Trends in Content Analysis, A Summary,* 1959). I am aware of the enormous advantages in reliability conferred by computerized content analysis (on which see P. J. Stone, D. C. Dunphy, M. S. Smith & D. M. Ogilvie, *The General Inquirer,* 1966, 211-12), but feel that the former is likely to remain the work-horse of the pair. Empirically, the constant stream of odd jobs involving systematic data retrieval from relatively small universes of at least partially indexed data (e.g. the *corpus* of some writer's work) with which not only historians are faced involves compounding difficulties in funding and programming if these are done in a series of computerized studies (see L.T. Milic, "Making Haste Slowly in Literary Computation", pp. 149-50 in E.A. Bowles (ed.), *Computers in Humanistic Research,* 1967).

10. Within this period, the writings of the second century A.D. — when Rome's empire was at its zenith and readership of books probably at its peak (see F.G. Kenyon, *Books and Readers in Ancient Greece and Rome,* 1951, 36-39) — dominate J.' s thoughtworld, providing the intermediaries through whose eyes he saw the history and culture of Greece and Rome to that point. The works of the great age of Hellenistic scholarship prior to that time seem not to have survived, and the period subsequent to it passes almost without notice in J.

11. The logic behind the division is this. Period 3 maps J.'s life-space (for the concept, see Lane & Sears, 40). Period 2 delineates the world of East Rome, which came into being with the founding of Constantinople, a world that is institutionally, ethnically and territorially new. Institutionally, because Principate changes to Dominate; ethnically, because Greek language and culture dominates; territorially, because it is centred around a different heartland, that of Asia Minor. J.'s information on this world is of a different order from anything that goes before, in terms of abundance of detail and freedom from error. Also it corresponds much more closely with contemporaries' pictures of the period than does J.'s picture of earlier times, indicating considerable agreement in accepting a tradition in common.

12. E.g. architecture as a discipline seems to attract those with a strikingly visual quality of thought. Lynch is a good example; but contrast L. Mumford *The City in History,* 1961 — not a book which an historian would have written — with P. Thornhill's *The Waterloo Campaign* (Clearway Programmed Books, Methuen, 1965) — where a military historian is playing with a rudimentary form of war game requiring highly developed deductive analytical qualities of thought — for ins-

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tances of polar extremes of the types of analytical exercise in which people attracted into these two disciplines tend to excel.

13. Cf. W. Köhler, *Gestalt Psychology*, 1947, 80-122; see Maccoby *et alii*, 53 & 61-63. Presumably this is what makes the analysis of clusters of items in a field of associations such a rewarding form of content analysis : see Pool, on contingency analysis; Stone (p. 261) terms it "the wave of the future in content analysis". For a very succinct and striking illustration of its applicability to problems likely to confront an historian, see A.B. Ellis & F.A. Favat, "From Computer to Criticism : An Application of Automatic Content Analysis to the Study of Literature", in Stone, 628-38.

14. See Lynch, *op.cit.* n. 5, chapters III & IV and Appendix A.

15. Cassiodorus (c. 487-583) was an aristocrat and man of letters, born on his family's ancestral estate in the S. of Italy. He served in (discontinuous) succession as Head of three *bureaux* within the Western bureaucracy under various Ostrogothic monarchs before retiring to found a monastery, continue his writings, build up library resources and train monks to provide for the transmission of the texts of the Great Literature of his day. A bureaucrat and *litteratus* contemporary with John, he has been studied in the works detailed at n. 2.

16. It is striking how different is the world of these sixth-century writers from that of Seneca in the first century A.D. (on which see C.J. Herington, Senecan Tragedy, *Arion* 5, 1966, 435-41) : not only does S. not live in a beleaguered empire but he can visualize his world along with others in space (J.'s, by contrast to the latter concept, is an astrologer's world tied to a star-map).

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17. See G. Sartori, *Democratic Theory,* 1962, 172-6.

18. See "The Changing Picture of Marius in Ancient Literature", *Proceedings of the African Classical Associations* 10, 1967.

19. On the significance of this see the results of the "method of serial reproduction" in E.E. Maccoby *et alii,* 50; cf. 56-65.

20. It would appear that words have a kind of hard core of meaning which is resistant to change over time and a penumbra of associated meanings subject to change, so that, with any abstract word, the context is necessary to establish a meaning for a point in space and time : see S. Ullmann, *Semantics : An Introduction to the Science of Meaning,* 1962, 48-53, 62-70 & 116-40 (on, *inter alia* "words with blurred edges" and "verbicide") & Sartori, 207-27 (statement of transempiricist case). In the ancient world, there was considerable development of the political vocabulary in the second half of the fifth century B.C. and Thucydides (III,82) was aware of it. With Aristotle in the fourth century new depths were added to human self-awareness, in an expansion as important as that produced by Freud; however, the semantics of this were very dimly perceived. In the first century B.C. Cicero enormously expanded the conceptual resources of the Latin language and a highly specialized vocabulary of politics developed (cf. D.C. Earl, *The Political Thought of Sallust,* 1961). By 31 A.D., however, a writer like Valerius Maximus was living in a political culture so radically different that he could not understand the political catch-phrases of 70 years before — *but was not aware of this inability.* This lack of semantic awareness is the rule under the Principate and Dominate : see "The Changing Picture of Marius" at n. 18. On the conservatism of literary language during the latter period see E. Auerbach, *Literary Language*

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and its Public in Late Latin Antiquity and the Middle Ages, 1965, 251 ff.;
N.H. Baynes & H.St. L.B. Moss, *Byzantium : An Introduction to East
Roman Civilization,* 1948, 255 ff.

21. See E. Barker, *Social and Political Thought in Byzantium,* 1957,
2-3 & 14-15.

22. A perennial problem involves the pagan tone of writers known to be
Christians : it would seem that the dictates of *genre* led them to eschew
Christian concepts and vocabulary : A. & A. Cameron, Christianity and
Tradition in the Historiography of the Late Empire, *Classical Quarterly,*
14, 1964, 316-28. Such dictates of *genre* result in J.'s use of bureau-
cratic jargon, where this is appropriate (e.g. *pleroma* in Classical Greek
means "filling up (a pail with milk)"; in Hellenistic Greek it means
"filling in (a tax-form)"; in the Church Fathers it means "The Plenitude
of God" and in J. "the final position (which completes a sequence of
offices across a career").

23. This type of change is normally traced by semantic field analysis. The
classical study of this type took four related concepts, each highly-char-
ged with socio-political connotations at the point in time where the first
analysis of them was conducted. Analysis of the usage of one hundred
years later revealed only one concept effectively in use and that with
radically changed connotation : a whole value-system was thus shown to
have passed away — Ullmann, 7-8 & 244-50.

24. In particular, *Scratches on Our Minds,* 1958 and *The New World of
Negro Americans,* 1963, to which works this study is greatly indebted.

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25. John's world, for instance, is more threatened than Cassiodorus' — in terms of the main themes in the imagery of either writer or of the expectations which each entertained of life. On the approach, see E.H. Erikson, *Childhood and Society,* 1963, 190-91.

26. See Hagen, 71-84; cf. 174-80.

27. On strategy, see P.: Selznik, *The Organizational Weapon,* 1960, vii-xi; on the theory M. Rokeach, *The Open and Closed Mind,* 1960, 31-70.

28. This emerges rather strikingly when his reactions to a reforming Emperor are contrasted with those of Procopius in the latter's *Secret History :* see "Problems of Producing Change in a Traditional Society : A case-study — The Reforms of the Emperor Justinian", in the Comp. Administration Group *Occasional Paper* mentioned in n. 2.

29. For the term "political acrobat" and discussion of the two main interpretations of Cassiodorus, see G.A. Punzi, *L'Italia del VI secolo nelle "Variae" di Cassiodoro,* 1927, 48 ff. Diagrammatic illustration of the method of analysis outlined in the text would be :
Table 7 :

CAPACITY IN WHICH LETTERS WRITTEN

RULER	Quaestor	Master of Offices	Praetorian Prefect
Theodoric	x		
Amalasuntha		x	
Theodohad & Witigis			x

30. There are certain basic issues which have to be considered before proceeding to the use of *any* document (see e.g. R.J. Burke Jr., *The Ancient World 800 B.C. - A.D. 800* (vol. I in the McGraw-Hill series Western So-

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ciety : Institutions and Ideals) 1967, xiv-xvi).Assessment of viewpoint is inextricably involved in this process.

31. On such relational properties see P.F. Lazarsfeld at p. 122 in D. Lerner (ed.), *Evidence and Inference,* 1959 and Lazarsfeld & A.H. Barton at pp. 170-72 in D. Lerner & H.D. Lasswell, (eds.), *The Policy Sciences,* 1951; see also Figure 1.

32. A.L. Baldwin, "A Method of Investigating the Single Personality", in E.A. Southwell & M. Merbaum, (eds.) *Personality : Readings in Theory and Research,* 1964, 258-75; see now J.M. Paige, "Letters from Jenny : An Approach to the Clinical Analysis of Personality Structure by Computer", in Stone's *The General Inquirer,* 431-51.

33. I have not attempted this in John's case but am involved in such a study of Suetonius, where preliminary manual content analysis has revealed latent antipathy to the Emperor Hadrian on a scale not before realized.

34. For work on such biases and stereotypes that is relevant to the historical focus of this study see T.W. Adorno, E. Frenkel-Brunswik, D.J. Levinson & R.N. Sanford, *The Authoritarian Personality,* 1950; D. Lerner, *The Passing of Traditional Society,* 1958, and Rokeach, cited above.

35. See, in general, Maccoby *et alii, op.cit.* n.5, 85-7, 89, 95, 170 & 289; specifically B.R. Berelson, P.F. Lazarsfeld & W.N. McPhee, *Voting,* 1963, 215-33; C.E. Osgood, G.J. Suci & P.H. Tannenbaum, *The Measurement of Meaning,* 1957, 95-6. In terms of cybernetics, K.W. Deutsch, *The Nerves of Government,* 1963, 100-101 & 202-3 analyses the "costs" of consciousness. A striking instance of how persons used to seeing pictures as two-dimensional mosaics failed completely to see the point of a mo-

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ving picture which assumed a perspective viewpoint is discussed in Mc-Luhan, *op.cit.* n.3, 36-40. On selective perception in J.'s works, see my study "The Helops : A case-study of the Transmission of a Piece of (Natural) Scientific Knowledge by the Scholarship of Antiquity", forthcoming in *Phoenix* 21, 1967.

36. See H.J. Eysenck, *Sense and Nonsense in Psychology,* 1958 rep., 280 ff.

37. Significantly, humanists who have had to think through the problems posed in a conscious research design comment strongly on improvements resulting in their work : see e.g. Kroeber and Kucera in Bowles, *Computers in Humanistic Research,* 135-6 & 157 resp.

38. See Pool, *Trends in Content Analysis,* 194; Baldwin, *op.cit.* n.32, 263 with 271-3, and Stone, *The General Inquirer,* 32-4; 196, & especially Osgood's technique of "Evaluation assertion analysis" mentioned at 40-41. Note however that quantitative studies are here being used for interpretation, description and the generating of hypotheses (rather than the testing of statistical significance) : *ib.* 244.

39. See Stone 33 (note however 230-31).

40. Stone, 48-49 & 88-9; on the scale, see Osgood *et alii, Measurement of Meaning,* 85.

41. See Stone, 134-206 and esp. 165 & 196.

42. Byond a certain level the volume of communications and the magnitude of decisions conspire together to become communication over-

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load and decision overload : cf. Deutsch, *The Nerves of Government*, 161-2.

43. Decisions made by observing one case present problems of a different nature, in regard to assessing probability or inference, than do those made by observing several cases : see J.S. Bruner, J.J. Goodnow & G.A. Austin, *A Study of Thinking*, 1956 182 ff. and H. Reichenbach in Lerner & Lasswell, *The Policy Sciences*, 124-6. On the "strategy of choosing multiple comparison groups" see B.G. Glasser & A.L. Strauss, "Discovery of Substantive Theory : A Basic Strategy underlying Qualitative Research", *American Behavioral Scientist* 8(6), 1965, 5-12.

44. See "Problems of Producing Change", *op. cit.* n. 28. The matrix on "Change" is appended to these footnotes by way of illustration.

45. For discussions of the method see P.F. Lazarsfeld & A.H. Barton, on "Qualitative Measurement in the Social Sciences", in Lerner & Lasswell, *The Policy Sciences*, 155-92; Lazarsfeld, on "Evidence and Inference in Social Research" in D. Lerner (ed.) *Evidence and Inference*, 1958, 107-38 and on "Multivariate Analysis" in P.F. Lazarsfeld & M. Rosenberg (eds.), *The Language of Social Research* 1955, 115-99.

46. See discussion on this in Berelson's summing up in *Content Analysis in Communications Research*.

47. This is a Guttmann scale; on its various uses, see M.W. Riley, "Scale Analysis of Collective Data", in M.W. Riley *et alii, Sociological Studies in Scale Analysis*, 1954.

48. This need not involve a huge array of statistics : it is, e.g., what P. Aries is doing when he compares the grouping and presentation of human subjects in paintings of different eras (to show changing attitudes to the small child) : *Centuries of Childhood*, 1965, 38-49. On the other hand if the patterns are confusingly many or complex, a technique has been evolved to make interpretation a methodical (rather than an intuitive, hit or miss) operation : L. Festinger, S. Schachter & K. Back, "Matrix Analysis of Group Structures", in Lazarsfeld & Rosenberg, *op. cit.* n.48, 358-67.

49. Actually, Isaacs' respondents would all fall into the "High" and "Middle" class rankings on the matrix in the text, as his panel was taken from people in the "communications process". For simplicity of exposition only an outline of the process, not Isaacs' actual findings, has been provided.

50. See Berelson *et alii, Voting* (*op. cit.* n.35), vii-viii & 132-49; cf. Stone, *The General Inquirer,* 52-3 (Stone, incidentally, thinks that application of content analysis to historical documents "represents the most powerful use" of the tool : *ib.* 236).

51. See S.N. Eisenstadt, "Political Struggle in Bureaucratic Societies", *World Politics* 9, 1956, 15-36 and Riggs, *Administration in Developing Countries (op. cit.* n.4), 99-237.

52. For detailed analysis see "Problems of Producing Changes..." *op.cit.* n.28.

53. Using this technique I was able to demonstrate that a crucial aspect of the modern conventional picture of an ancient politician was owed to one passage only in a source writing about 180 years after the poli-

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tician's death, and that the passage was in conflict with all contemporary views of the politician and inconsistent with the other references to the issue elsewhere in the writings of the late source on whose sole authority it rested : see Carney, *A Biography of C. Marius*, [1961], pp.33-34. This example provides a good illustration of the difference between analysis concentrating on a focus of attention and analysis aiming to let patterns emerge by generating data so that the latter will fill out a matrix.

54. The follow-up consists of asking one of three questions :
(1) is item X there or not ?
(2) How much of item X is there ?
(3) What is item X connected with ?
For instance, in terms of the study discussed at n.55, these questions appear as :

> 1. does depiction of Marius as timid before citizen assem-blies occur anywhere else than at Plutarch, *Marius* 28, 2 ? (No.)
> 2. Does depiction of the "Marian Massacre" grow more horrific the farther one gets from contemporary sources ? (Yes.)
> 3. How many details are there on the Jugurthine War and, by contrast, on the Cimbric War which do not centre around or involve Numidicus, Rutilius, Catulus or Sulla ?
> (Almost none in the former case; the majority in the latter.)

These different methods of counting involve different approaches to the source-material and yield different types of finding : see Pool, *Trends in Content Analysis; op.cit.* n.9, 9ff. and C. North *et alii, Content Analysis. A Handbook with Applications for the Study of International Crisis,* 1963, 101 n.3 and discussion in the text at 91 ff.

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55. See "The Changing Picture of Marius", *op. cit.* n.18.

56. See O.R. Holsti, "Computers in International Relations Research", pp. 110-114 in Bowles, *Computers in Humanistic Research, op.cit.* n.9, and Stone, *The General Inquirer,* 85-92.

57. On authoritarianism as the appropriate psychological process to be assumed as operative in J.'s case, see nn. 3, 4 & 28 and texts thereto. There is nothing in the analytical procedure to indicate "appropriate" psychological assumptions, but it does force one to awareness of problems concerning, and the need for, appropriateness in such assumptions. The operation may itself be aimed precisely at establishing an appropriate model by sifting for a syndrome of drives, values, need-states or what have you : see nn. 27 & 36 and text thereto. For work on such problems see Milic, pp. 146-9 in Bowles, *Computers in Humanistic Research* and Chap. 14 in Stone, *The General Inquirer.*

58. "The Words *sodes* and *quaeso* in Terentian Usage", *Acta Classica* 7, 1964, 57-63. More pertinent to the forms of the present study is J.R. Grant, "A Note on the Tone of Greek Diplomacy", *Classical Quarterly* 15, 1965, 261-66, where diplomatic transactions are studied to check whether the textbook assumption of nineteenth century diplomatic protocol as normal Greek practice is correct (it isn't).

59. E. Berne, *Games People Play,* 1964, 13-65. For a study of this general nature bearing on transactions pertinent to the focus of the present study, see R.A. Bauer, I. de S. Pool & L.A. Dexter, *American Business and Public Policy : The Politics of Foreign Trade,* 1964, 466-79.

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60. While it is not implied that the methods here discussed constitute the only way to perform analyses of this topic, I do think that these methods are superior to others in use : see S.M. Lipset, *Political Man,* 1959, Methodological Appendix, 72-75. As nn. 3, 4, 23, 27 & 42 imply, this method is enriched by awareness of heuristic models (on which see further F.W. Riggs, "Confusion or Clarity : On the Use of Models for Administrative Analysis", *Indian Journal of Public Administration* 6, 1960, 225-42) and systems analysis.

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