

AUTHENTICITY OF INSTRUMENTATION IN THE  
RECORDINGS OF THE ANACHRONISMS, 1981-1986

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*Abstract.* A statistical method was devised to assess the authenticity of artistic oeuvres. An assessment of the Anachronisms' recordings confirmed earlier assertions of the authenticity of their oeuvre.

Previous analyses of the oeuvre of the Anachronisms (Sutton, 1981; H. Herpes, 1983, 1985) have been thematic and largely unquantified. While this work, particularly Herpes', has proven extremely valuable in the clarification of issues in semiologico-hermeneutics, its value in the description and analysis of the Anachronisms' oeuvre has never been empirically demonstrated. It was, moreover, clearly Herpes' intention to carry out these empirical demonstrations, but this intention was frustrated by his entry into the political arena.

The purpose of this study was to commence the empirical analysis of, to use Herpes' term, the Anachro-oeuvre by using multivariate statistical techniques to assess instrumental use within this oeuvre. The analysis was guided by both the statistical (1963, 1971 and 1985) and semiologicohermeneutic work of H. Herpes. In particular the purpose of the study was to use multivariate techniques to assess the authenticity of the Anachro-oeuvre, in order to carry out this analysis, authenticity had to be empirically defined, and in order to define authenticity both free and contextual data structures had to be defined.

H. Herpes (1985) defined a characteristic as free to the extent that all its measures load on a single factor in a factor analysis, and contextual to the extent that its measures do not correlate at all. However, Herpes' discussions of the contextuality coefficient (1971, 1985) clearly do not rule out the possibility that in practice a characteristic may be designated as contextual to the extent that its measures load on more than one factor, and in fact Herpes' examples of contextual characteristics are all characteristics which load on several factors. It seems more profitable to define a characteristic as contextual to the extent that its measures load on more than one factor, and then to define a characteristic as authentic if a factor structure cannot be inferred from its measures.

This definition of authenticity accords with Herpes' non-quantitative definition of authenticity as a "synthesis of free and contextual characteristics" (1985., p. 717), A factor structure in which duplication of measures does not exist should reasonably be taken as representative of authenticity of mensuration inasmuch as it designates maximum efficiency of apprehension (MEA).

Efficiency of apprehension is perhaps most easily conceived of as the inverse of reliability. Reliability is increased by increasing the number of correlated measures used so that one characteristic can be more easily deduced. Efficiency of apprehension is increased by increasing the number of uncorrelated measures, so that all characteristics can be more easily deduced, When a factor structure cannot be deduced from a set of measures, maximum efficiency of apprehension has obviously been obtained. MEA is a state in which attention is not focussed on a single, arbitrarily chosen aspect of being, but rather on as many aspects as possible. By being non-arbitrary and consequently non-judgmental, MEA is obviously a state of authenticity, and should be expected to characterize any true art.

The concept of MEA was used in this study to test H. Herpes' assertions (1985) about the authenticity of the Anachro-oeuvre. As this was the first such study of the Anachronisms', or

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indeed of any, oeuvre, it was decided to concentrate on the most reliably quantifiable aspect of the oeuvre – instrumentation.

### METHOD

*Data.* With the co-operation of two members of the Anachronisms (Zither, personal communication, 1986; S. Herpes, personal communication, 1986), a list was constructed of the numbers of instruments used by the Anachronisms in 94 recordings from the period 1981-1986, in the following categories:

- i. acoustic or classical guitars,
- ii. steel guitars,
- iii. electric guitars,
- iv. violins,
- v. mandolins,
- vi. keyboards,
- vii. stylophones,
- viii. ukuleles,
- ix. percussion, and
- x. wind instruments.

Because of limitations in the session logs, no value greater than 1 was given for percussion instruments regardless of the number used. Alternative versions recorded at the same session were entered only once on the list if the same instruments were used on each. The “Passages” from *AI!* were omitted because of lack of session information, but the 34 selections coded include the rest of the Anachronisms' extensive recording history, both published and unpublished (three recent unpublished recordings were included).

### RESULTS

Examination of the distributions of the instrumentation variables revealed no gross departures from normality. A principal components analysis of the ten instrumental variables was performed. The correlation matrix is shown in Figure 1.

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Correlations:	ACGUITAR	SGUITAR	EGUITAR	VIOLIN	MANDOLIN
ACGUITAR	1.0000**	-.2041	-.3442**	.0375	-.0900
SGUITAR	-.2041	1.0000**	.0546	.1068	-.0798
EGUITAR	-.3442**	.0546	1.0000**	-.1089	-.1623
VIOLIN	.0375	.1068	-.1089	1.0000**	-.1310
MANDOLIN	-.0900	-.0798	-.1623	-.1310	1.0000
KEYBOARD	-.2915*	.1396	.2523*	.0065	-.1853
STYLO	-.0317	.2162	.0411	.0929	-.0562
UKULELE	-.0560	-.1110	-.1009	-.0815	-.0349
PERCUSS	-.1576	-.0449	.0666	-.0611	.2939*
WIND	-.1309	-.1846	-.0364	-.0632	-.0581
Correlations:	KEYBOARD	STYLO	UKULELE	PERCUSS	WIND
ACGUITAR	-.2915*	-.0317	-.0560	-.1576	-.1309
SGUITAR	.1396	.2162	-.1110	-.0449	-.1846
EGUITAR	.2523*	.0411	-.1009	.0666	-.0364
VIOLIN	.0065	.0929	-.0815	-.0611	-.0632
MANDOLIN	-.1853	-.0562	-.0349	.2939*	-.0581
KEYBOARD	1.0000**	.1034	-.1751	.0744	.1443
STYLO	.1034	1.0000**	-.0349	-.0672	-.0581
UKULELE	-.1751	-.0349	1.0000**	-.0418	-.0362
PERCUSS	.0744	-.0672	-.0418	1.0000**	-.0696
WIND	.1443	-.0581	-.0362	-.0696	1.0000

= p < .05, \*\* = p < .01

ACGUITAR = acoustic or classical guitar, SGUITAR = steel guitar, EGUITAR = electric guitar

Figure 1. Correlation matrix of instrumentation variables

Using procedures recommended by FitzGerald (1986, personal communication, 1986), the significant eigenvalue for extraction was determined to be 2.57 for p < .05. No eigenvalue was this large, so no factors were extracted. The eigenvalues are shown in Figure 2.

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Factor	Eigenvalue	Pct of Variance	Cumulative Pct
1	1.79416	17.9	17.9
2	1.48285	14.8	32.8
3	1.28943	12.9	45.7
4	1.07650	10.8	56.4
5	.96041	9.6	66.0
6	.89886	9.0	75.0
7	.80046	8.0	83.0
8	.71445	7.1	90.2
9	.57532	5.8	95.9
10	.40757	4.1	100.0

Figure 2. Eigenvalues and percentages of variance explained for the factor analysis of instrumentation (critical eigenvalue = 2.57)

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### DISCUSSION

The experimental results provide stunning confirmation of H. Herpes' assessment of the *Anachro-oeuvre* as authentic. In operational terms, the factor analysis of the Anachronisms' instrumentation demonstrated MEA. Some significant correlations appear in the correlation matrix, but these appear to be chiefly due to temporal changes in the range of instrumental choices available to the Anachronisms. At any rate, a few significant correlations would be expected to appear by chance, and the frequency and magnitude of those that did appear was not adequate to justify the extraction of factors.

MEA in instrumentation suggests that the Anachronisms' choice of instruments for a particular work is determined by authentic considerations such as appropriateness to the subject or structure of the work, rather than by non-artistic considerations such as habit, availability, or fashion. In Barphe's words, "le monde n'est pas un produit de l'art, et l'art n'est pas un produit du monde" (1966, p. 915). Art is art to the extent that it rejects conventional ways of looking at the world and instead attempts to project itself into the world. Herpes (1985) has already noted the Anachronisms' implementation of this artistic philosophy; the present study provides statistical confirmation of Herpes' view.

The present study has demonstrated the utility of the MEA method in assessing the authenticity of an oeuvre. While the present study dealt only with instrumentation it would be possible to combine the MEA method with content analysis to perform quantitatively acceptable assessment of thematic, harmonic, or melodic authenticity.

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