Jaques Bertin

dvia, fall 2019, robin coenen

Jaques Bertin

27 July 1918 - 3 May 2010
French cartographer and theorist

1954
founder and director of the Cartographic Laboratory
of the École pratique des hautes études ⟨EPHE⟩

1974
director of studies and director
of the Geographical Laboratory
of the École des hautes études en sciences social

1970s
head of research
at the Centre national de la recherche scientifique ⟨CNRS⟩

Three stages of work

Semiology of Graphics ⟨1967⟩,
The Graphics and Graphic Information Processing ⟨1977⟩,
Atlas of World History ⟨1997⟩.

-> the semiotic approach
-> the map as a process
-> cartographic discourse

»The Painters Eye«
Semiology of Graphics

https://www.youtube.com/watch?v=WLKsXdDog94

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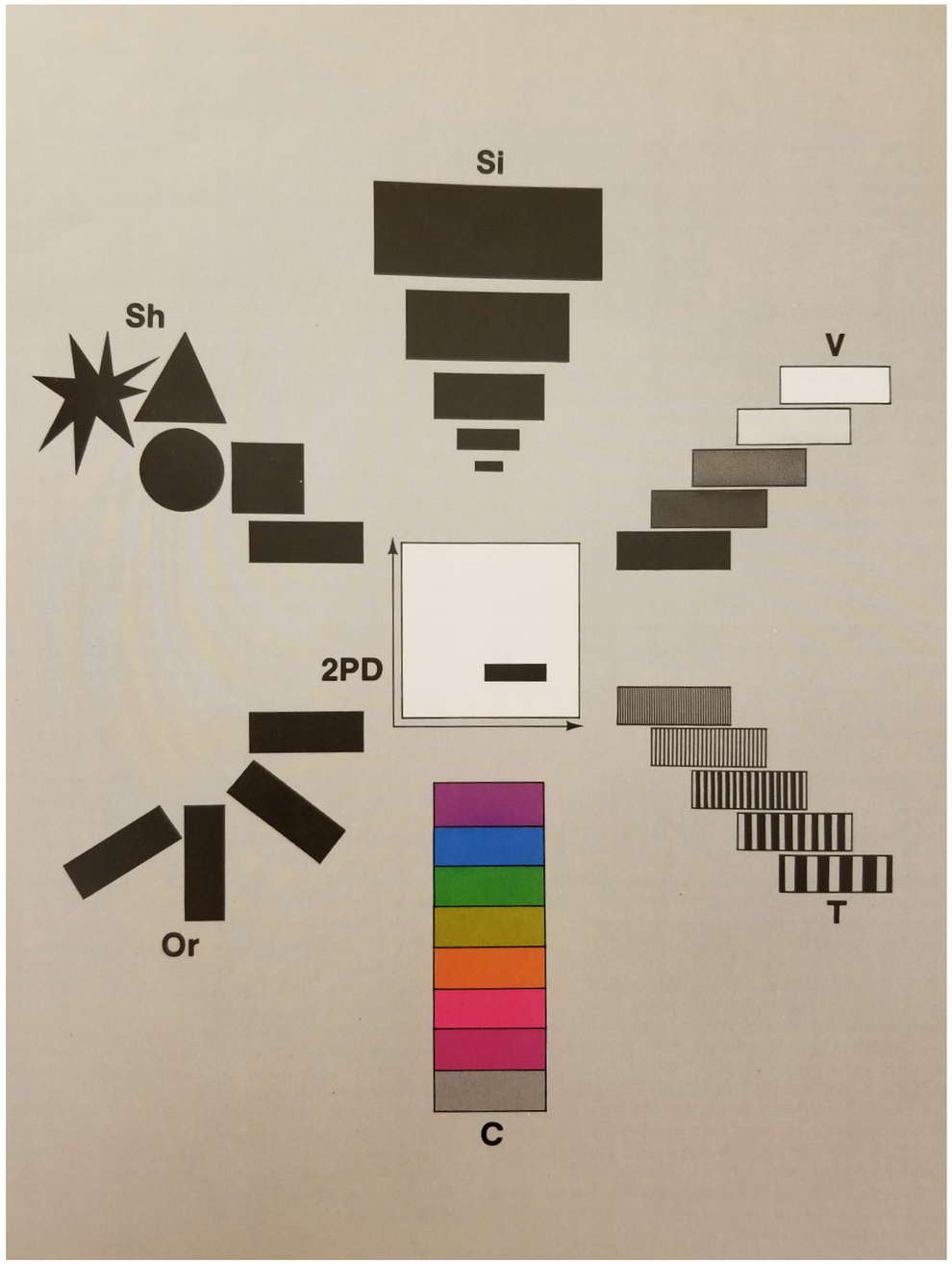
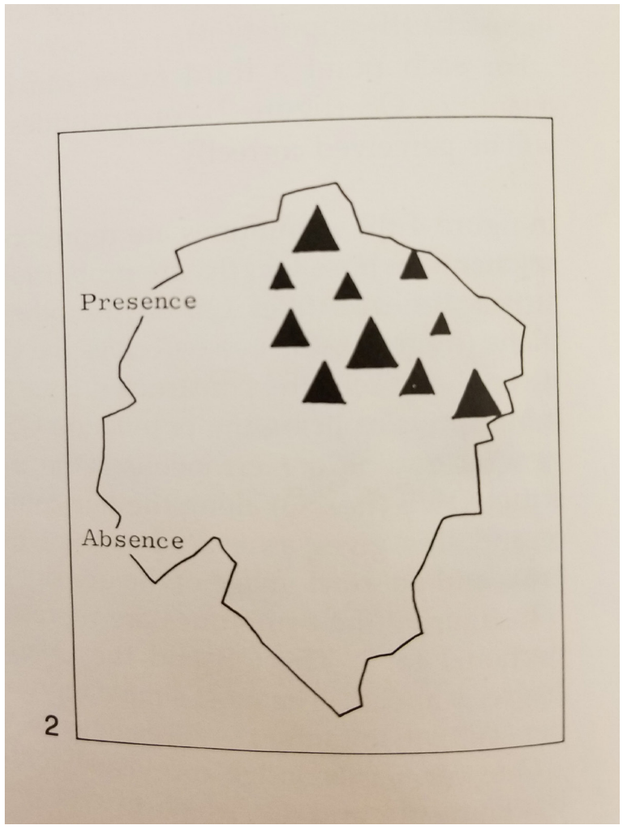
Jaques Bertin, Semiology of Graphics, Madison Wis: University of Wisconsin Press, p.v

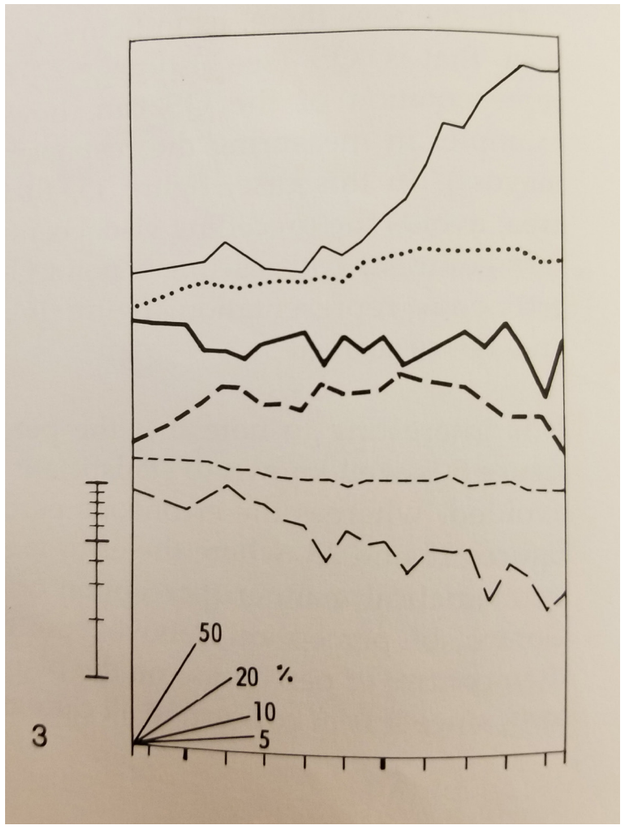
Retinal Variables

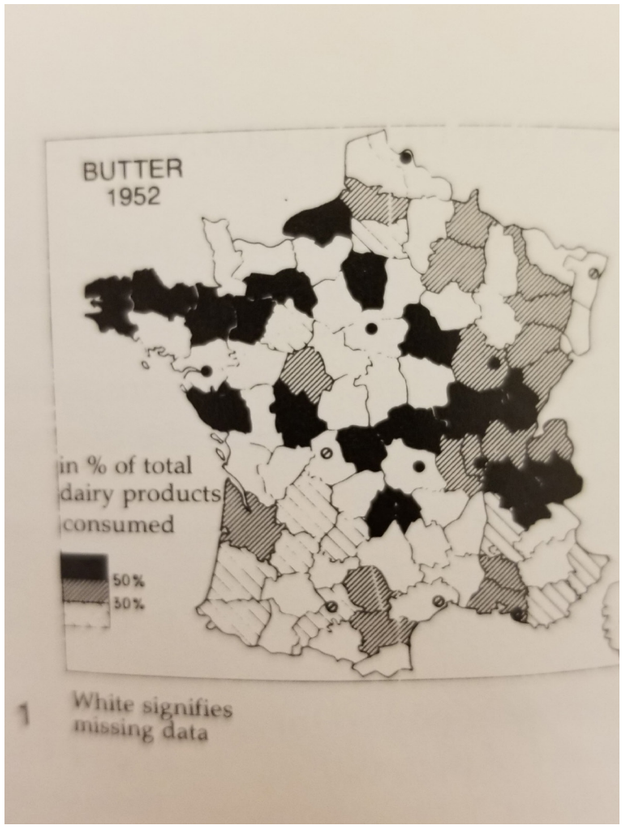


Jaques Bertin, Semiology of Graphics, Madison Wis: University of Wisconsin Press, p.43

The plane

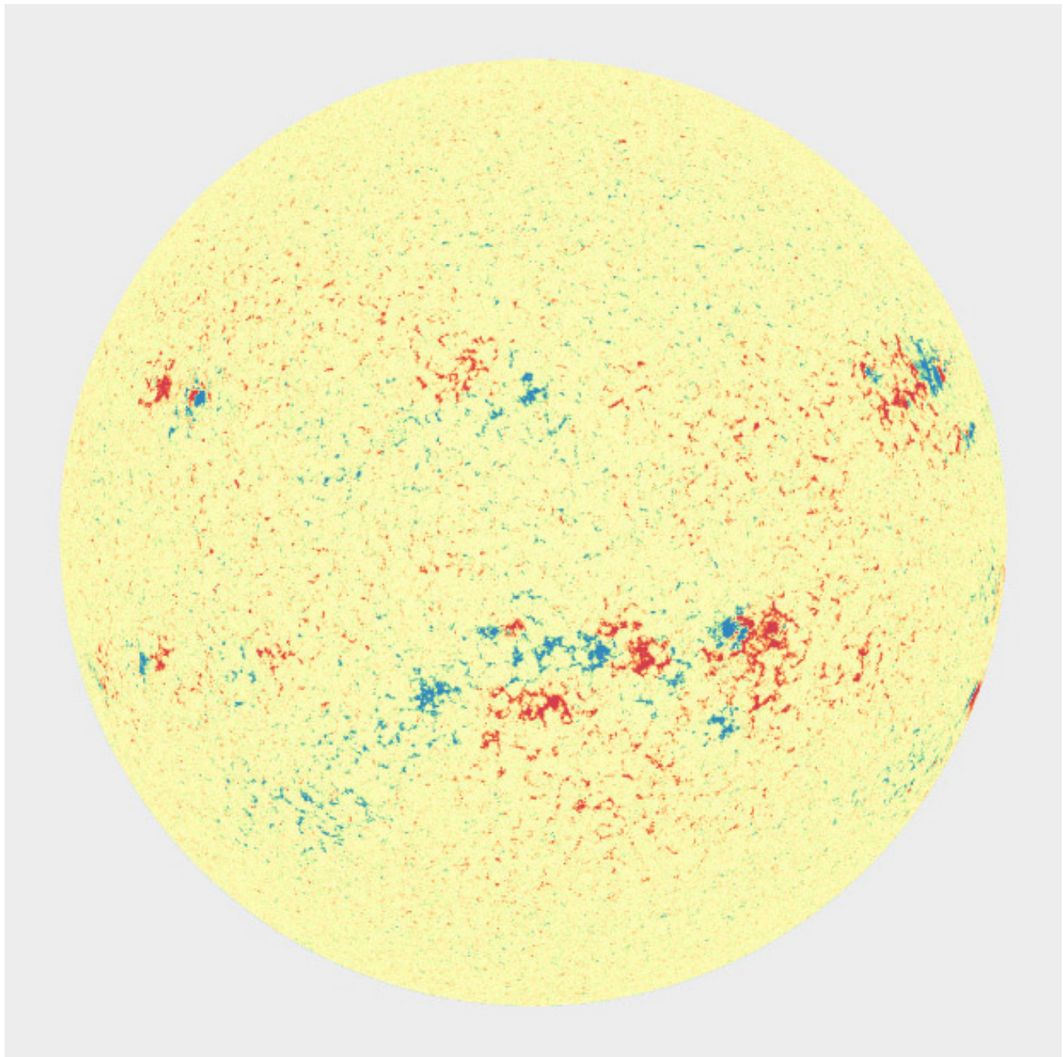






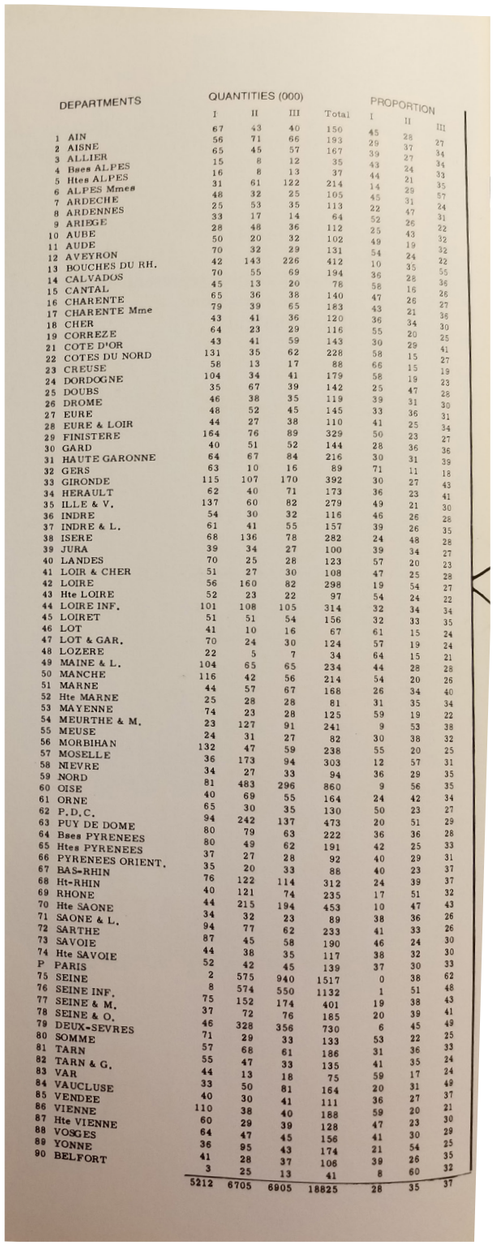
Jaques Bertin, Semiology of Graphics, Madison Wis: University of Wisconsin Press, p.46

The plane, external example from previous reading



https://earthobservatory.nasa.gov/blogs/elegantfigures/2013/08/12/subtleties-of-color-part-3-of-6/

The basic graphic problem



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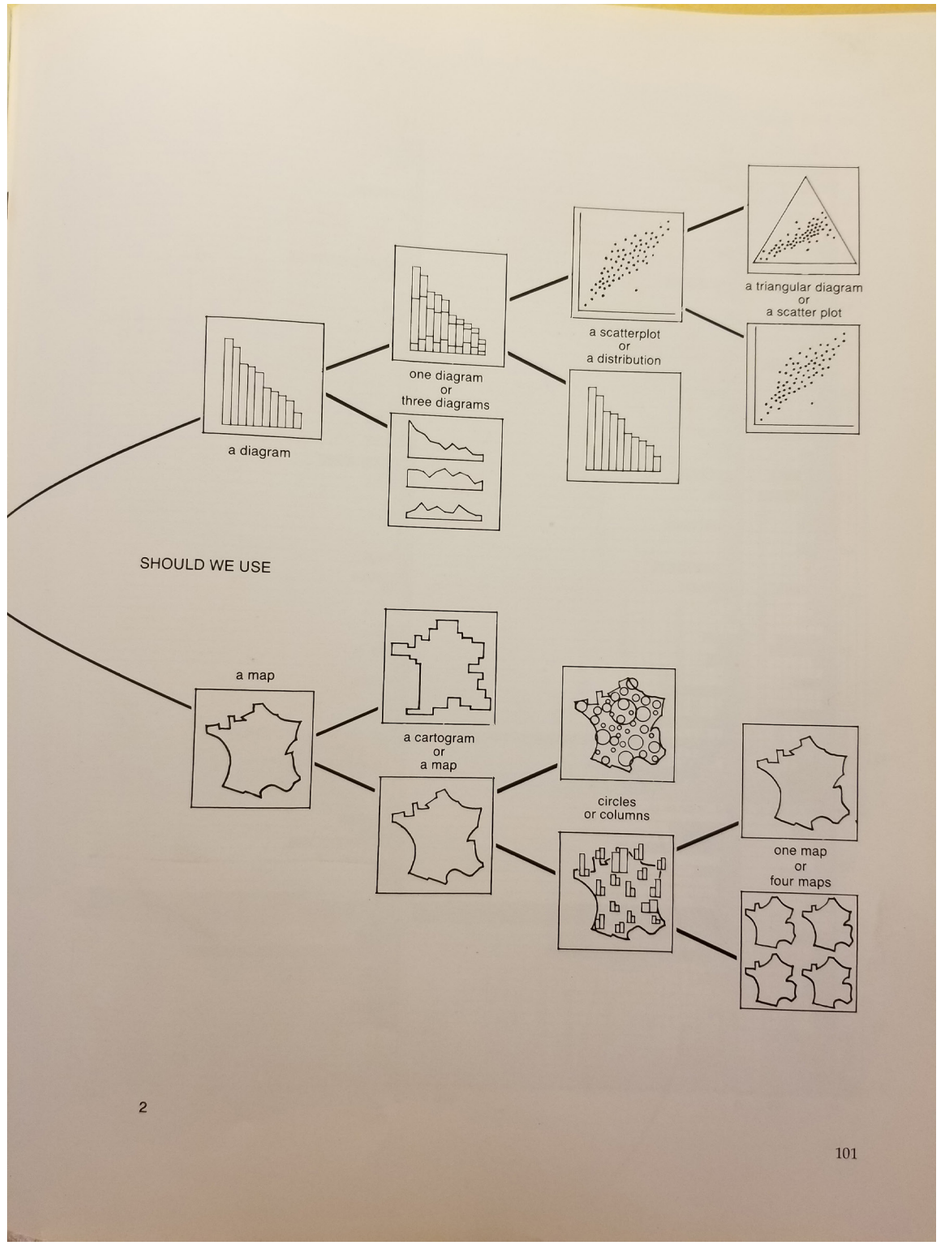
3	ALLIER	65	45	57	167	39	27	34
4	Bses ALPES	15	8	12	35	43	24	34
5	Htes ALPES	16	8	13	37	44	21	33
6	ALPES Mmes	31	61	122	214	14	29	35
7	ARDECHE	48	32	25	105	45	31	57
8	ARDENNES	25	53	35	113	22	47	24
9	ARIEGE	33	17	14	64	52	26	31
10	AUBE	28	48	36	112	25	43	22
11	AUDE	50	20	32	102	49	19	32
12	AVEYRON	70	32	29	131	54	24	22
13	BOUCHES DU RH.	42	143	226	412	10	35	55
14	CALVADOS	70	55	69	194	36	28	36
15	CANTAL	45	13	20	78	58	16	26
16	CHARENTE	65	36	38	140	47	26	27
17	CHARENTE Mme	79	39	65	183	43	21	36
18	CHER	43	41	36	120	36	34	30
19	CORREZE	64	23	29	116	55	20	25
21	COTE D'OR	43	41	59	143	30	29	41
22	COTES DU NORD	131	35	62	228	58	15	27
23	CREUSE	58	13	17	88	66	15	19
24	DORDOGNE	104	34	41	179	58	19	23
25	DOUBS	35	67	39	142	25	47	28
26	DROME	46	38	35	119	39	31	30
27	EURE	48	52	45	145	33	36	31
28	EURE & LOIR	44	27	38	110	41	25	34
29	FINISTERE	164	76	89	329	50	23	27
30	GARD	40	51	52	144	28	36	36
31	HAUTE GARONNE	64	67	84	216	30	31	39
32	GERS	63	10	16	89	71	11	18
33	GIRONDE	115	107	170	392	30	27	43
34	HERAULT	62	40	71	173	36	23	41
35	ILLE & V.	137	60	82	279	49	21	30
36	INDRE	54	30	32	116	46	26	28
37	INDRE & L.	61	41	55	157	39	26	35
38	ISERE	68	136	78	282	24	48	28
39	JURA	39	34	27	100	39	34	27
40	LANDES	70	25	28	123	57	20	23
41	LOIR & CHER	51	27	30	108	47	25	28
42	LOIRE	56	160	82	298	19	54	27
43	Hte LOIRE	52	23	22	97	54	24	22
44	LOIRE INF.	101	108	105	314	32	34	34
45	LOIRET	51	51	54	156	32	33	35
46	LOT	41	10	16	67	61	15	24
47	LOT & GAR.	70	24	30	124	57	19	24
48	LOZERE	22	5	7	34	64	15	21
49	MAINE & L.	104	65	65	234	44	28	28
50	MANCHE	116	42	56	214	54	20	26
51	MARNE	44	57	67	168	26	34	40
52	Hte MARNE	25	28	28	81	31	35	34
53	MAYENNE	74	23	28	125	59	19	22
54	MEURTHE & M.	23	127	91	241	9	53	38
55	MEUSE	24	31	27	82	30	38	32
56	MORBIHAN	132	47	59	238	55	20	25
57	MOSELLE	36	173	94	303	12	57	31
58	NIEVRE	34	27	33	94	36	29	35
59	NORD	81	483	296	860	9	56	35
60	OISE	40	69	55	164	24	42	34
61	ORNE	65	30	35	130	50	23	27
62	P.D.C.	94	242	137	473	20	51	29
63	PUY DE DOME	80	79	63	222	36	36	28
64	Bses PYRENEES	80	49	62	191	42	25	33
65	Htes PYRENEES	37	27	28	92	40	29	31
66	PYRENEES ORIENT.	35	20	33	88	40	23	37
67	BAS-RHIN	76	122	114	312	24	39	37
68	Ht-RHIN	40	121	74	235	17	51	32
69	RHONE	44	215	194	453	10	47	43
70	Hte SAONE	34	32	23	89	38	36	26
71	SAONE & L.	94	77	62	233	41	33	26
72	SARTHE	87	45	58	190	46	24	30
73	SAVOIE	44	38	35	117	38	32	30
74	Hte SAVOIE	52	42	45	139	37	30	33
P	PARIS	2	575	940	1517	0	38	62
75	SEINE	8	574	550	1132	1	51	48
76	SEINE INF.	75	152	174	401	19	38	43
77	SEINE & M.	37	72	76	185	20	39	41
78	SEINE & O.	46	328	356	730	6	45	49
79	DEUX-SEVRES	71	29	33	133	53	22	25
80	SOMME	57	68	61	186	31	36	33
81	TARN	55	47	33	135	41	35	24
82	TARN & G.	44	13	18	75	59	17	24
83	VAR	33	50	81	164	20	31	49
84	VAUCLUSE	40	30	41	111	36	27	37
85	VENDEE	110	38	40	188	59	20	21
86	VIENNE	60	29	39	128	47	23	30
87	Hte VIENNE	64	47	45	156	41	30	29
88	VOSGES	36	95	43	174	21	54	25
89	YONNE	41	28	37	106	39	26	35
90	BELFORT	3	25	13	41	8	60	32
		5212	6705	6905	18825	28	35	37



Jaques Bertin, Semiology of Graphics, Madison Wis: University of Wisconsin Press, p.101

Representation of the entire globe

Map Projections

Map Projections

»Jacques Bertin's work was drawing, artistic and very talented. (...) Jacques Bertin had a transparent glass globe on which he had drawn a meridian / parallel grid reference. And he was projecting it, literally. With different angles of view, he projected this grid onto a paper. There was nothing mathematical about it.«

Anne Le Fur, cartographer
⟨former student of Bertin⟩

https://visionscarto.net/bertin-projection-1953

Map Projections

»Projection with regional compromise in which the compromise is no longer homogeneous but is modified for a larger deformation of the oceans, to give a lesser deformation of the continents.«

Jaques Bertin

https://visionscarto.net/bertin-projection-1953

Bertin projection

VISIONSCARTO

2018

https://visionscarto.net/base-maps

Bertin projection

»(...) the end of the Cold War world situation requires a projection that presents the lowest possible distortion at the North Pole, a high point of conflict during this period. The projection of Jacques Bertin 1953 with regional compensation owns this property.«

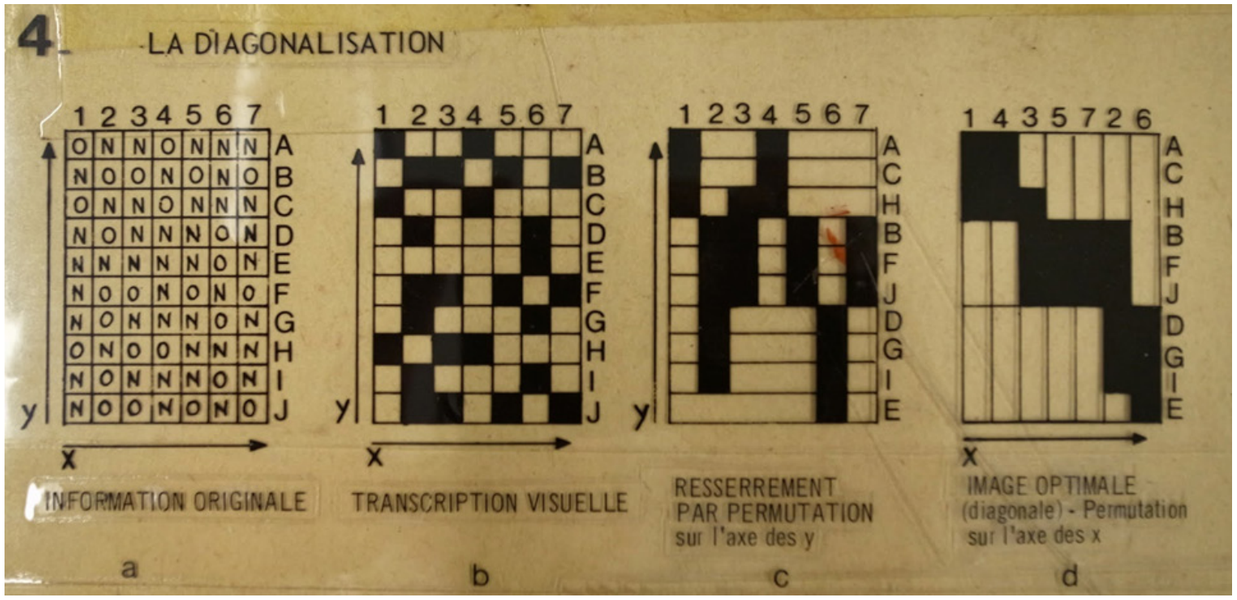
taught at Science Po,
French Universitry

https://visionscarto.net/bertin-projection-1953

Reorderable physical matrix

A wise view in the here and now

Data Manipulation

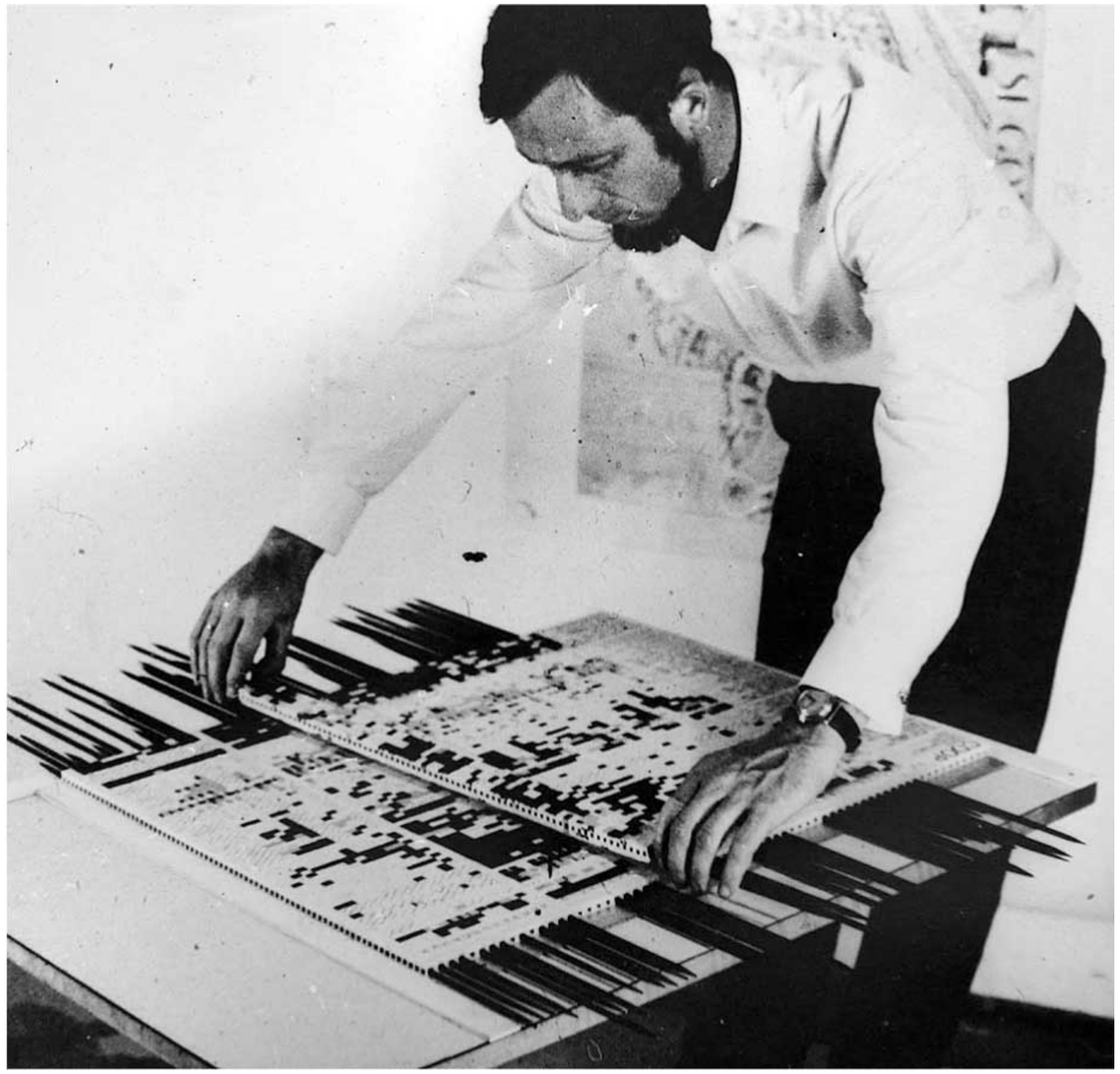


It is the internal mobility of the image that characterizes the modern Graphique. We do not "draw" an image once for all. We "build" it and rebuild it (we manipulate it) until all hidden relations-hips have been perceived.

Jaques Bertin

https://aviz.fr/diyMatrix/

Data Manipulation



https://www.youtube.com/watch?v=VWfeOjJ_th4&feature=emb_title

https://aviz.fr/bertifier_app/

https://aviz.fr/diyMatrix/