Sun wind water earth life living legends for design

(AR1U010 Territory (design), AR0112 Civil engineering (calculations))

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Publish on your website:

AR1U010 AR0112 how you could take original legends into account in your earlier and future work. AR0112 calculations and observations of surfaces and boundaries in any location and your design, check your observations.

LEGENDS

sun wind water earth life living, environment, nature-culture function, priorities, agenda

Design making differences



Alternatives of form: states of dispersion on one level of scale



Line, surface, mass as variants of dispersion

Concentrating	XYZ	XY	Z		In time
Deconcentrating		Z	XY	XYZ	
Result	compact	line	surface	completely	a pile-up
	mass	elongation	sprawl	spread	of events

The designer's view: state of dispersion(form)







Concentration and centralisation are different concepts

		FORM		
7		concentration	deconcentration	
ICTION	centralisation	Concentration of centralised functions	Deconcentration of centralised functions	
FUN	decentralisation	Concentration of decentralised	Deconcentration of decentralised	
		functions	functions	

Built and open space



Open space

Open area

- Landscape
- Landscape park
- Urban landscape
- Town park
 - District park
 - Neighbourhood park
 - Ensemble green

within	radius
100km	30km
30km	10km
10km	3km
3km	1km
1km	300m
300m	100m
100m	30m



States of dispersion at different levels of scale



Shape as state of dispersion_{30km}



concentrated

concentration

deconcentration

deconcentrated

Nagtegaal (1994)

Accords of dispersion_{1km}



CC concentration of residence and traffic at district and neighbourhood level DC spread of residence and traffic at district level and concentration at neighbourhood level



DD spread of residence and traffic at district and neighbourhood level

Mergler (1994)

3-level-accords of dispersion_{1km}







CCC concentration of residence and traffic at district, neighbourhood, and spot level

DCC + DCD spread of residence and traffic at district level, concentration at neighbourhood level, different forms of concentration at spot level

DDC + DDD spread of residence and traffic at district level, spread at neighbourhood level, different forms of concentration at spot level.

Schale paradox



Binary legend of man's habitat

	nominal		binary	legend
Name frame	frame in m	grain in m	net residential area	tare
Global	10 000 000	1 000 000	continents	oceans
Continental	3 000 000	300 000	habitable lands	seas and waste lands
Subcontinental	1 000 000	100 000	urbanised areas	lake and rural areas
National	300 000	30 000	urban netw orks	landscapes
Subnationaal	100 000	10 000	urban regions	landscape park
Regional	30 000	3 000	conurbations	tow n landscapes
Subregional	10 000	1 000	tow ns, quarters	tow n parks
Urban, local	3 000	300	districts, villages	district parks
District	1 000	100	neighbourhoods, hamlets	neigbourhood parks
Neighbourhood	300	30	ensembles	greenery
Ensemble	100	10	lots	opening up area
Lot	30	3	houses	gardens, patios
Dw elling	10	1	living rooms, studies,	w et rooms, circulation spaces,
			bedrooms	stogares
Room	3	0,3	sitting areas, dinettes, beds	w alking area, cupboards,
				closets, w indow sills
Place	1	0,1	action-surrounding space	commodities

Culturalness in legend colours

Legend/Key	culture	culture <			nature
Grain (unit) radius	Red	Orange	Yellow	Green	Blue
1 m					
3 m					
10 m					
30 m					
100 m					
300 m					
1 km					
3 km					
10 km					
30 km					
100 km					
300 km					

Design strategy as a legend

Frame	Grain	red	orange	yellow	green	blue
km	m					
30	300	urban node	rural estate	plantation	landscape theatre	streamland





Number of people as a legend

Frame	Grain	red	orange	yellow	green	blue
km	m	100	1000	500	<100	<10
10	100	people average per hour using a station or motorway exit	people living at home	people working	people recreating	people caring or studying nature





Infrastructure investment as legend

Frame	Grain	€ 10 mln	€ 10 mln	€ 10 mln	€ 10 mln	€ 10 mln
km	m	investment	investment	investment	investment	investment
1	10	crossing	trace	multiple land	milieu	waterworks
				use		





Grain r=20m

Problems and opportunities as legend

Frame	Grain			Light (sun/		
		Safety	Noise	artificial)	Ecotope	Wind
km	m	problems	problems	problems	problems	problems
0,3	3	opportunities	opportunities	opportunities	opportunities	opportunities



Frame 600x600m

Grain r=3m



Mediaeval trias urbanica

Social differentiation	Urban differentiation
administration (aristocracy)	castle, palace
culture (spirituality)	church, cloister
economic basis (citizens,	market, shops, dwellings,
serfs)	small traditional trade
	businesses

Contemporary functional legends

Social differentiation	Urban differentiation
Politics	
legislative power	town hall
legal/administrative	law court/government services
executive power	police station, prison, barracks, military training ground
Culture	
religion/ ideology	churches, monuments, signs
art/science	museums, institutes, libraries
up-bringing/education	socio-cultural facilities, schools
Economy	
production	firms, banks, offices
exchange	distribution points, infrastructure
consumption	living, health service, recreation

Dispersion of different colours

LEGEND/KEY (30 m)	PILING -UP	SPREADING	
buildings	urban	rural	
pavement	course meshed	fine meshed	
agrarian area	agricultural business	vegetable gardens	
green	one nature reserve	waste green	
water	one large lake	many ponds	
	CONCEN	TRATION	
	<		
	>		
PROCESS	DECONCE	NTRATION	

Design making differences



Possibilities = f(Differences)



Highest visibility in the centre



http://www.msac.gov.au/pdfs/reports/msacref13.pdf

Design details to focus



Different focus on composition



Green Heart North and South wings Deltametropolis

The recognition of the very first component determines the definition of the other ones

Morphological reconstruction to determine the first component





Different varieties by composition



Picture

Quality

Variety

too

much



Composition analysis

Variety accord district Baarsjes (Amsterdam)

VARIETY-REPETITION					ACCORD
district	with	same neighbourhoods	in a radius of	1000	R
neighbourhood	with	different ensembles	in a radius of	300	V
ensemble	with	same building complexes	in a radius of	100	R
building complex	with	different façades	in a radius of	30	V
façade	with	same building segments	in a radius of	10	R
building segment	with	different building parts	in a radius of	3	V
building part	with	same building subparts	in a radius of	1m	R

Variety accords in buildings

	Traditional	Industrial
between buildings	Repetition	Diversity
between components:	Diversity	Repetition
between details:	Repetition	Diversity

Compositions of components and details



in a frame of

- 10m
- 30m
- 100m




Kinds of details

There are

- characteristic (for a component);
- connecting (components);
- crucial (for the composition) or
- striking (as an accidental point of recognition, a label)

details.

Components and details in compositions

RADIUS		1/10			COMPOSITION
100 000	details≤	10 000	<components< td=""><td>of</td><td>subnational</td></components<>	of	subnational
30 000	details≤	3 000	<components< td=""><td>of</td><td>regional</td></components<>	of	regional
10 000	details≤	1 000	<components< td=""><td>of</td><td>conurbation</td></components<>	of	conurbation
3000	details≤	300	<components< td=""><td>of</td><td>town</td></components<>	of	town
1000	details≤	100	<components< td=""><td>of</td><td>district</td></components<>	of	district
300	details≤	30	<components< td=""><td>of</td><td>neighbourhood</td></components<>	of	neighbourhood
100	details≤	10	<components< td=""><td>of</td><td>ensemble</td></components<>	of	ensemble
30	details≤	3	<components< td=""><td>of</td><td>building complex</td></components<>	of	building complex
10	details≤	1m	<components< td=""><td>of</td><td>façade</td></components<>	of	façade
3	details≤	0,3	<components< td=""><td>of</td><td>building segment</td></components<>	of	building segment
1m	details≤	0,1	<components< td=""><td>of</td><td>building part</td></components<>	of	building part

Growing awareness by scale



Field of vision for child and adult



in degrees from center

I am 0 year old



I look for				
differences to experience:	to learn:			
hard-soft	danger			
movable non-movable	operational abilities			
color	recognition			
within 1 m				

I am 1 year old



I look for				
differences to experience:	to learn:			
w indow s doors	orientation			
light dark	imagination			
shelter corners	to escape adult movements			
function time	every time having its ow n place			
visibility	hide-and-seek			
within 3 m				

I am 3 years old



l look for				
differences to experience:	to learn:			
accessibility	rules			
control	other people			
noise	context			
temperature	kinds of clothes			
within 10 m				

I am 5 years old



differences to experience:	to learn:			
wetness	hygiene			
ceiling shelter	in-betw eens to hesitate, to decide			
plantation	nature			
sun	nature			
formal-informal	different behavior			
recognition suprise	initiative			
within 30 m				

I am 7 years old



I look for				
differences to experience: to learn				
run compete	ambition			
w atch, learn	to learn			
within	100 m			

I am 9 years old



I look for					
differences to experience:	to learn:				
possibility to buy	expensiveness				
possibility to w alk	interest fascination				
possibility to ride a bike	ride				
within 300 m					

I am 11 years old



I look for				
differences to experience:	to learn:			
urban functions	exploration			
within 1	000 m			

I am 13 years old



I look for					
differences to experience:	to learn:				
meeting retire	projection identification				
atmosphers cultures	identity				
within 3000 m					

Legend boundaries as field of problems and desires

straal in m	RG	RB	RZ	GZ	BZ	GB
30 000	nationale spreiding?	bouwen in de duinen?				Nederland Waterland
10 000	Groene Hart?		mainports	inpassing var	Afsluitdijk I	Casco- concept
3 000	bufferzones?			snelwegen	Tjeukemeer	3 netwerken
1 000	stadsgroen?	Makelaars- droom	geluidhinder		havens	
300	wijkgroen?				boulevards	oever- recreatie
100	buurtgroen?					
30	vlekgroen?		ontsluiting	bermbeheer		
10	hof of tuin?	ontwatering			kaden	taluds
3	opipporgross	Vonotič	rociliinmorro			
1	snippergroen	veneue	roonjnmarge			beschoeiing

Scale of separation

straal in m	RG	RB	RZ	GZ	BZ	GB
30 000						
10 000	Give	Give a meaning to each cell in words or in				
3 000	sma	II illustrat	tions. Mak	ke – whe	ther on	
1 000	loca	location or not – a design sketch in the five				
300	colo	colours in which all transitions occur, each in				
100	at le	at least four directions of the compass. Make				
30	a de	a detailed design sketch of at least three				
10	trans	transitions. Then characterise each area by				
3	mea	means of its boundaries.				
1						

Boundaries

Boundaries play a major rôle in design and in ecology.

In design, every boundary is a line drawn between 2 legend units (types).

In ecology every boundary is a place offering more opportunities than homogeneous areas.

Aldo van Eyck (1968)

Take off your shoes and walk along the beach through the ocean's last thin sheet of water gliding landwards and seawards.

You feel reconsiled in a way you would not feel if there were a forced dialogue between you and either one or the other of these great phenomena.

For here, in-between land and ocean – in this in-between realm, something happens to you that is quite different from the seaman's alternating nostalgia.

No landward yearning from the sea, no seaward yearning from the land. No yearning for the alternative – no escape from one into the other. Now there is nothing wrong with the seaman as long as we realize that he is always wanting to go home both ways.

Design making difference



Polarity: from form to structure













10m

30m

100m

Sharp edges and gradients 3m



Wall

Campsheeting

Slope



In-between realms

Connecting and separating 30m



A dispersion of blue and green



3000m

300m

Boundary-richness as a quality

Water and stone



VeniceIJburgVenice1x2km1x2km200x

Venice 200x200m IJburg 200x200m

IJburg early design ArchitectenCie

Urban space and relief

Small outside space with continual horizontal relief

medium urban space with vertical relief every 80m.



Ede, Brauwere

Rotterdam Crooswijk, Malschaert

Public private margin

Horizontal relief	small urban space	large urban space
top floor	recessing	extending
intermediate floors	extending	recessing
ground floor	recessing	extending



Oud in: Boven, Freijser et al. (1997)



Wils in: Boven, Freijser et al. (1997)

Vertical relief

vertical relief	traffic space	lodging space
corner	recessing	extending
flank	extending	recessing



De Bazel in: Boven, Freijser et al. (1997)



Brandes in: Boven, Freijser et al. (1997)

Mixing horizontal and vertical relief

Loerakker,

Van Herk, Benthem en Crouwel , Mehrtens in: Boven, Freijser et al. (1997)









Conditional analysis

based on the simple comparison of two concepts A and B, putting the question 'could you imagine A without B?' and the reverse.



Abiotic

Biotic

Cultural

Anthropocentric and ecocentric thinking



Possible futures



Possibilities = f(Differences)



Causes under conditions



Presupposed conditions



Conditional sequence?



Changing conditions



Design making difference



Aims and means



Means = f(Aims)

Aims=f(Means)

Function follows form

Form follows function
Concepualisation



Benefit of generalising empirical thinking

