

POSTMATERIALISM AS A DIMENSION OF CULTURAL CHANGE

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ABSTRACT

The results of a broad, inductive study of cultural orientation in Norway are used to throw light on issues in the debate on dimensions of cultural change. Inglehart's index of materialism–postmaterialism is shown to constitute one diagonal in a two-dimensional cultural space with axes resembling those discussed by Flanagan. It is argued that they both fail to appreciate the importance of cultural differences along the other diagonal, opposing hedonistic and austerity oriented, in demographic terms typically younger men with low education versus well educated older women.

The latest book of Ronald Inglehart, *Culture shift in advanced industrial society* (1990), sums up the impressive results of his two decade endeavor to describe the gradual cultural change from materialist to postmaterialist values and analyze its causes and consequences. The book covers a lot of important and debated issues, where Inglehart argues elegantly in favor of cultural or value explanations of behavior. He also forcefully counters critical comments to his earlier writings. The purpose of this article is not to contest the general theoretical assumptions of Inglehart, the idea of a lasting imprint of experiences during adolescence on the value preferences of the individual, giving rise to relatively stable intergenerational differences in cultural orientation as the socioeconomic conditions during socialization change over time, differences which through the process of generational replacement change the aggregate value preferences of a society. What will be questioned is certain aspects of his description of the content of the intergenerational differences in cultural orientation as a shift from materialism to postmaterialism.

The empirical database of Inglehart is outstanding as regards the number of cases and the impressive span in time and space they cover. The main part of the analysis relies on a very narrow set of indicators, however, derived from his theoretical reasoning about the nature of cultural change in industrial societies. What happens when one uses a more open, inductive approach and a much broader set of value indicators? The results from an analysis of a series of large value surveys, called the Norwegian Monitor, show far more pronounced

differences between age groups than Inglehart's postmaterialism-index, and present an alternative picture of the cultural characteristics of the young.

Having analyzed the relationship between the Monitor dimensions and Inglehart's concepts, the results are used to shed light on central issues in the long and inconclusive debate between Scott Flanagan and Inglehart concerning the dimensionality of cultural change. Flanagan has persistently insisted that the postmaterialism-index mixes together dimensions which ought to be kept apart (Flanagan, 1982a, 1982b, 1987; Flanagan and Lee, 1988), but have not succeeded in persuading Inglehart to change his approach (Inglehart, 1982, 1990, p. 142–3). Nor has Inglehart responded to the 'middle position' advocated by Oddbjørn Knutsen who in addition to the materialism–postmaterialism index of Inglehart also looks at two subdimensions it may be decomposed into (Knutsen, 1985, 1986, 1990). By using a two-dimensional space when analyzing variations in cultural orientation, instead of presenting results for indexes one at a time, a clear picture of the relationship between the different positions in this debate emerges.

INGLEHART'S THEORY OF CULTURE SHIFT

As a brief presentation of Inglehart's theory we quote from his latest book:

The Materialist/Postmaterialist thesis is based on two key hypotheses: (1) a *scarcity hypothesis* that one's priorities reflect one's socioeconomic environment so that one places greatest subjective value on those things that are in relatively short supply; and (2) a *socialization hypothesis* that, to a large extent, one's basic values reflect the conditions that prevailed during one's preadult years. Taken together, these two hypotheses imply that, as a result of the historically unprecedented prosperity and the absence of war that has prevailed in Western countries since 1945, younger birth cohorts place less emphasis on economic and physical security than do older groups, who have experienced a much greater degree of economic insecurity, and that conversely, the younger birth cohorts tend to give a higher priority to nonmaterial needs, such as a sense of community and the quality of life (Inglehart, 1990, p. 56).

The title of Inglehart's first book on this topic: *The silent revolution* (1977), characterizes the importance as well as the subtle nature of the resulting process of cultural change. Society undergoes a basic transformation, but not in a sudden and dramatic way: 'Instead, fundamental value change takes place gradually, almost invisibly . . .' (1990, p. 69). Inglehart also sees the rising level of education as contributing to the shift towards postmaterialist values, and among its consequences he points to changes in political ideology and behavior (1990, p. 6).

The extensiveness of the data Inglehart has been able to collect to test his theory of a culture shift must be unique in social research, including a remarkable time series of surveys for six West European nations covering 18 years, in total nearly 200,000 interviews (1990, p. 85). Altogether comparable

data exist for two dozen nations. Inglehart finds within each nation a pattern of differences between age and educational groups in line with his thesis of a shift towards postmaterialism. By pooling the data for several nations he also obtains solid databases for a cohort analysis, with results supporting his interpretation that the age differences are an effect of generation rather than life cycle (1990, ch. 2).

The extensiveness of the database in terms of number of cases has been accomplished, not surprisingly, at the expense of its intensiveness, the range of indicators of cultural orientation is very limited. The major part of the empirical analysis is based on a ranking of four items, although the measure of materialist–postmaterialist orientations in several studies is expanded to 12 items, and the relationship to other values are sometimes discussed.

The analysis presented below uses the original 4-item index, shown in Table 1. Two of the items to be ranked are intended to express a materialist, the other two a postmaterialist value orientation. A respondent with a consistent ranking—either both materialist or both postmaterialist items as his/her first and second preference—is classified accordingly. Selecting one item from each category gives the classification ‘mixed’ orientation on the MPM-index.

Most Norwegians end up in the middle category (Table 2). The figure of 63 percent ‘mixed’ in the combined 1989–91 samples is a little above the results reported by Inglehart for most other nations in 1986–87, but Great Britain (63 percent), Denmark and the United States (61 percent) are at the same level

TABLE 1 Inglehart’s 4-item value indicator

Question: ‘Lately there has been a lot of talk about what should be the goals of this country for the next 10 years. On this card various goals which different people might prefer are listed. Which of these goals do you consider the most important?’
– ‘And what would be your second choice?’

	<i>First choice</i>	<i>Second choice</i>
	<i>percent</i>	
1 Maintain order in the nation (M)	58	22
2 Give people more say in the decisions of the government (PM)	17	23
3 Fight rising prices (M)	9	25
4 Protect freedom of speech (PM)	16	29
Total	100	99

MPM-index:

Mat.: 1 + 3 or 3 + 1; Post-Mat.: 2 + 4 or 4 + 2; Mixed: Other comb.

Source: MMI, Norwegian Monitor, 1989 and 1991 combined.

TABLE 2 Age, education and materialism–postmaterialism in Norway

	<i>Value orientation</i>			<i>(N)</i> <i>(= 100 percent)</i>	<i>Balance</i> <i>Postmat.–</i> <i>Materialist</i>
	<i>Postm.</i>	<i>Mixed</i>	<i>Mater.</i>		
All	11	63	26	(5683)	– 15
Age					
15–24	13	66	21	(1127)	– 8
25–34	15	64	21	(1126)	– 6
35–44	16	59	26	(1027)	– 10
45–54	11	66	23	(769)	– 12
55–64	7	64	28	(642)	– 21
65 +	3	63	34	(1172)	– 31
percent – d (15–24 – 65 +)	10	3	– 13		23
Education					
High	23	63	14	(1344)	9
Medium +	11	66	23	(2353)	– 12
Medium –	7	64	29	(1566)	– 22
Low	3	59	38	(1171)	– 35
percent – d (High–Low)	20	4	– 24		44

Source: MMI, Norwegian Monitor, 1989–1991.

(1990, p. 93). The pattern of group differences in Table 2 conforms with that of other nations as shown by Inglehart. Looking at the balance between postmaterialists and materialists (last column), the younger age groups are less materialist than the older ones, and the highly educated less than those with little education.

The small anomaly that the second youngest group have a slightly more postmaterialist balance than the youngest, may well reflect random sampling variation. But even if real it seems reasonable within the framework of Inglehart's theory, since the value orientation of the youngest should be influenced by the recent recession and rising youth unemployment in Norway.

The age differences are somewhat smaller than those found by Inglehart in many countries, but on a par with those of Great Britain, Denmark, and Belgium, and greater than in the United States (Inglehart, 1990, p. 93). The results for the MPM-index in the Norwegian Monitor study are thus fully in accordance with those reported by Inglehart in his book. We might end here by concluding that yet another brick has been added to the vast empirical

foundation supporting his theory. Instead it will be argued that the result in itself may raise doubts about the assumed affluence–postmaterialism relationship.

Inglehart's work conforms with the canons of deductive research, first formulating a theory and deriving the MPM-index from ideas about the nature of materialist and postmaterialist orientations, then testing whether the empirical relationships between this index and variables such as age/cohort and education correspond to the hypotheses deduced from his theory. The results are taken to confirm (strengthen) the theory, since the differences go in the predicted direction. Within the deductive approach, however, there is a danger of regarding the conclusion to be drawn from an empirical test as a dichotomous choice—either the theory is supported or refuted—and let this be decided by a test of statistical significance. Instead one ought to ask for the *degree* of confirmation, as indicated by the strength of the relationship.

Using a standard measure of association like the percentage difference instead of the balance between postmaterialists and materialists, Table 2 shows a case of significant, but rather modest differences between the age groups. So modest, considering the dramatic increase in the standard of living in Norway over the time span separating these cohorts, as to question whether the results do not in fact contradict Inglehart's reasoning. At least one would have to conclude that the effect of the level of economic prosperity on the outcome of the socialization process is very weak indeed.

There is another possibility, however, that the existing cultural differences between the age groups are much greater than those shown in Table 2. A strict deductive approach runs the risk of 'premature closure', of not discovering important traits of a phenomenon because of focusing on a particular aspect from the very outset. Instead of being restricted to answering the question 'Do we find this particular difference in value orientation between age groups?', a broader inductive approach makes it possible to ask 'What cultural differences do exist between the age groups?', with the possibility of unexpected answers.

Stating that 'To detect generational differences, one must have some theoretical guidance that points to those components of culture that one believes are changing, and then proceed to measure them' (1990, p. 20), Inglehart overlooks the alternative strategy followed in the Monitor study of attempting to cover the widest possible spectrum of cultural components.

THE MONITOR VALUE STUDY

The Monitor uses approximately 160 questions to construct 40 value indexes, which through a correspondence analysis reveal major cultural dimensions in the Norwegian population. The study has been carried out biannually since 1985,

with representative samples of nearly 3,000 respondents interviewed in each wave. The two last ones, from the autumn of 1989 and 1991, also included Inglehart's original four item value index, making a direct comparison of results possible. The surveys are carried out by the market research institute MMI, and have clients in the private as well as in the public sector. This and similar studies done in other countries around the world,¹ are not based on one particular theory of cultural evolution, from which a specific empirical measure is derived. Instead there has been an eclectic selection of values from previous studies, supplemented with new ones as deemed necessary, with the aim of covering a widest possible spectrum of preferences found among members of the population, regarding basic goals and means on the personal, interpersonal and societal level.

Cultural orientation may be described at three levels in the Monitor study, with reference to specific attitudes, to more general values or to even more general cultural dimensions. The measurement process starts by asking the respondent the 160 questions, mostly agree-disagree scales. The item scores are combined into 40 additive indexes, designed to measure a value (e.g. creativity) or a pair of opposed values (e.g. risk taking versus security). In the third step the value indicators are subjected to a dimensional analysis to arrive at the most important cultural differences in the population. The method used is correspondence analysis of the matrix of all bivariate tables, with the indexes dichotomized. Quite similar dimensions result when one performs instead a principal component analysis on the complete index scales.

The positioning of the values (i.e. the average location on the axes of those who possess the value) is the basis for forming an idea of the meaning of the two first axes and the plane they define. Figure 1 gives a simplified picture of the location for a selection of values typical of each dimension and the four quadrants they divide the cultural space into. The values at the upper extreme of the first axis express a taste for risks, change, and new cultural trends, while those at the bottom indicate that stability, traditions, and security are preferred. Those placed at one end of the second axis give priority to own needs and material well-being, and signal sensitivity to the opinions of others, while the values at the opposite end are concerned with creativity, expressing own identity, and spiritual phenomena.

THE CULTURAL SPACE OF NORWAY

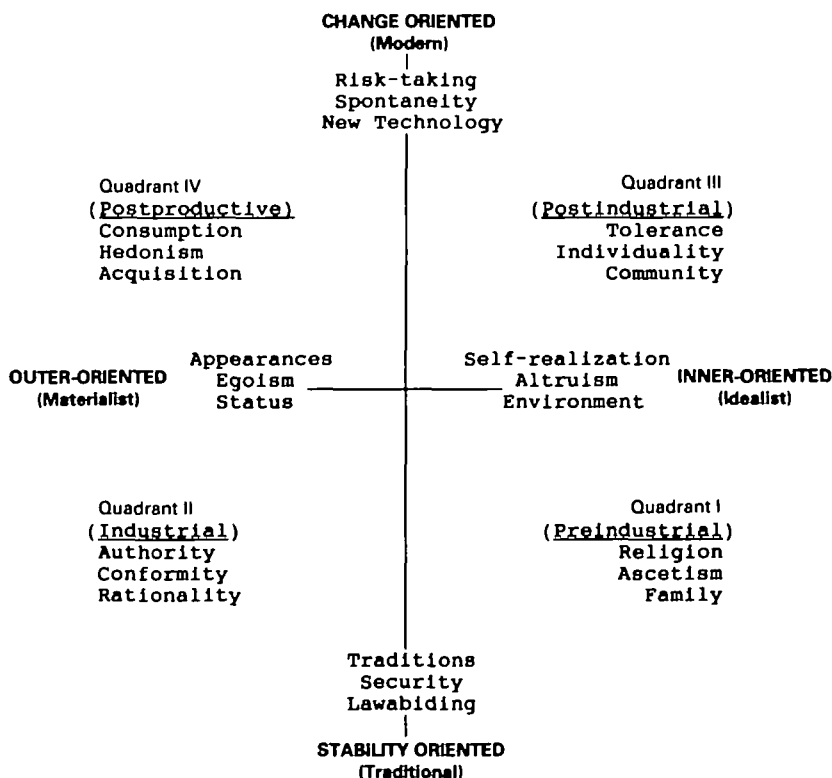
Based on impressions of common properties of the extreme values the first dimension may be 'baptized' *change-* versus *stability-*oriented, and the second

¹ There is an organization, RISC (Research Institutes on Social Change), located in Nyon, Switzerland, with subsidiaries or affiliated institutes in countries all over the world which carry out such studies, including also a set of common items used for comparative analyses of cultural trends for clients among multinational companies.

outer- versus *inner-*oriented. Other terms might seem equally fitting, for instance modern versus traditional for the first and materialist versus idealist for the second dimension have also been used. Combined as axes in a plane, we get four quadrants of different cultural orientations.

The values typical of each quadrant describe distinctive subcultures. Those of the stability and inner-oriented quadrant (I) may be called the 'root-Norwegian' or pre-industrial subculture, since they represent ideals and institutions dating back to the traditional agrarian society. The values of the stability and outer-oriented quadrant (II) may be called the authoritarian or industrial subculture, since several seem typical of earlier descriptions of traditional working class culture (Lipset, 1960). The upper-right quadrant (III) contains values which may be seen as characteristic of the expanding tertiary sector, especially the public part, making post-industrial subculture a possible term. Many of them are also associated with the anti-authoritarian and feminist movements of the late sixties and seventies, sometimes referred to as the culture of the 68-revolt. The remaining change and outer-oriented quadrant has traits typical of the

FIGURE 1 The cultural space of Norway as depicted by the two first dimensions and selected values from the Monitor project.



'yuppie' subculture of the eighties. Its focus on pleasures of the moment may seem better adapted to mass consumption than to productive activity, reflecting a dilemma of modern industrial society discussed by Daniel Bell (1976). Hedonist, consumption-oriented or 'post-productive' are possible labels for this subculture.

The numbering of the quadrants I–IV follows the historical sequence for the epochs assumed to be reflected in their subcultures. The direction of development in Figure 1 thus takes the form of a Z (starting from bottom right). The transition from industrial to post-industrial culture in some respects represents a return to inner-oriented or idealist values, similar to but not the same as in pre-industrial culture, an observation made by Inglehart (1982, p. 446).

A reversal of direction towards a modern version of materialist culture in the fourth 'post-productive' quadrant is a development contradicting his postmaterialism theory. That we actually have such a tendency among segments of the young, is indicated by the Monitor results, as will now be demonstrated. There is a problem of documentation, however. Within the frame of an article it is impossible to present the complete analysis behind the results sketched above, including the wording of all items, the construction of the value indexes, and the analysis leading up to the dimensions of cultural orientation. This of course would be necessary to permit the readers to form their own judgment of the content of the measures.

The solution to this dilemma which has been chosen, is that instead of using the results of the original analysis, the comparison with Inglehart's study will rely on two simple four-item additive indexes reflecting the two main axes of the Monitor. This may also be seen as contributing to 'fair play', the difference between the two analyses will be in content rather than size of the set of indicators of cultural orientation. It also facilitates replication.

THE VALUE INDEXES

The selection of items for the Monitor indexes has been made on the basis of their correlation with the two main dimensions from the correspondence analysis.² The resulting sets are shown in Table 3, which also give the results (percentage agreeing to the proposition) within each of the four quadrants of the cultural space we get by combining the two indexes, dichotomized so as to give an even distribution of cases.

² Items correlated mainly with just one of the dimensions have been preferred, in order to obtain independence (zero correlation) between the two indexes. In addition question content and the response distribution have been considered. For the sake of simplicity, only items with agree-disagree responses have been used. The response alternatives were: completely disagree, partly disagree, impossible to answer, partly agree, and completely agree. The scoring was 0–4, with no answer scored 2 along with impossible to answer (the NA rate for most questions is around 1 percent). Each index includes items in opposite directions, in order to neutralize possible occurrence of response-set (yes-saying).

TABLE 3 The Monitor indexes: Percentage agreeing within each quadrant defined by the dichotomized indexes

<i>Quadrant</i>	<i>Changes & Outer</i>	<i>Changes & Inner</i>
	<i>Stability & Outer</i>	<i>Stability & Inner</i>
<i>Dimension 1: Change vs. stability</i>		
I am prepared to take significant risks to get what I want out of life	74 30	62 21
The old traditional ways usually are better than today's fashions	35 80	26 72
Sexual experiences prior to getting married contribute to a happier marriage	65 28	55 15
There are many opinions that should never be allowed on radio or television	27 82	15 69
<i>Dimension 2: Outer vs. inner-oriented</i>		
I lack some material possessions to be able to live the way I want to	75 70	22 11
A dull job is fine with me, as long as it is well paid	34 36	4 5
We should take care of the problems in our own country before spending money to help people in other countries	82 85	26 38
I am willing to cut down on my present consumption if this will contribute to preserve our nature's resources	76 79	96 96

The items of the change- versus stability-index reflect willingness to take risks versus preference for security, openness to new practices and norms versus preference for traditional ways (in general terms as well as with reference to sexual mores), and tolerance of deviating opinions. The inner- versus outer-orientation indicators reflect focus on own needs, material possessions and economic rewards versus personal fulfilment and concern for other people or the environment.

The indicators capture various aspects of the content of the two original dimensions from the correspondence analysis. While all correlate highly with the dimension they represent, they correlate only moderately between themselves. The resulting additive indexes are clearly related to the original dimensions, we have a Pearson's r of .69 for the first and .60 for the second, and as intended they are unrelated to each other (.02). The patterns of relationship with other

variables reported later in this article are very similar to those obtained with the original dimensions, although usually of a somewhat lesser strength.

To get a richer picture of the characteristics of the four quadrants as captured by the two dichotomized indexes, Table 4 gives concrete empirical illustrations of variations in the response to a selection of items. To highlight the differences between diametrically opposite quadrants, the percentage differences along the two diagonals are shown. Attitudes varying mainly along the bi-diagonal opposing quadrant I and IV, includes religiosity (A), traditional morality (B and C), austerity versus hedonism (D and E), and two aspects of consumption orientation: conspicuous (F) and immediate (G) consumption. Along the main

TABLE 4 Value profile and attitudes

	<i>Quadrant*</i>		<i>Diagonal difference percent</i>	
	<i>CO</i>	<i>CI</i>		
	<i>SO</i>	<i>SI</i>		
A Believe in God	38 63	39 68	-24	-30
B Sale of pornographic magazines/books should be free (rather than prohibited)	53 22	33 14	11	39
C Acceptability of behavior: keep money one finds (not at all acceptable)	45 67	53 70	-14	-25
D It is not good for people to get all they wish for (CA)	51 69	59 75	-10	-24
E In the future I want to follow my desires and enjoy the pleasures of life (A)	83 63	72 53	9	30
F I try to get hold of things which will make an impression on others (A)	22 16	10 8	-6	14
G I do not mind using the hire-system to buy things (A)	27 17	15 10	-2	17
H Prefers: family where spouses are equal with regard to career and home duties (of 3 alt.)	55 36	68 38	32	17
I Chooses: Possibilities to be more creative Over: Obtain more economic security	37 31	63 54	32	-17
J The most important thing for a child to learn is obedience and respect (CA)	33 60	15 43	-45	-10
K It is always important to keep calm and not let oneself be carried away by emotions (A)	65 82	52 72	-30	-7
L I dislike people who cannot behave like the rest of us (A)	39 59	16 32	-43	7
M It's of no use to plan for the future, what happens depends on fate anyhow (A)	26 41	13 19	-28	7

* Percent within a quadrant answering as specified; CA: completely agree; A: agree or partly agree.

Source: MMI, Norwegian Monitor, 1989-1991; N = approx. 1500 cases.

diagonal opposing quadrant II and III, we find variation in attitudes to gender roles (H), creativity versus economic security (I), authority (J), rationality (K), conformity (L), and fatalism (M).

LOCATION OF MATERIALISTS AND POSTMATERIALISTS

When the three types of the MPM-index are entered into the cultural space of the Monitor indexes, they fall along the main diagonal from stability- and outer-oriented to change- and inner-oriented (Figure 2). Table 5 gives a more detailed picture of this diagonal pattern, showing the distribution within each of the nine cells of the combined indexes, trichotomized so as to get approximately the same

FIGURE 2 Location of Inglehart's types, age, and educational groups on the Monitor indexes (mean of standardized scores).

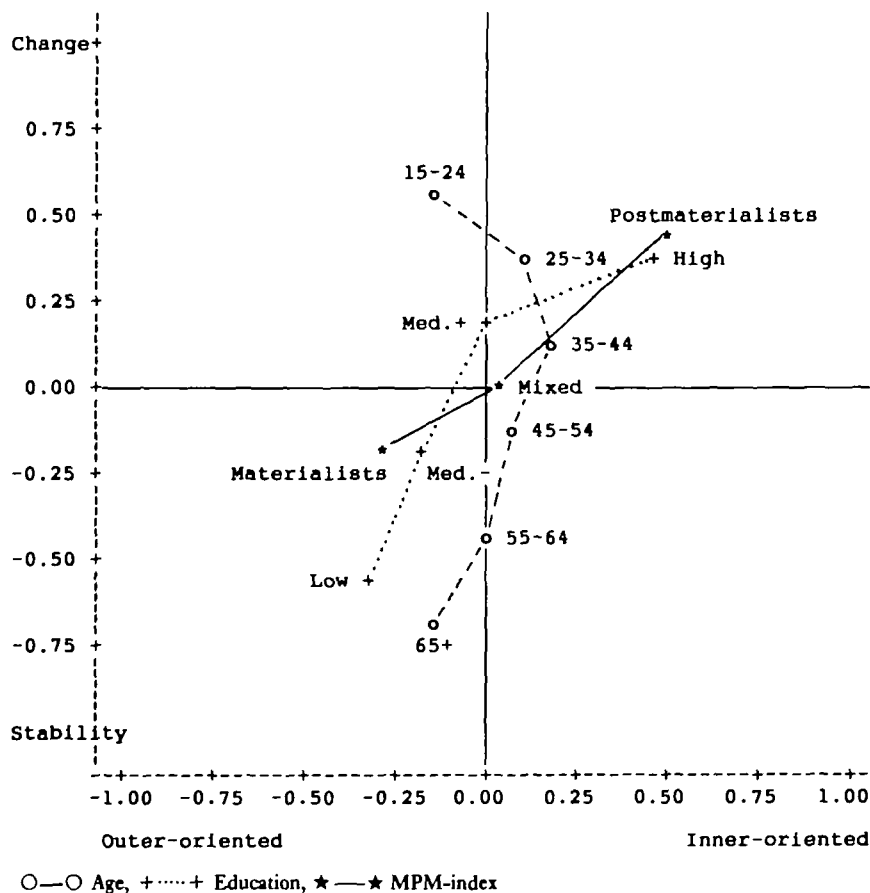


TABLE 5 Balance between Postmaterialists and Materialists within each of the nine Monitor value profile cells (percentage)

<i>First axis:</i>	<i>Second axis</i>		
	Outer-oriented		Inner-oriented
Change-oriented	- 21	- 5	16
	- 32	- 12	1
Stability-oriented	- 39	- 25	- 14

Source: MMI, Norwegian Monitor, 1989-1991; *N* = approx. 750 for each cell.

number in each cell. The balance between postmaterialists and materialists changes from - 39 to 16 as we move up the main diagonal. Along the bidiagonal, it is interesting to note that the materialists are less dominant in the lower-right than in the upper-left cell. This may seem surprising considering the relationship between age and cultural orientation shown in Figure 2.

While education follows the same diagonal as the MPM-index, the age groups have a vertical, somewhat curvilinear pattern, with the youngest and the oldest mostly in the outer-oriented direction. This means that the age variation along the first dimension of change versus stability is very strong, with clear majorities in opposite directions for the extreme groups and percentage differences of 52-56 as compared to 10-13 for the MPM-index (Table 6).

The change-stability dimension thus gives a much stronger differentiation of the age groups than the MPM-index. To what degree these differences reflect stable generational characteristics and to what extent life cycle effects, will not be discussed here, since we lack sufficiently long time series to make a cohort analysis feasible. It does not seem unreasonable to suggest, however, that this dimension portrays more substantial intergenerational differences than the MPM-dimension in Norway.

The outer- versus inner-oriented dimension only distinguishes between the age groups to a limited extent, except for a somewhat more inner-oriented tendency among those of medium age. This dimension is a basis of intra-generational cleavage, where an individual's position is affected by education and, in contrast to the MPM-index, also by gender. This is seen in Figure 3, which shows the multivariate relationship between age, education, and gender and the two cultural dimensions. To avoid cluttering and small bases the age variable is divided into four and the education variable into two categories. Within all age groups we have similar patterns for the effects of education (along the main diagonal) and gender (along the bidiagonal, which explains why its effect on cultural orientation is not detected by the MPM-index). The effect of

TABLE 6 Age and position on the first Monitor index

	<i>Change</i>	<i>Dimension 1 Middle percent</i>	<i>Stab.</i>	<i>Balance Change- Stability</i>
All	33	31	36	- 3
Age				
15-24	59	30	11	48
25-34	46	35	19	27
35-44	36	35	29	7
45-54	26	34	40	- 14
55-64	15	31	54	- 39
65 +	7	24	69	- 62
percent - d (15-24 - 65 +)52		6	- 58	110

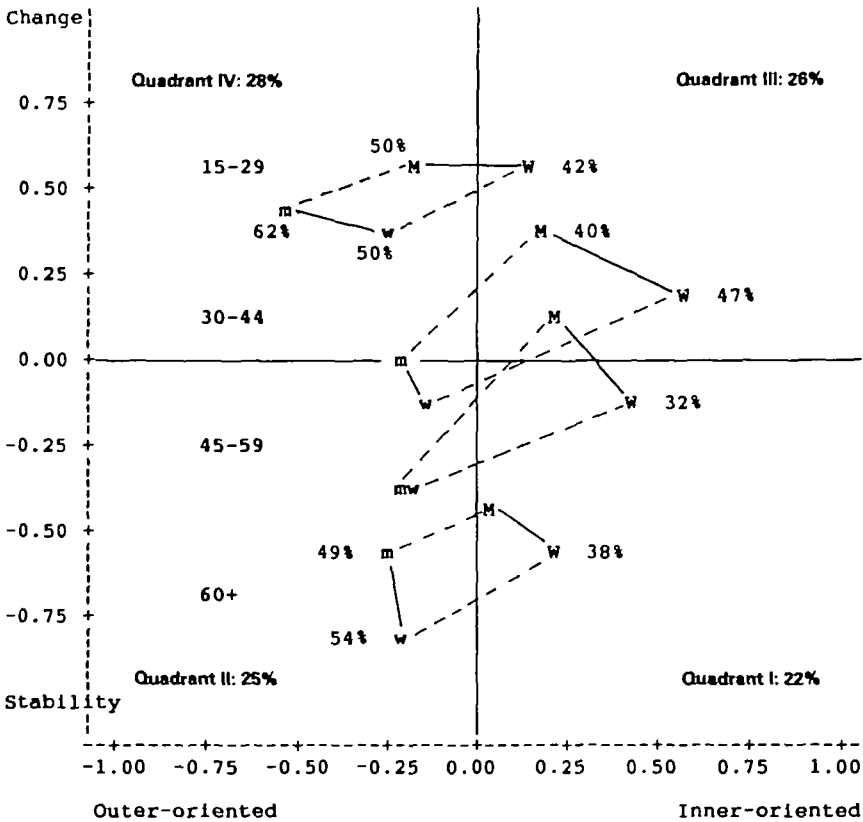
Source: MMI, Norwegian Monitor, 1989-1991. *N* as in table 2.

education is in most cases stronger than that of gender, and the combined effects are largest in the medium age categories. Within each age group women with high education and men with low constitute the extreme cultural opposites.

From the perspective of Monitor it is clear that the MPM-index combines its two dimensions, so that moving from materialists to postmaterialists means a move from stability to change-oriented as well as from outer- to inner-oriented. Inglehart's own theoretical reasoning actually seems to contain both these dimensions, as exemplified in the quote at the beginning of this article. On the one hand he discusses variations in emphasis on economic and physical security, which clearly is an aspect of the change-stability Monitor dimension. On the other hand he mentions priority to non-material versus material needs, which reflects aspects of the inner-outer-oriented dimension.

It may even be argued that it can be deduced from his discussion that the age differences should follow the stability-change dimension, since the aspect of conditions during adolescence referred to is the presence/absence of economic hardship or threats to one's physical safety, creating a high/low need for security. No reason why concern for security should be related to the degree of materialist orientation is presented. In a reply to Flanagan (1982a), who argues that economic concerns and emphasis on physical security belong to separate cultural dimensions, Inglehart gives good reasons why concern for physical and economic security can be expected to go together (Inglehart, 1982, p. 452-3). This is clearly confirmed by the Monitor results, but is, however, not the point. As the Monitor results also highlight, valuing material goods or consumption must be distinguished from being concerned with economic *security*.

FIGURE 3 Age, sex, education, and value orientation (mean standardized score on indexes; also shown: Percentage for selected groups belonging to the quadrant where they are located).



m/w: men/women with low education; M/W: high education; --- : effect of education; — : effect of sex

While an emphasis on economic security (e.g. reflected by savings in the bank) is common for older people in both stability-oriented quadrants, there are clear differences in the concern for material possessions. The inner-oriented primary quadrant might be called 'antimaterialists', or prematerialists, to borrow a term used by Inglehart to describe traditional Japanese culture (1990, p. 148).

Affluence during adolescence may explain why young people in both change-oriented quadrants seem willing to take risks and have little concern for economic security. But for some of them this does not preclude a strong interest in the material aspects of existence in their search for immediate pleasure. The term 'postmaterialist' fits only the change-inner-oriented quadrant, the upper-left quadrant dominated by young men might more aptly be described as 'supermaterialists'.

When Inglehart says that 'younger birth cohorts place less emphasis on economic and physical security than do older groups, . . . and that conversely, the younger birth cohorts tend to give a higher priority to non-material needs' (1990, p. 56), he might seem to imply that a change in the emphasis on security, i.e. a movement along the first Monitor dimension, necessarily is accompanied by a change in materialist concerns, i.e. a movement along the second dimension. Seen from quadrant II where Inglehart's materialists are located, the young 'supermaterialists' in quadrant IV exemplify a change along the first dimension only.

LIMITATIONS OF INGLEHART'S ANALYSIS

It is of course perfectly legitimate to focus on the cultural dimension represented by the MPM-diagonal as Inglehart does. One might even argue that this dimension is of particular interest, since it spans the combined effects of two variables of special relevance to the process of cultural change, opposing the older groups with low education and the younger ones with high. There are several arguments in favor of the two-dimensional description of cultural orientation of the Monitor, however.

First of all we get a better representation of age-related and presumably also *intergenerational* differences in cultural orientation. As argued above, the change-versus-stability dimension might even seem to be more in line with Inglehart's own reasoning stressing the importance of security during adolescence.

Secondly two dimensions is a minimum if one also wants to be able to describe *intragenerational* differences. This is of course vital when we want to give cultural explanations of for instance political behavior, and we do not expect the generations to become politically homogeneous. It is one thing to demonstrate a greater tendency to support 'New politics' party alternatives among the young, another to explain why some go for the 'New right', others for the 'New left'. In Norway this is clearly related to position on the second axis (Hellevik, forthcoming).

The diagonal patterns of differentiation with regard to possible causes (education and gender) or effects (e.g. party preference) of cultural orientation make it particularly interesting to analyze relationships using the cultural space of the combined indexes, as exemplified in Figure 3 or Table 5. Looking at differences along just one diagonal as with the MPM-index, leaves out the differentiation along the other diagonal, and results in neglecting the existence of a consumption-oriented segment of mostly younger people. This limitation of his empirical measure may explain Inglehart's categorical rejection of youth materialism:

Everyone has heard that today's youth have turned conservative, and that they are mainly interested in preparing for lucrative careers so that they can become Yuppies and devote their lives to conspicuous consumption. In fact, the empirical evidence provides very little support for this stereotype (1990, p. 12).

The existence of youth segments preoccupied with consumption and material possessions puts Inglehart's basic assumption of the relation between 'formative' affluence and a postmaterialist value orientation in doubt. It appears, in fact, that for some the result of being reared in affluence is a greater dependency on material goods and a high level of consumption (Flanagan, 1982a, p. 433), and that the chances for developing such an orientation are increased by lack of education and being male.

To the degree that the education of the respondents is an indicator of variations in the standard of living in their parental families, the strong effect of education on position on the second dimension may be taken to support Inglehart's formative affluence hypothesis. When men are more materialist in orientation than women, this cannot be explained by differences in economic conditions during adolescence, however. There clearly is a need to consider other factors influencing the outcome of the process of value formation.

THE DIMENSIONALITY DEBATE

This is not the first time the fruitfulness of Inglehart's one-dimensional description has been questioned. Several authors have suggested splitting the MPM-index into two or more components (e.g. Milkis and Baldino, 1978; Herz, 1979, Flanagan, 1982a, 1987; Flanagan and Lee, 1988; Knutsen, 1985, 1986, 1990). As his last book shows, Inglehart has yet to be persuaded by their arguments (1990, pp. 142-3).

A central theme in this debate concerns the degree of correlation between items, whether they load on the same factor and may be combined in an index or not. If the idea of a cultural space is accepted, however, this debate over correlations and unidimensionality becomes irrelevant. Within the Monitor framework, it is clear that the types of MPM-index are characterized by specific combinations of values on two completely independent indexes. But this diagonal is no less empirically meaningful as a dimension of cultural differentiation than the axes or any other straight line drawn within the space.

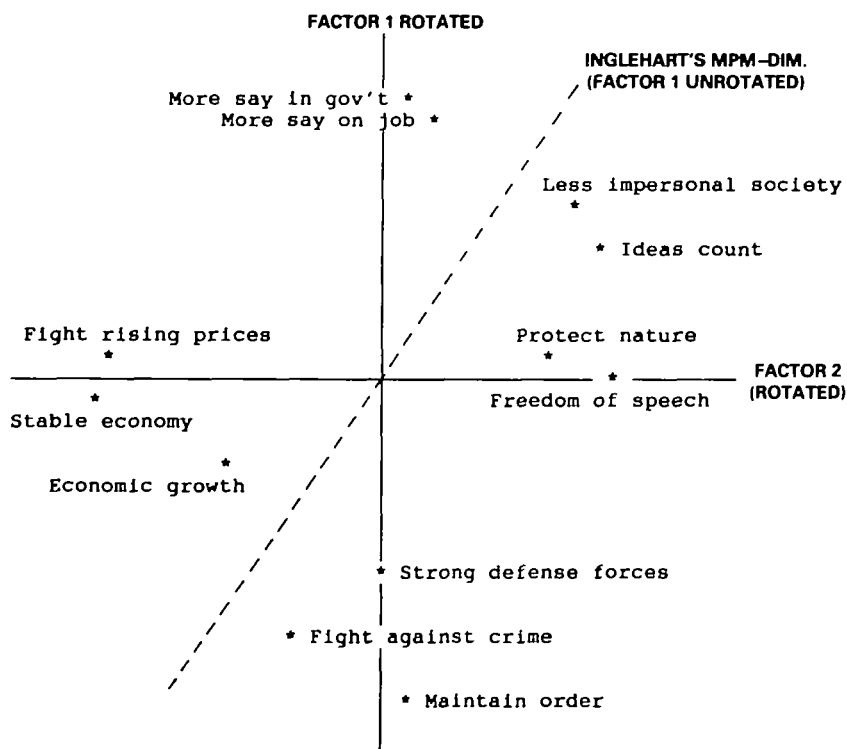
The futility of the debate over correlation between items or indexes can be demonstrated from a different angle. It would not have been difficult to select items with a diagonal pattern from Table 4 to make indexes of correlated items measuring each of the diagonals directly. If we for instance combine items J-N into an additive index, the categories of scores 0-16 follow the main diagonal, and we get correlations of .36 and .40 (Pearson's r) with the two original indexes.

With the new indexes as axes the original dimensions would become diagonals, and could be measured alternatively as combinations of the new indexes or directly by the original indexes. It is thus a practical and not a principal difference between the two ways of measuring a dimension of cultural orientation.

Interestingly results very similar to the Monitor dimensions are obtained by factor analysis using Inglehart's set of twelve items from a Norwegian survey. As with Inglehart's own data the first factor of a principal component analysis is the MPM-dimension, but Oddbjørn Knutsen finds that a varimax rotation gives two very meaningful subdimensions (Knutsen, 1985, 1986, 1990).

Figure 4 shows the results, which bear a clear resemblance with those of the Monitor in Figure 2. The first rotated axis opposes items of physical security and democratic participation, the second economic versus non-material and environmental concerns. The MPM-dimension (unrotated first axis) also follows the main diagonal in this case.

FIGURE 4 Inglehart's MPM-factor (first axis unrotated solution) and two varimax-rotated factors from analysis of 12-item battery.*



* based on Knutsen 1985, p.754.

Knutsen's analysis indicates that the diagonal pattern of the MPM-dimension of Figure 2 is not restricted to the 4-item version of Inglehart's index. It also demonstrates that an interesting two-dimensional solution can be obtained with Inglehart's own measure of cultural orientation. In his analyses of Norwegian and Nordic surveys, Knutsen, in addition to the MPM-index, uses separate additive indexes for the two subdimensions, constructed by splitting Inglehart's 12 items into two groups. The results indicate similar relations between these indexes and age or education as those of Figure 2 (Knutsen, 1990, pp. 90–1, 96).

THE CULTURAL DIMENSIONS OF FLANAGAN

Knutsen concludes that his subdimensions are similar to the dimensions discussed by Scott Flanagan, who has made several contributions to the debate on the nature of cultural change. The inductive approach of Flanagan resembles the one followed in the Monitor study, even if the various sets of items he uses to establish main dimensions of cultural change are more restricted in content. Another difference is that the dimensional analyses are based on single items, compared to value indexes in the Monitor study. Lacking completely corresponding indicators, a direct empirical comparison is impossible. The values he refers to in his theoretical discussion, and also the content of his various sets of items, are clearly related to Monitor items such as those of Table 3 and 4, permitting an evaluation of similarities.

According to Flanagan the materialism–postmaterialism index of Inglehart is a mix of two dimensions, one opposing authoritarian versus libertarian values, the other materialist versus non-materialist. These dimensions are only weakly related to each other, and it is the authoritarian–libertarian (AL) dimension which is the important one with regard to cultural change. This is where one finds a clear correlation with age and indications of a change over time due to generational differences, and also correlation with important dependent variables such as party preference (Flanagan, 1982a, 1987; Flanagan and Lee, 1988).

Flanagan's other dimension of materialism versus non-materialism resembles the second outer- versus inner-oriented dimension of Monitor (which have also been called materialism versus idealism). Both have a modest and curvilinear relationship with age, albeit in opposite directions. Flanagan finds less materialism among the young and old, which he explains as a life cycle effect of being free from traditional 'economic responsibilities' within family and work life (1982a, p. 429).

Instead of such 'economic worries', the Monitor dimension reflects to a greater extent the craving for material goods and consumption, which is more

prevalent in the extreme age groups.³ Such a tendency to material 'self-indulgence' may actually be related to the freedom from economic responsibilities, but a curvilinear pattern of generational differences is also a possibility to be considered. The difference discussed above is one of nuances, however, the materialism dimension of Flanagan and the inner-outer-oriented dimension of Monitor are basically similar.

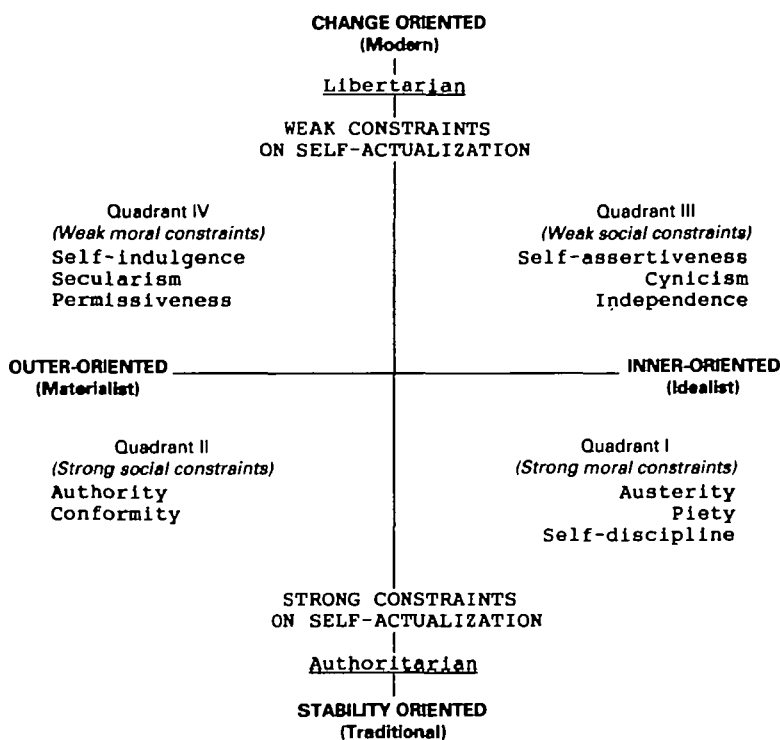
Flanagan's main focus is on the authoritarian-libertarian dimension. In an interesting discussion of the relationship between changes in 'underlying material-technological realities' and the values of a society, he describes this dimension as representing four sets of opposed values or sub-dimensions: (1) austerity versus self-indulgence; (2) piety and self-discipline versus secularism and permissiveness; (3) conformity versus independence; and (4) authority versus self-assertiveness and cynicism. The first two represent strong versus weak moral constraints, and the last two strong versus weak social constraints (Flanagan, 1982a, pp. 407-8, 434). Another way of characterizing the AL-dimension is thus weak versus strong constraints on the drive for self-actualization.

Comparing this with our prior discussion of the Monitor dimensions (Figure 1, Table 3 and 4), it is striking how well Flanagan's categories fit into the four quadrants. The moral constraints variations reflect the bidagonal of the Monitor dimensions, while the social constraints follow the main diagonal (Figure 5). Combining the two kinds of weak versus strong constraints into the AL-dimension, corresponds to projecting the two diagonals on to the first change versus stability dimension of Monitor. In addition, these dimensions seem to coincide in the two studies.

Flanagan's discussion of changes in moral and social constraints give an interesting perspective on the origin and nature of the cultural differences along the diagonals. Since he does not use a two-dimensional representation of his reasoning, Flanagan fails to see the relationship between his two main dimensions and the aspects he discusses for the AL-dimension. In particular he gives little attention to the phenomenon of libertarian materialism. One exception is his interpretation of a rotated factor analysis where two 'self-indulgent' items

³ Some of the relevant Monitor items show slightly curvilinear relationships in opposite directions in line with this distinction between economic responsibility and materialistic self-indulgence. Using the same six age groups as in Table 2, we get the following series of percentages choosing 'greater economic security' over 'possibilities to be more creative', starting from the young: 45, 47, 48, 48, 45, 46. The opposite pattern is found when we look at the percentage agreeing that it gives them great pleasure to buy something they want: 79, 76, 72, 74, 78, 80; that they lack some material possessions to live the way they would like (item from Table 2): 58, 47, 41, 41, 42, 49; that they want to follow their desires and enjoy the pleasures of life (item E Table 4, percentage who completely agree): 46, 32, 26, 31, 33, 33; or that they want to impress others through possessions (item F Table 4): 27, 13, 10, 10, 13, 13. The pattern for Inglehart's 'fight rising prices' item shows an increasing tendency (percentage first or second choice): 30, 31, 36, 31, 34, 41 in Norway, in contrast to Flanagan's curvilinear result from Japan (1982b, p. 104).

FIGURE 5 Suggested relationship between aspects of Flanagan's Authoritarian-Libertarian-dimension and the Monitor cultural space.



unexpectedly load higher on his materialist than on his libertarian factor, which is seen as a sign of 'a Yuppie type of terminal materialism' (Flanagan, 1987, p. 1316).

In a later paper the self-indulgent aspect is explicitly removed from the AL-dimension (Flanagan and Lee, 1988). Three subdimensions are described: authority versus autonomy, conformity versus openness, and survival versus self-betterment. The first two, which correspond to the two social constraints subdimensions in the earlier version, are said to be the major defining aspects of the authoritarian-libertarian dimension (Flanagan and Lee, 1988, p. 13). The last and least important subdimension contains some elements of the prior moral constraints subdimensions (austerity versus self-indulgence), but also various forms of intellectual self-improvement which are typical of the third, inner-oriented quadrant, and thus do not belong to the Monitor bidiagonal.

The implication of this change is that Flanagan has moved from an understanding of the AL-dimension which coincides with the vertical axis towards one falling along the main diagonal of the Monitor space. This is reflected in the latest measurement instrument proposed, which lack any items

with a hedonistic content (Flanagan and Lee, 1988, p. 53). The changing content of the AL-dimension combined with the lack of an explicit two-dimensional frame of reference has made the debate between Flanagan and Inglehart on the relationship between the MPM- and the AL-dimensions confusing.

Inglehart, in a reply to Flanagan in 1982, seems to see the MPM- and the AL-dimensions as identical, and accepts the hedonistic orientation as an aspect of postmaterialism:

Furthermore, we agree that one important aspect of these changes has been a shift from Materialist (or 'austerity' and 'authoritarian') values toward Post-Materialist (or 'hedonistic' and 'libertarian') values (Inglehart, 1982, p. 445).

Flanagan also includes 'self-indulgence' in a list of elements of the cluster of postmaterialist items (1987, p. 1304). This case of agreement between Inglehart and Flanagan on associating self-indulgence with postmaterialism is contradicted by the Monitor results, which show that the MPM-index captures the authority-autonomy diagonal, but not at all the austerity-hedonistic diagonal.

While Flanagan criticizes Inglehart for mixing two dimensions, he claims that the MPM-index primarily captures his own AL-dimension and only to a lesser extent the materialism-dimension, which explains why their two measures have the same strong correlations with age and education (Flanagan, 1987, p. 1311). After the latest revision by Flanagan, leaving out the austerity-hedonistic aspect from his definition of the AL-dimension, it certainly has moved closer to the MPM-index, making it reasonable to assume that the two more or less overlap.

CONCLUSION

While the database for the analyses presented in this article is very rich with regard to the number and range of items of value preference, it is severely restricted in time and space. This means that it is differences between age groups and not patterns of change which have been analyzed, and that the findings represent just one nation, Norway. While this must induce caution, the correspondence with theoretical discussions and empirical results from other studies suggests that the findings have relevance for the general debate on dimensions of cultural change.

A conclusion to be drawn from the comparison of the various descriptions of cultural differences is that Inglehart's dimension of materialism-postmaterialism, Flanagan's dimensions of authoritarian-libertarian and materialist-nonmaterialist, Knutsen's rotated factors based on Inglehart's items, and the Monitor dimensions of change-stability and inner-outer-oriented, all seem to reflect the same underlying cultural space of different value orientations. The three two-dimensional solutions more or less overlap, and define an axis-system with Inglehart's single dimension constituting a diagonal, towards which the last

version of Flanagan's authoritarian-libertarian dimension is also turning. This focus of earlier contributions creates a need for stressing the importance of the other, more neglected, austerity-hedonism diagonal. In particular, the phenomenon of youth materialism, which may prove an important explanatory factor in analyses of new right political behavior, deserves more attention than it has so far been given.

A final point is the fruitfulness of using the combined dimensions when analyzing cultural change, whether as dependent or independent variables. One may of course perform analyses with the dimensions one at a time, but presentations like those of Figure 2 and 3 or Table 5 give a better impression of the nature of the relationships with other variables.

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BIOGRAPHICAL NOTE

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