

Timetable Resolution Study

From 2D grid resolution to print, scale and three-dimensional reading.

2D

screen grid

3D

spatial grid

PRINT

newspaper

SCALE

publication sizes

This week, the reference become a method.

01

FORMAL PROPERTIES

Investigate material, construction, style and the internal logic of the reference.

02

TRANSLATION

Move the reference into another medium or context, without treating the move as decoration.

03

CIRCULATION

Publish, distribute or re-stage the work through another platform, scale or economy.

Therefore the presentation is not about showing more outcomes. It is about showing how a reference changes the testing condition.

How does grid resolution change the legibility, comparison and information loss of the same railway timetable?

I am not redesigning the timetable to make it better.
I am using grid resolution as a testing method.

The question now moves across media.

How does grid resolution change legibility, comparison and information loss when the same timetable moves from screen to print and into space?

The original screen test still matters, but it becomes only one condition among several.

New variables introduced this week:

- 01 paper scale
- 02 body distance
- 03 folding / handling
- 04 depth and viewing position

SOURCE

8 GRID

20 GRID

32 GRID

The grid becomes spatial.

The grid in three-dimensional design

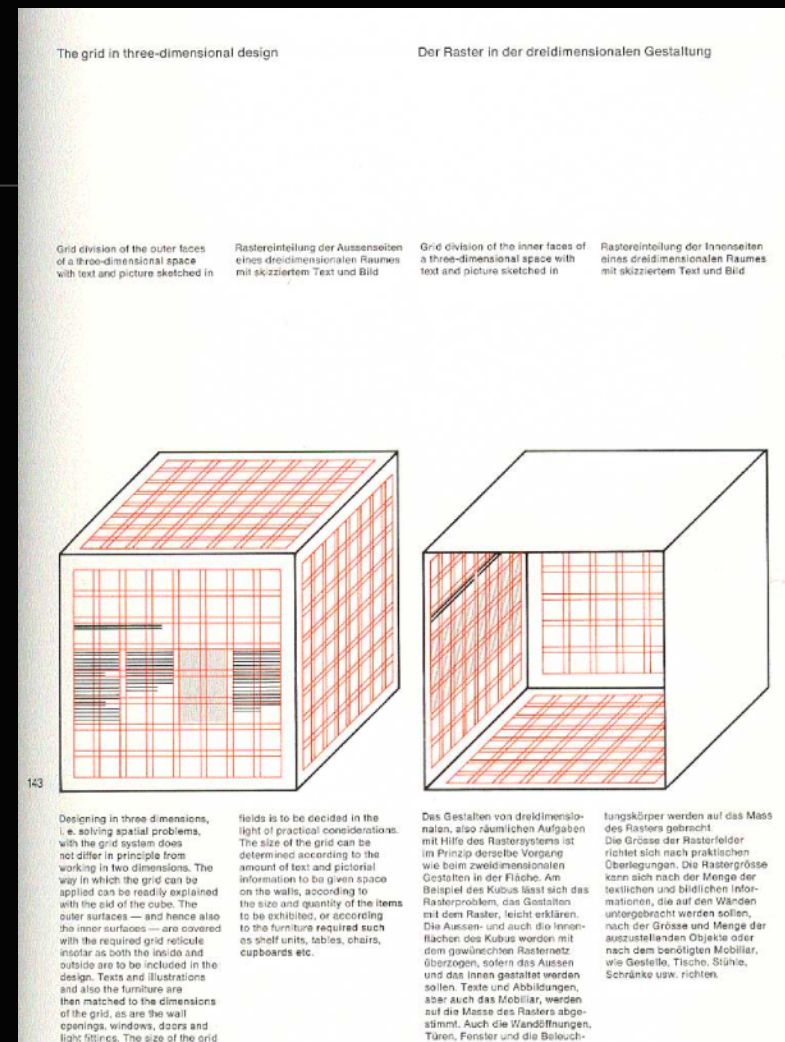
Josef Müller-Brockmann

This reference changes my project because the grid is no longer only a page structure. It becomes a way to organise floor, wall, object, image, text and viewing distance.

Key shift

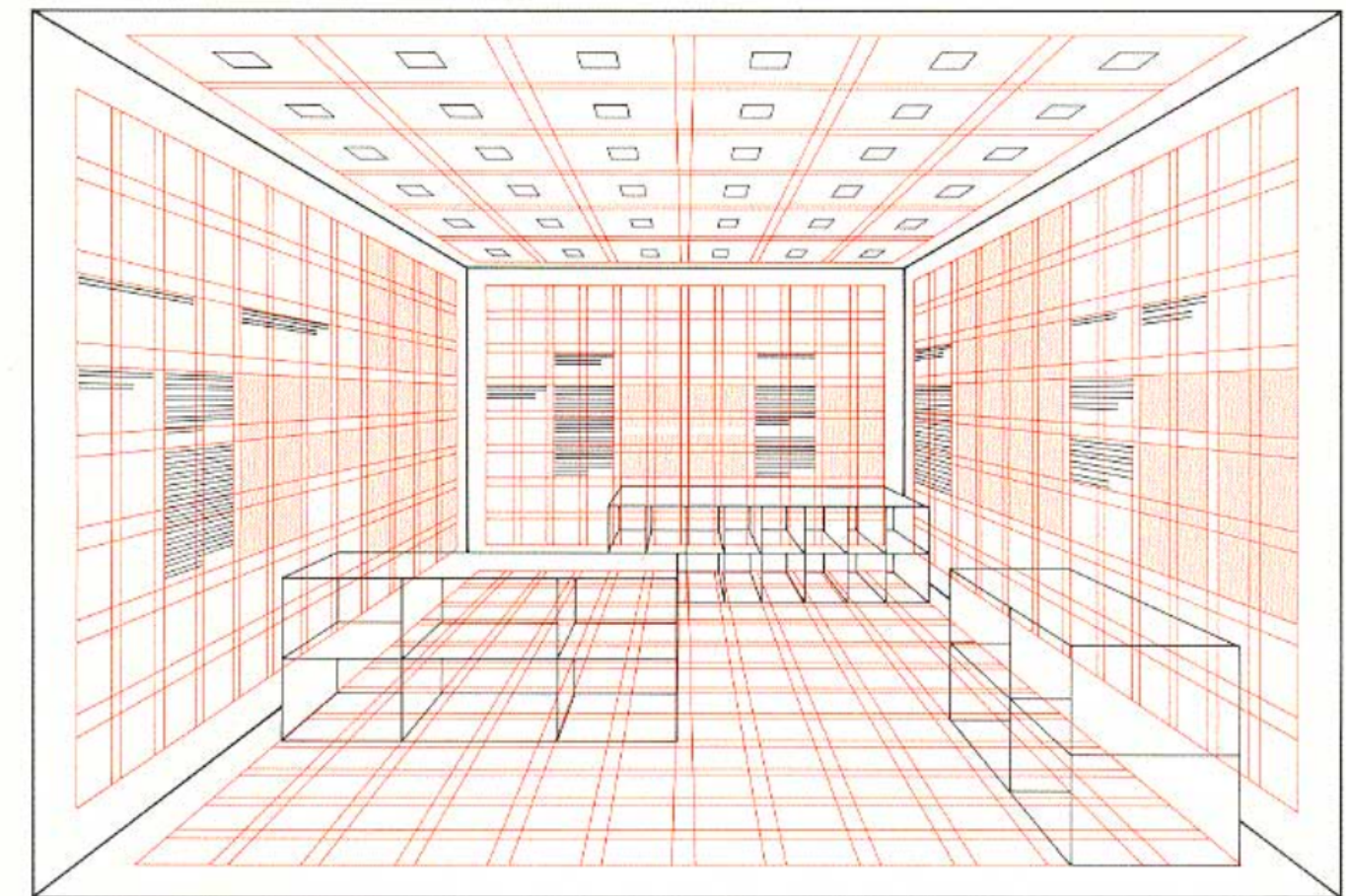
2D grid = arrangement on a surface

3D grid = arrangement of a reading environment



Grid in the three-dimensional space with light fittings, flooring, furniture, texts and pictures sketched in

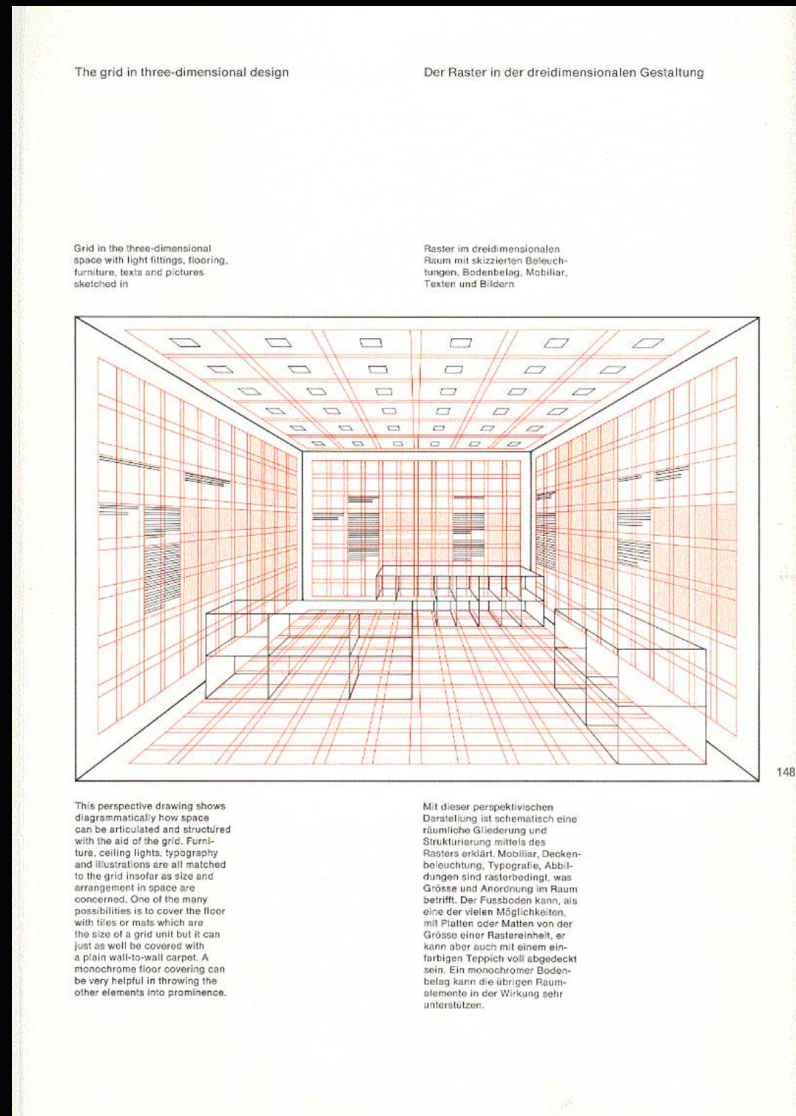
Raster im dreidimensionalen Raum mit skizzierten Beleuchtungen, Bodenbelag, Mobiliar, Texten und Bildern



This perspective drawing shows diagrammatically how space can be articulated and structured with the aid of the grid. Furniture, ceiling lights, typography and illustrations are all matched to the grid insofar as size and arrangement in space are concerned. One of the many possibilities is to cover the floor with tiles or mats which are the size of a grid unit but it can just as well be covered with a plain wall-to-wall carpet. A monochrome floor covering can be very helpful in throwing the other elements into prominence.

Mit dieser perspektivischen Darstellung ist schematisch eine räumliche Gliederung und Strukturierung mittels des Rasters erklärt. Mobiliar, Deckenbeleuchtung, Typografie, Abbildungen sind rasterbedingt, was Grösse und Anordnung im Raum betrifft. Der Fussboden kann, als eine der vielen Möglichkeiten, mit Platten oder Matten von der Grösse einer Rastereinheit, er kann aber auch mit einem einfarbigen Teppich voll abgedeckt sein. Ein monochromer Bodenbelag kann die übrigen Raumelemente in der Wirkung sehr unterstützen.

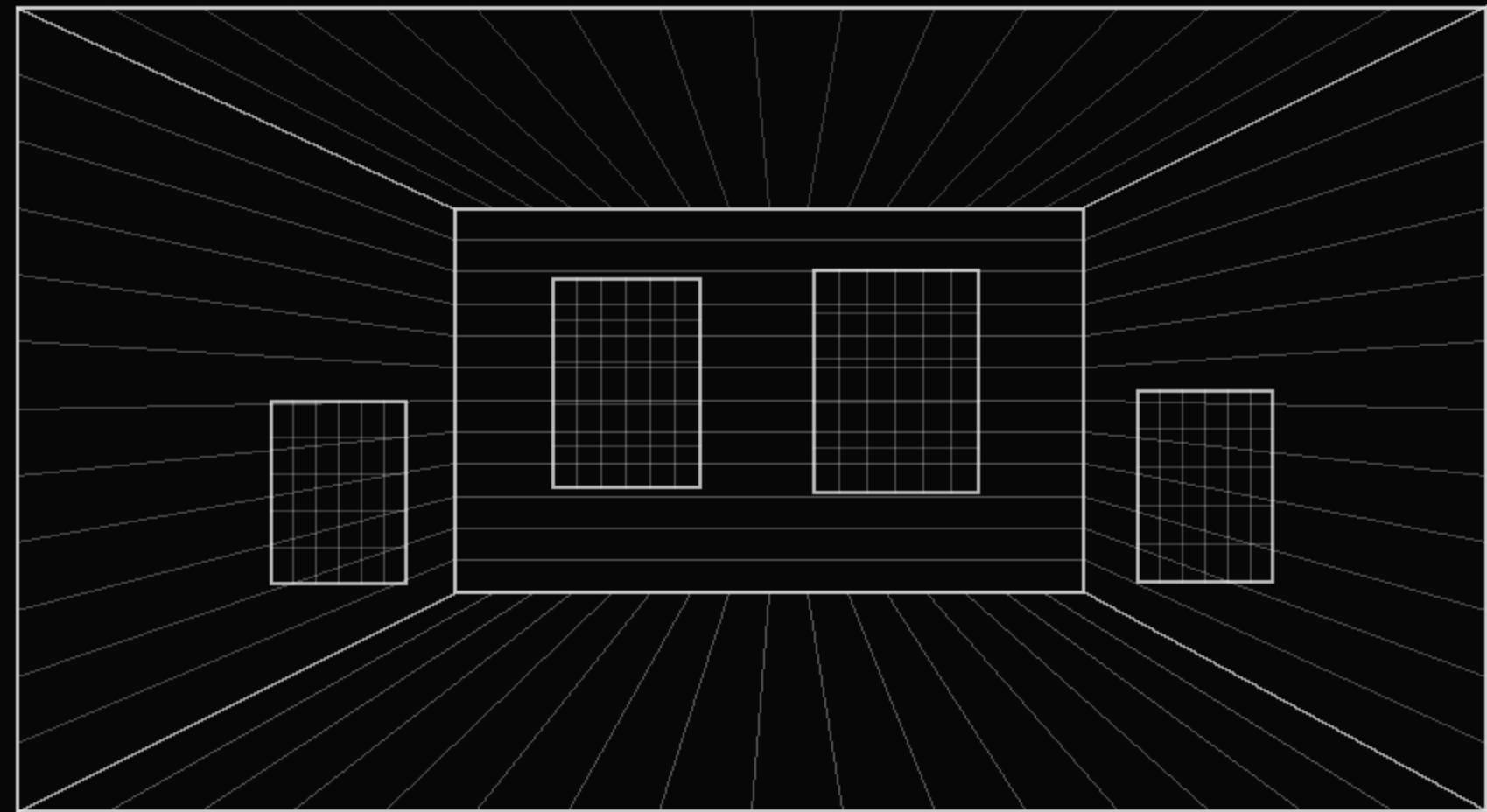
I translated the timetable grid into a spatial apparatus.



translate



3D GRID FIELD / SPATIAL READING CONDITION



floor / wall / depth / viewing position

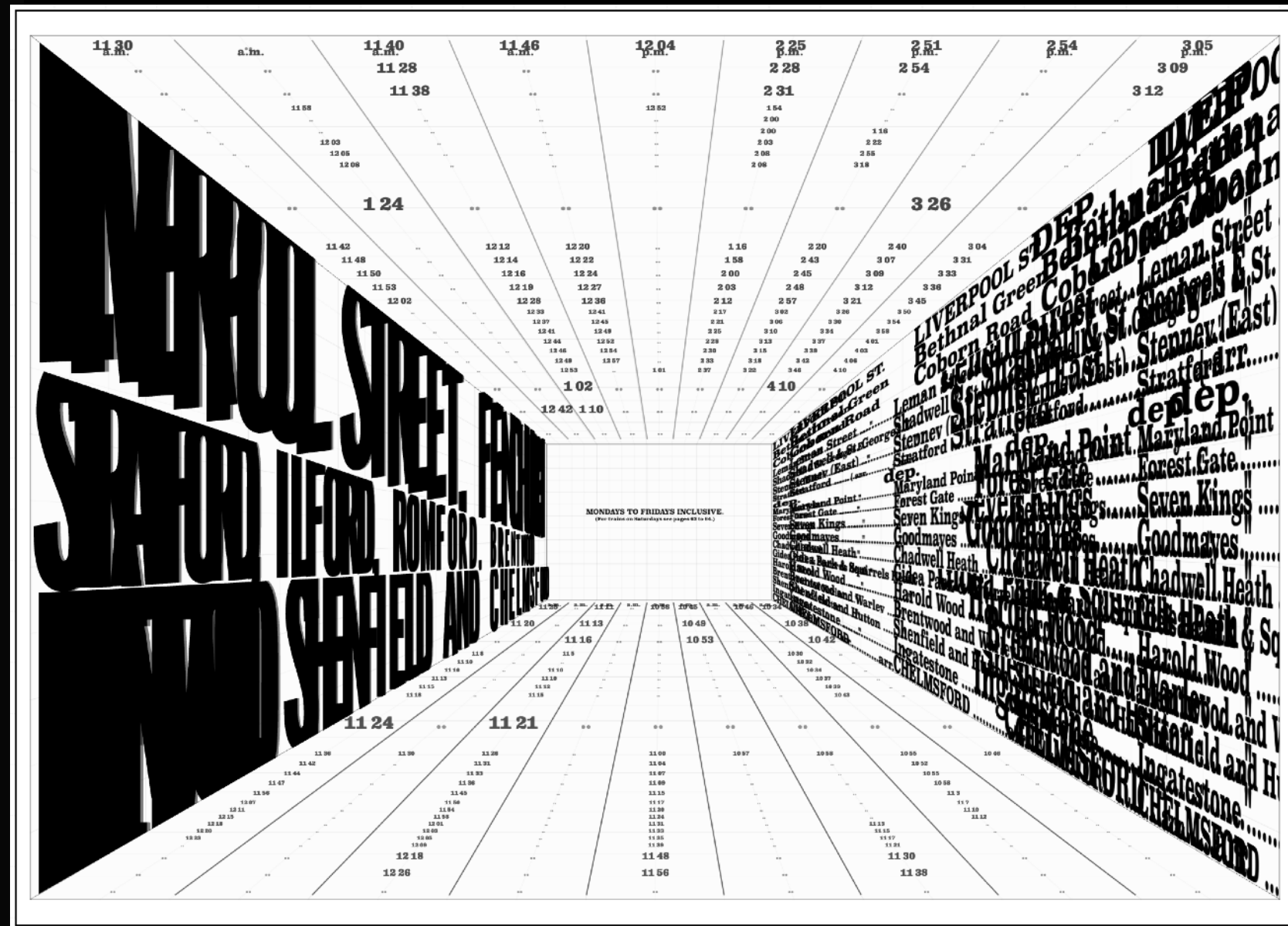
REFERENCE: grid as room structure

RESPONSE: timetable as spatial field

The experiment asks whether grid resolution can become a condition of movement, distance and orientation.

The viewer now navigates the timetable.

3D GRID FIELD / SPATIAL READING CONDITION



floor / wall / depth / viewing position

New reading variables

- 01 DISTANCE
near reading / far reading
- 02 ANGLE
front view / side view
- 03 DEPTH
foreground / background
- 04 PATH
reading as movement

This pushes the project beyond a predictable screen metric: not every outcome can be calculated in advance.

Original grid

ORIGINAL TIMETABLE LAYOUT

LANDSCAPE 8 GRID

LANDSCAPE 20 GRID

LANDSCAPE 32 GRID

3D GRID SYSTEM

PORTRAIT 8 GRID

SOURCE SCAN

MODERN PRINT

FIELD SHIFT

RANDOM SHIFT

KEEP FORMAT

GRID OVERLAY

SCREENSHOT

TABLE LABEL

DATE TIME

TABLE 13—continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD

MONDAYS TO FRIDAYS INCLUSIVE. (For trains on Saturdays see pages 63 to 64.)

STATIONS	00L ST. dep.	10:34	10:40	10:45	10:50	11:11	11:20	11:30	11:40	11:45	12:04	12:10	12:15	12:24	12:30	12:35	12:40	12:45	12:50	12:55
LIVERPOOL ST. dep.	10:34	10:40	10:45	10:50	11:11	11:20	11:30	11:40	11:45	12:04	12:10	12:15	12:24	12:30	12:35	12:40	12:45	12:50	12:55	
Bethnal Green	10:38	10:44	10:49	10:54	11:15	11:24	11:34	11:39	11:44	12:03	12:09	12:14	12:23	12:29	12:34	12:39	12:44	12:49	12:54	
Coburn Road	10:42	10:48	10:53	10:58	11:19	11:28	11:38	11:43	11:48	12:07	12:13	12:18	12:27	12:33	12:38	12:43	12:48	12:53	12:58	
FENCHURCH ST. dep.	10:30	10:36	10:41	10:46	11:07	11:16	11:26	11:31	11:36	11:55	12:01	12:06	12:15	12:21	12:26	12:31	12:36	12:41	12:46	
Leman Street	10:32	10:38	10:43	10:48	11:09	11:18	11:28	11:33	11:38	11:57	12:03	12:08	12:17	12:23	12:28	12:33	12:38	12:43	12:48	
Shawell & St. George's E.	10:34	10:40	10:45	10:50	11:11	11:20	11:30	11:35	11:40	12:04	12:10	12:15	12:24	12:30	12:35	12:40	12:45	12:50	12:55	
Stepney (East)	10:37	10:43	10:48	10:53	11:14	11:23	11:33	11:38	11:43	12:02	12:08	12:13	12:22	12:28	12:33	12:38	12:43	12:48	12:53	
Burdett Road	10:39	10:45	10:50	10:55	11:16	11:25	11:35	11:40	11:45	12:04	12:10	12:15	12:24	12:30	12:35	12:40	12:45	12:50	12:55	
Bow Road	10:43	10:49	10:54	10:59	11:20	11:29	11:39	11:44	11:49	12:08	12:14	12:19	12:28	12:34	12:39	12:44	12:49	12:54	12:59	
Stratford Market..... arr.	10:48	10:54	10:59	11:04	11:25	11:34	11:44	11:49	11:54	12:13	12:19	12:24	12:33	12:39	12:44	12:49	12:54	12:59	13:04	
Maryland Point..... [arr.	10:48	10:54	10:59	11:04	11:25	11:34	11:44	11:49	11:54	12:13	12:19	12:24	12:33	12:39	12:44	12:49	12:54	12:59	13:04	
Forest Gate.....	10:50	10:56	11:01	11:06	11:27	11:36	11:46	11:51	11:56	12:15	12:21	12:26	12:35	12:41	12:46	12:51	12:56	13:01	13:06	
Manor Park.....	10:52	10:58	11:03	11:08	11:29	11:38	11:48	11:53	11:58	12:17	12:23	12:28	12:37	12:43	12:48	12:53	12:58	13:03	13:08	
Ilford.....	10:54	11:00	11:05	11:10	11:31	11:40	11:50	11:55	12:00	12:19	12:25	12:30	12:39	12:45	12:50	12:55	13:00	13:05	13:10	
Seven Kings.....	10:56	11:02	11:07	11:12	11:33	11:42	11:52	11:57	12:02	12:21	12:27	12:32	12:41	12:47	12:52	12:57	13:02	13:07	13:12	
Goodmayes.....	10:58	11:04	11:09	11:14	11:35	11:44	11:54	11:59	12:04	12:23	12:29	12:34	12:43	12:49	12:54	12:59	13:04	13:09	13:14	
Chadwell Heath.....	11:00	11:06	11:11	11:16	11:37	11:46	11:56	12:01	12:06	12:25	12:31	12:36	12:45	12:51	12:56	13:01	13:06	13:11	13:16	
Goodmayes.....	11:02	11:08	11:13	11:18	11:39	11:48	11:58	12:03	12:08	12:27	12:33	12:38	12:47	12:53	12:58	13:03	13:08	13:13	13:18	
Ilford.....	11:04	11:10	11:15	11:20	11:41	11:50	12:00	12:05	12:10	12:29	12:35	12:40	12:49	12:55	13:00	13:05	13:10	13:15	13:20	
Seven Kings.....	11:06	11:12	11:17	11:22	11:43	11:52	12:02	12:07	12:12	12:31	12:37	12:42	12:51	12:57	13:02	13:07	13:12	13:17	13:22	
Goodmayes.....	11:08	11:14	11:19	11:24	11:45	11:54	12:04	12:09	12:14	12:33	12:39	12:44	12:53	12:59	13:04	13:09	13:14	13:19	13:24	
Chadwell Heath.....	11:10	11:16	11:21	11:26	11:47	11:56	12:06	12:11	12:16	12:35	12:41	12:46	12:55	13:01	13:06	13:11	13:16	13:21	13:26	
Goodmayes.....	11:12	11:18	11:23	11:28	11:49	11:58	12:08	12:13	12:18	12:37	12:43	12:48	12:57	13:03	13:08	13:13	13:18	13:23	13:28	
Ilford.....	11:14	11:20	11:25	11:30	11:51	12:00	12:10	12:15	12:20	12:39	12:45	12:50	12:59	13:05	13:10	13:15	13:20	13:25	13:30	
Seven Kings.....	11:16	11:22	11:27	11:32	11:53	12:02	12:12	12:17	12:22	12:41	12:47	12:52	13:01	13:07	13:12	13:17	13:22	13:27	13:32	
Goodmayes.....	11:18	11:24	11:29	11:34	11:55	12:04	12:14	12:19	12:24	12:43	12:49	12:54	13:03	13:09	13:14	13:19	13:24	13:29	13:34	
Chadwell Heath.....	11:20	11:26	11:31	11:36	11:57	12:06	12:16	12:21	12:26	12:45	12:51	12:56	13:05	13:11	13:16	13:21	13:26	13:31	13:36	
Goodmayes.....	11:22	11:28	11:33	11:38	11:59	12:08	12:18	12:23	12:28	12:47	12:53	12:58	13:07	13:13	13:18	13:23	13:28	13:33	13:38	
Ilford.....	11:24	11:30	11:35	11:40	12:01	12:10	12:20	12:25	12:30	12:49	12:55	13:00	13:09	13:15	13:20	13:25	13:30	13:35	13:40	
Seven Kings.....	11:26	11:32	11:37	11:42	12:03	12:12	12:22	12:27	12:32	12:51	12:57	13:02	13:11	13:17	13:22	13:27	13:32	13:37	13:42	
Goodmayes.....	11:28	11:34	11:39	11:44	12:05	12:14	12:24	12:29	12:34	12:53	12:59	13:04	13:13	13:19	13:24	13:29	13:34	13:39	13:44	
Chadwell Heath.....	11:30	11:36	11:41	11:46	12:07	12:16	12:26	12:31	12:36	12:55	13:01	13:06	13:15	13:21	13:26	13:31	13:36	13:41	13:46	
Goodmayes.....	11:32	11:38	11:43	11:48	12:09	12:18	12:28	12:33	12:38	12:57	13:03	13:08	13:17	13:23	13:28	13:33	13:38	13:43	13:48	
Ilford.....	11:34	11:40	11:45	11:50	12:11	12:20	12:30	12:35	12:40	13:03	13:09	13:14	13:23	13:29	13:34	13:39	13:44	13:49	13:54	
Seven Kings.....	11:36	11:42	11:47	11:52	12:13	12:22	12:32	12:37	12:42	13:05	13:11	13:16	13:25	13:31	13:36	13:41	13:46	13:51	13:56	
Goodmayes.....	11:38	11:44	11:49	11:54	12:15	12:24	12:34	12:39	12:44	13:07	13:13	13:18	13:27	13:33	13:38	13:43	13:48	13:53	13:58	
Chadwell Heath.....	11:40	11:46	11:51	11:56	12:17	12:26	12:36	12:41	12:46	13:09	13:15	13:20	13:29	13:35	13:40	13:45	13:50	13:55	14:00	
Goodmayes.....	11:42	11:48	11:53	11:58	12:19	12:28	12:38	12:43	12:48	13:11	13:17	13:22	13:31	13:37	13:42	13:47	13:52	13:57	14:02	
Ilford.....	11:44	11:50	11:55	12:00	12:21	12:30	12:40	12:45	12:50	13:13	13:19	13:24	13:33	13:39	13:44	13:49	13:54	13:59	14:04	
Seven Kings.....	11:46	11:52	11:57	12:02	12:23	12:32	12:42	12:47	12:52	13:15	13:21	13:26	13:35	13:41	13:46	13:51	13:56	14:01	14:06	
Goodmayes.....	11:48	11:54	11:59	12:04	12:25	12:34	12:44	12:49	12:54	13:17	13:23	13:28	13:37	13:43	13:48	13:53	13:58	14:03	14:08	
Chadwell Heath.....	11:50	11:56	12:01	12:06	12:27	12:36	12:46	12:51	12:56	13:19	13:25	13:30	13:39	13:45	13:50	13:55	14:00	14:05	14:10	
Goodmayes.....	11:52	11:58	12:03	12:08	12:29	12:38	12:48	12:53	12:58	13:21	13:27	13:32	13:41	13:47	13:52	13:57	14:02	14:07	14:12	
Ilford.....	11:54	12:00	12:05	12:10	12:31	12:40	12:50	12:55	13:00	13:23	13:29	13:34	13:43	13:49	13:54	13:59	14:04	14:09	14:14	
Seven Kings.....	11:56	12:02	12:07	12:12	12:33	12:42	12:52	12:57	13:02	13:25	13:31	13:36	13:45	13:51	13:56	14:01	14:06	14:11	14:16	
Goodmayes.....	11:58	12:04	12:09	12:14	12:35	12:44	12:54	12:59	13:04	13:27	13:33	13:38	13:47	13:53	13:58	14:03	14:08	14:13	14:18	
Chadwell Heath.....	12:00	12:06	12:11	12:16	12:37	12:46	12:56	13:01	13:06	13:29	13:35	13:40	13:49	13:55	14:00	14:05	14:10	14:15	14:20	
Goodmayes.....	12:02	12:08	12:13	12:18	12:39	12:48	12:58	13:03	13:08	13:31	13:37	13:42	13:51	13:57	14:02	14:07	14:12	14:17	14:22	
Ilford.....	12:04	12:10	12:15	12:20	12:41	12:50	13:00	13:05	13:10	13:33	13:39	13:44	13:53	13:59	14:04	14:09	14:14	14:19	14:24	
Seven Kings.....	12:06	12:12	12:17	12:22	12:43	12:52	13:02	13:07	13:12	13:35	13:41	13:46	13:55	14:01	14:06	14:11	14:16	14:21	14:26	
Goodmayes.....	12:08	12:14	12:19	12:24	12:45	12:54	13:04	13:09	13:14	13:37	13:43	13:48	13:57	14:03	14:08	14:13	14:18	14:23	14:28	
Chadwell Heath.....	12:10	12:16	12:21	12:26	12:47	12:56	13:06	13:11	13:16	13:39	13:45	13:50	13:59	14:05	14:10	14:15	14:20	14:25	14:30	
Goodmayes.....	12:12	12:18	12:23	12:28</																

Printing is used as a reading test

WHY PRINT?

The railway timetable originally belongs to a printed information culture. By printing it again, the project tests scale, paper, folding, handling and reading distance as part of the system.

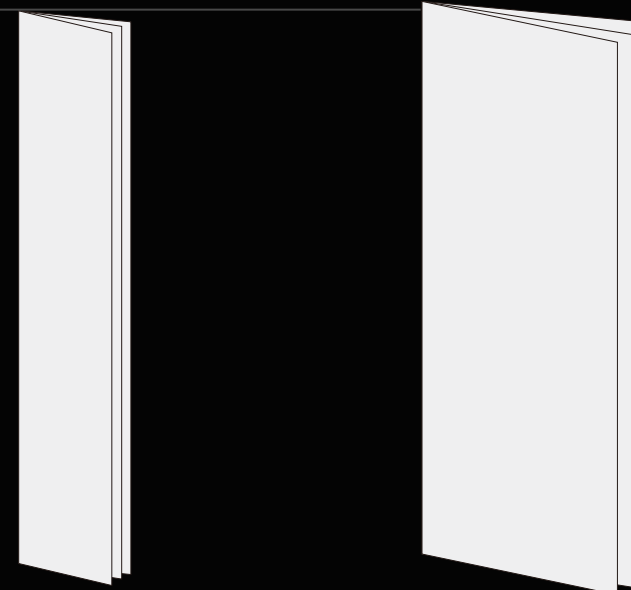
- 01 Different Newspaper Scale
- 02 A3 test Publication
- 03 Different Reading Approaches

Newspaper (332x475)

A4

Newspaper (350x550)

A3



Changing size changes the unit of comparison.

Same data,
different reading object.

A4

fragment reading

A3

page reading

NEWSPAPER

field reading

One source, four testing conditions.

01

SCREEN

switching / random states

Tests recombination and comparison on demand.

02

PRINT

paper / handling / scale

Tests whether reading changes when the timetable becomes physical.

03

3D SPACE

depth / angle / movement

Tests the grid as an environment rather than a surface.

04

PUBLICATION

fixed sequence / archive

Tests how the experiments can be read as evidence.

The controlled part remains the source timetable. The variable part is the condition under which it becomes readable.

One source, four testing conditions.

A3

Newspaper

A4

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD.

MONDAYS TO FRIDAYS INCLUSIVE.

SS Second class carriages are not run on these trains.

Time	Liverpool St.	Fenchurch St.	Stratford	Ilford	Romford	Brentwood	Shenfield	Chelmsford
11:58								
12:03								
12:06								
12:08								
12:12								
12:14								
12:16								
12:19								
12:22								
12:28								
12:33								
12:37								
12:41								
12:44								
12:46								
12:49								
12:53								
1:02								
1:05								
1:10								

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD.

MONDAYS TO FRIDAYS INCLUSIVE.

SS Second class carriages are not run on these trains.

Time	Liverpool St.	Fenchurch St.	Stratford	Ilford	Romford	Brentwood	Shenfield	Chelmsford
11:58								
12:03								
12:06								
12:08								
12:12								
12:14								
12:16								
12:19								
12:22								
12:28								
12:33								
12:37								
12:41								
12:44								
12:46								
12:49								
12:53								
1:02								
1:05								
1:10								

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD.

MONDAYS TO FRIDAYS INCLUSIVE.

SS Second class carriages are not run on these trains.

Time	Liverpool St.	Fenchurch St.	Stratford	Ilford	Romford	Brentwood	Shenfield	Chelmsford
11:58								
12:03								
12:06								
12:08								
12:12								
12:14								
12:16								
12:19								
12:22								
12:28								
12:33								
12:37								
12:41								
12:44								
12:46								
12:49								
12:53								
1:02								
1:05								
1:10								

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD.

MONDAYS TO FRIDAYS INCLUSIVE.

SS Second class carriages are not run on these trains.

Time	Liverpool St.	Fenchurch St.	Stratford	Ilford	Romford	Brentwood	Shenfield	Chelmsford
11:58								
12:03								
12:06								
12:08								
12:12								
12:14								
12:16								
12:19								
12:22								
12:28								
12:33								
12:37								
12:41								
12:44								
12:46								
12:49								
12:53								
1:02								
1:05								
1:10								

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD.

MONDAYS TO FRIDAYS INCLUSIVE.

SS Second class carriages are not run on these trains.

Time	Liverpool St.	Fenchurch St.	Stratford	Ilford	Romford	Brentwood	Shenfield	Chelmsford
11:58								
12:03								
12:06								
12:08								
12:12								
12:14								
12:16								
12:19								
12:22								
12:28								
12:33								
12:37								
12:41								
12:44								
12:46								
12:49								
12:53								
1:02								
1:05								
1:10								

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD.

MONDAYS TO FRIDAYS INCLUSIVE.

SS Second class carriages are not run on these trains.

Time	Liverpool St.	Fenchurch St.	Stratford	Ilford	Romford	Brentwood	Shenfield	Chelmsford
11:58								
12:03								
12:06								
12:08								
12:12								
12:14								
12:16								
12:19								
12:22								
12:28								
12:33								
12:37								
12:41								
12:44								
12:46								
12:49								
12:53								
1:02								
1:05								
1:10								

METHOD

Original grid

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

32 grid

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

20 grid

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

8 grid

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

3D grid

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

PORTRAIT 8 grid

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

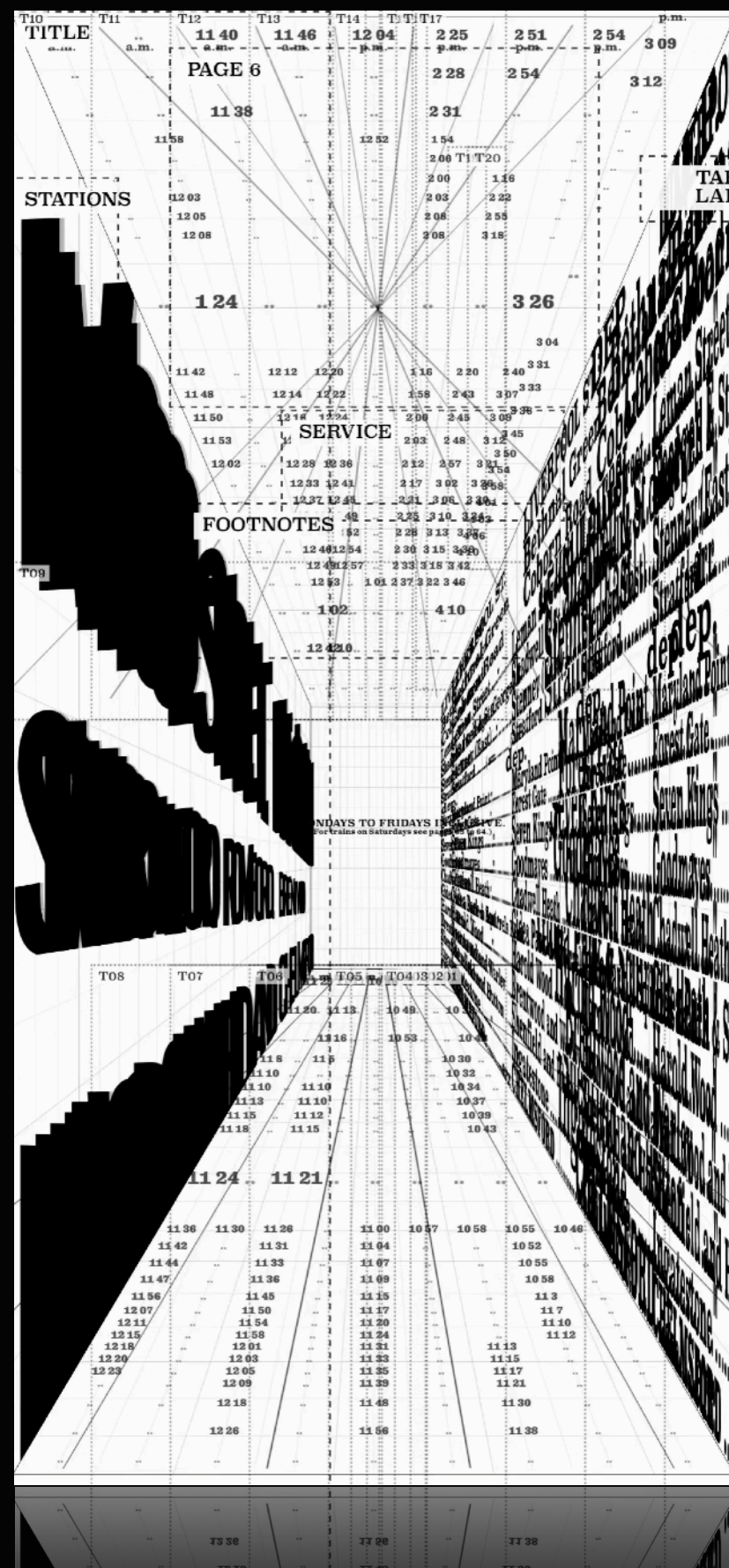


Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

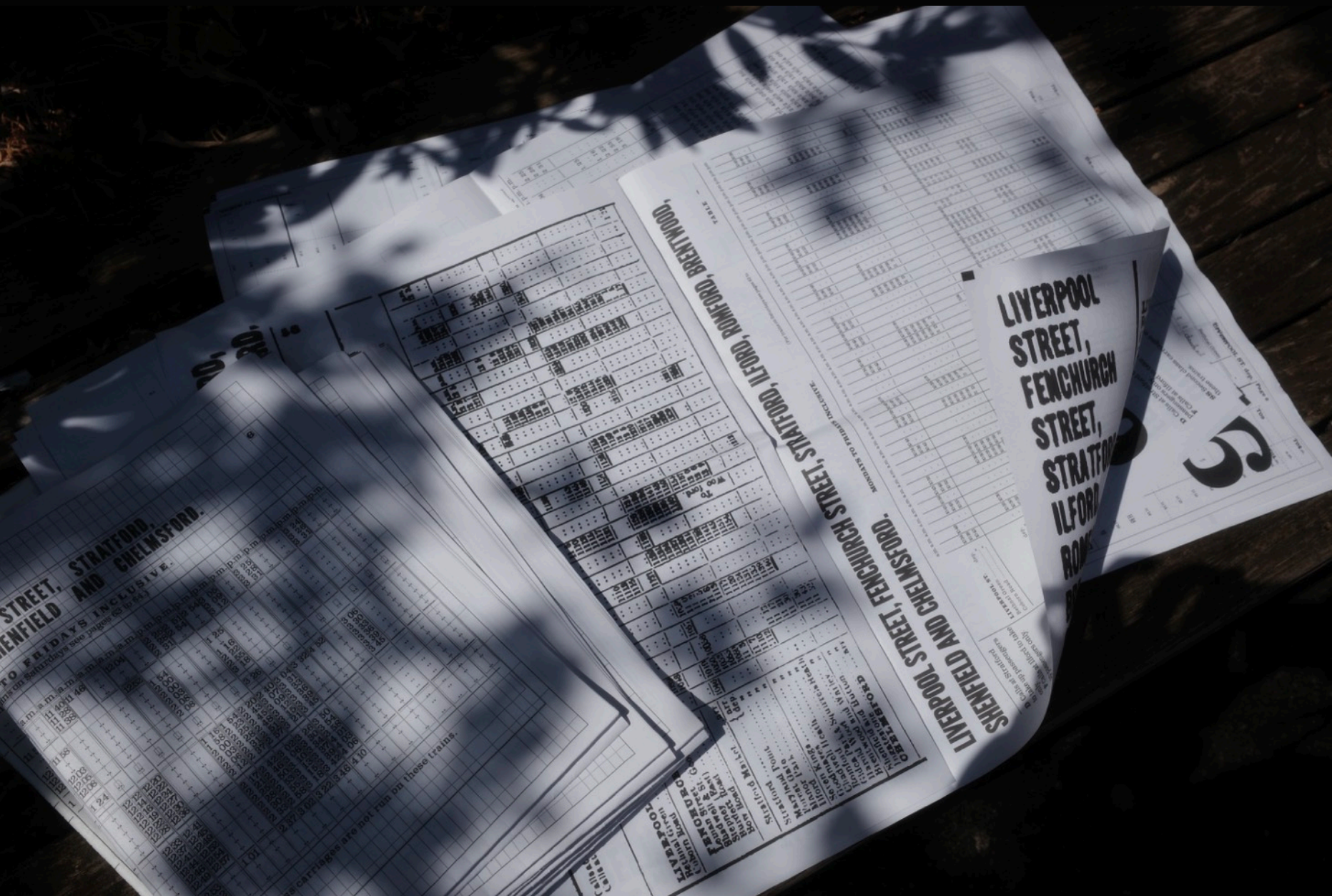
Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. LIVERPOOL STREET, FENCHURCH STREET, STRATFORD, ILFORD, ROMFORD, BRENTWOOD, SHENFIELD AND CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.

Table 13 - continued. CHELMSFORD. MONDAYS TO FRIDAYS INCLUSIVE.



Bibliography

01 GRID / NEUTRALITY

the grid as rational order and rhetorical claim



Müller-Brockmann, J. (1981)

Grid Systems in Graphic Design: the canonical grid system tested as apparatus.



Crowel & van Toorn (1972/2015)

The Debate: modernist order placed against political communication.



Kinross, R. (1985)

The Rhetoric of Neutrality: the timetable as rhetorical evidence.



Haraway, D. (1988)

Situated Knowledges: objectivity as position, not neutral distance.

02 INFORMATION / MEDIATION

visualisation as a political and epistemic apparatus



Chun, W. H. K. (2018)

On Patterns and Proxies: pattern recognition as constructed knowledge.



Drucker, J. (2014)

Graphesis: visual forms do not simply transmit knowledge; they produce it.



Latour, B. (1986)

Visualisation and Cognition: flat inscriptions gather and stabilise power.



Becher, B. & Becher, H. (2004)

Typologies of Industrial Buildings: serial comparison as visual method.



Akten, M. et al. (2019)

Learning to See: machine vision as an interpretive system.

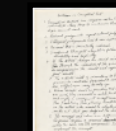
03 INSTRUCTION / EXECUTION

systems, rules and repeated interpretation



Ono, Y. (1964)

Grapefruit: instruction as poetic system and open execution.



LeWitt, S. (1969)

Sentences on Conceptual Art: rule, idea and realisation separated.



Conditional Design (2013)

Conditional Design Manifesto: design generated through rules and conditions.

Kinross, R. (1985) *The Rhetoric of Neutrality.*

Robin Kinross's 'The rhetoric of neutrality' is a key textual reference for my current enquiry because it shifts information design away from the opposition between functional clarity and visual expression. The essay asks "whether information can be neutral" (Kinross, 1985, p. 18), but it does not treat this as an abstract theoretical problem. Kinross argues through the railway timetable: an everyday, compressed and apparently self-evident information object. His position is that visual information becomes rhetorical as soon as it is given visible form. The timetable may seem purely practical, but its typography, spacing, leaders, rules, colour, hierarchy and typeface already decide how information is organised, how authority is performed, and what kind of reader is imagined.

The formal method of the essay is central to this argument. Kinross works through close visual reading rather than broad historical summary. By comparing British and Dutch railway timetables, he locates rhetoric in small material decisions: dot leaders, Gill Sans, horizontal rules, colour, serif and sans serif type systems. This treats the designed surface as evidence. When Kinross writes that timetables "organize and articulate and give visual presence to information" (Kinross, 1985, p. 19), he makes legibility inseparable from arrangement. Information does not sit behind design waiting to be communicated; it is produced through the typographic procedures that make it available to a reader.

This challenges the assumption that graphic communication design can clarify information without altering its meaning. Kinross does not simply attack functionalism from the outside. He takes one of functionalism's most ordinary objects and shows that function itself has rhetorical consequences. A timetable can be useful and still carry assumptions about efficiency, standardisation, infrastructure and institutional authority. His discussion of modernism, Swiss typography and HfG Ulm shows how neutrality became a visual style attached to post-war beliefs in technology, rational order and ideology-free communication (Kinross, 1985, pp. 24-29). This sharpens my position: the grid cannot be treated as a neutral support structure.

For my studio response, Kinross changes the status of the railway timetable. I should not treat it as raw data to be improved through a more elegant grid, or as nostalgic graphic material to be revived. I should treat it as an existing rhetorical apparatus before any new intervention takes place. This matters because my line of enquiry asks: how does grid resolution change the legibility, comparison and information loss of the same railway timetable? With Kinross, the timetable becomes a precise object for iteration: a source structure whose typographic details, density and hierarchy can be tested under different conditions.

Kinross's conclusion that "nothing is free of rhetoric" (Kinross, 1985, p. 29) is therefore useful as a methodology for making, rather than as a rule to be translated directly into interface modules. His essay gives me both a master object and a way of reading it. The historical timetable becomes a repeatable matrix through which changes of scale, grid resolution, print format and binding can be observed. My A3, newspaper and A4 prints, and my experiments with different binding forms, come from this methodological lesson. They are material tests of how information is organised, how authority is performed, and what kind of reader each format imagines.



Müller-Brockmann, J. (1981) *Grid Systems in Graphic Design.*

Josef Müller-Brockmann's *Grid Systems in Graphic Design* is the project/practice reference that structures my current studio response. Although it is a book, I am using it primarily as evidence of a graphic design practice: the systematic construction of visual order through modular grids, measured columns, margins, intervals, and proportional fields. Its key position is that the grid offers a rational basis for organising communication. Within this position, the designer submits the material to a system that promises clarity, consistency, and universal order. This is exactly why the reference is valuable to my project. I am not using Müller-Brockmann as a neutral authority. I am using his grid practice as the historical system that my timetable experiment tests.

The formal qualities of the reference are essential. The grid examples are not simply images of finished layouts; they expose the underlying armature by which layouts are planned. Lines, columns, gutters, modules, and measured divisions become visible as a technical language. The reference pages I am working from provide different grid conditions, including 8, 20, and 32 grid structures (Müller-Brockmann, 1981, pp. 72, 76, 87). These are therefore not arbitrary choices in my studio response. They are borrowed constraints from a canonical modernist method. By taking these grid resolutions and applying them to Kinross's railway timetable, I can test what happens when a modernist structure of order is forced onto an already dense historical information surface.

The project/practice reinforces one part of my understanding of graphic communication: structure matters. The grid is not just a background device. It determines where information can sit, how groups are formed, what becomes dominant, and how a reader moves across a page. In the timetable experiments, this becomes very clear. When I use a low grid resolution, the page tends to produce broad fields and stronger visual hierarchy, but the detailed train-by-train comparison becomes fragile. When I use a higher grid resolution, more information can be retained and aligned, but the reader encounters greater density pressure. The grid therefore does not merely organise information; it redistributes attention.

The later development of the website towards a 3D grid also comes directly from this reference. In the section on the grid in three-dimensional design, Müller-Brockmann shows a perspectival interior in which walls, floor, ceiling, furniture, lighting, texts and images are all articulated through the same spatial grid (Müller-Brockmann, 1981, p. 148). This page is important because it extends the grid beyond the flat page. It suggests that the grid can operate as a spatial co-ordinate system, not only as a typographic layout device. My 3D grid development in the website draws from this shift. It translates the timetable experiment from a two-dimensional printed surface into a spatial structure where density, orientation and reading order can be tested through depth and movement.

At the same time, Müller-Brockmann challenges my project because his method carries an implied faith in rational visual order. The grid appears to be a solution: a disciplined structure that can bring coherence to complex material. My project wants to test that belief rather than repeat it. The railway timetable is useful because it resists clean modernist absorption. It already contains columns, station rows, dot leaders, time sequences, footnotes, and a dense internal rhythm. When I place this material into 8, 20, and 32 grid systems, the grid does not simply clarify the timetable. It also displaces information, creates new hierarchies, and produces different forms of information loss. This reveals the grid as an apparatus, not just a tool.

This reference has also shaped my multi-media and binding experiments. In moving between A3 and A4 prints, poster formats, web-based viewing and possible bound structures, I have repeatedly had to adapt the grid to different publication sizes and reading situations. Müller-Brockmann gives this process both a critical direction and an iterative direction. Critically, his work allows me to question the modernist belief that order automatically produces clarity. Iteratively, it gives me a system that can be adjusted, scaled, folded, printed, spatialised and tested. My studio response is therefore not anti-grid, and it is not a decorative homage to Swiss modernism. It uses the grid as a controlled condition through which legibility, comparison and information loss can be observed across different media and formats. In this sense, Müller-Brockmann's practice is both the structure of the experiment and the object being tested. 18