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ENZO MARI

FUNZIONE  
DELLA RICERCA  
ESTETICA

THE FUNCTION  
OF ESTHETIC  
RESEARCH

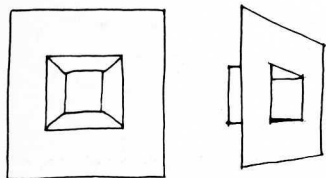
EDIZIONI  
DI COMUNITÀ

ambiguità percettiva dello spazio tridimensionale interno

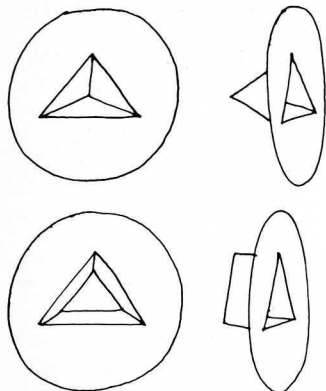
gi non è molto cambiata) isolava e limitava lo sviluppo di questo tipo di ricerca, che pertanto poteva essere approfondita solo in parte. La condizione di doverla divulgare nel contesto delle occasioni proprie alle arti visive e comunque la necessità di osservare e documentare il succedersi dell'in-

dagine, hanno portato, in un secondo tempo, alla realizzazione di sequenze di modelli.

Per evitare che lo sguardo sia distratto da elementi esterni al modello, porrò sempre davanti, sullo stesso piano della faccia mancante, una sorta di cornice tangente agli spigoli del solido rappresentato.

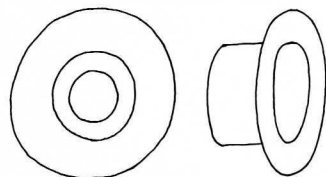


Limiterrò questa prima serie di osservazioni alle differenze causate dall'uso del bianco e del nero. In seguito userò schermi e volumi di questo tipo, per poter analizzare i colori fondamentali composti:

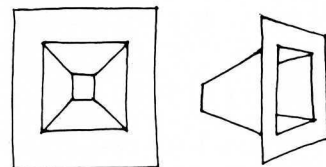


oppure di questo tipo, per evitare gli

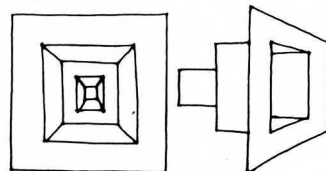
spigoli interni che graficamente, anche senza l'ausilio del colore, danno l'idea del volume:



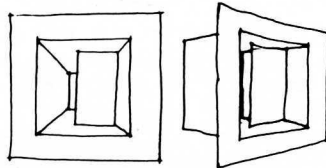
oppure con deformazione scenoplastica, per accentuare la parte grafica degli spigoli:



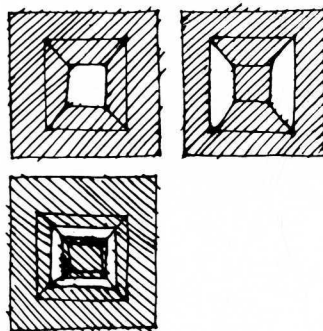
oppure così:



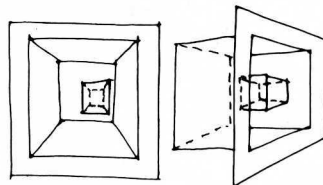
o così:



In seguito praticherò delle aperture nelle pareti del volume da analizzare per osservare le influenze dei contrasti di luce sul colore e sul volume:

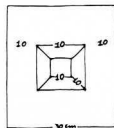


Infine, come avevo già detto, porrò dei corpi colorati in spazi determinati da superfici colorate per condurre l'analisi fino in fondo.

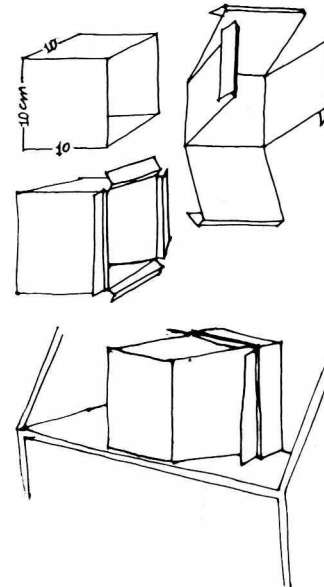
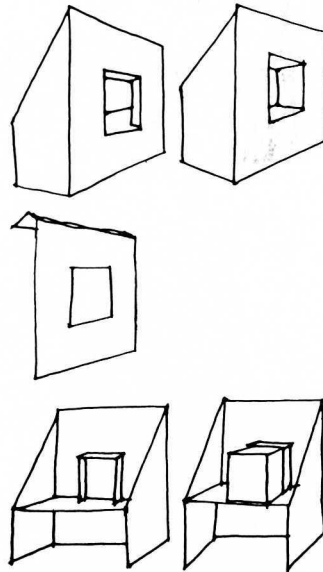


Sulla costruzione dei modelli occorrenti per le osservazioni.

Ho costruito un primo gruppo di modelli staccati ed uguali per le osservazioni sul cubo, aventi queste caratteristiche:



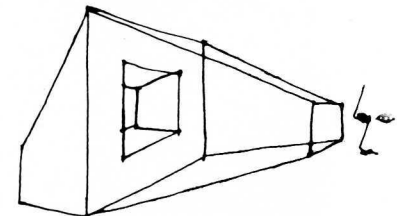
Per facilitare e sveltire i cambiamenti di colore ho usato questi accorgimenti: i cambiamenti avvengono attraverso sovrapposizioni di maschere di carta colorata. Per facilitare queste operazioni i modelli sono scomponibili, cioè il volume svuotato è staccabile dalla cornice, che d'ora in poi chiamerò rispettivamente scatola e schermo.



A questo punto, il problema della luce (che le osservazioni richiedono per il momento la più diffusa possibile) ha assunto una grande importanza.

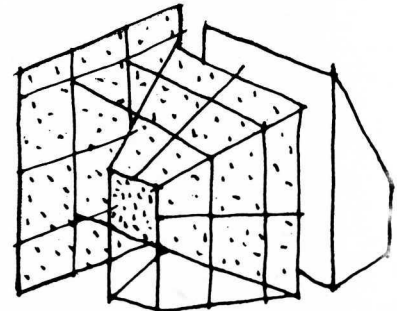
Inizialmente avevo pensato di porre i modelli in una stanza che avesse già una luce diffusa. Pensavo che se questo fosse stato insufficiente avrei potuto ricorrere a degli schermi mobili che facessero da riflettori, ma questo sistema non ha dato la precisione voluta. Ho pensato allora di costruire davanti al modello una sorta di camera luminosa che facesse convergere uniforme-

mente i raggi luminosi verso la scatola. Ho realizzato la camera luminosa nel modo seguente:



Calcolato un cono ottico di trenta gradi l'ho iscritto in un telaio a forma di tronco di piramide, in cui la base maggiore coincide col perimetro esterno dello schermo dei modelli, e la base minore con lo spazio che corre fra i due occhi.

Ho rivestito questo telaio con carta bianca, semitrasparente e lucida. L'ho sollevato dal piano di posa con un'armatura, in maniera che la luminosità esterna filtrasse nell'interno da tutte e quattro le pareti rivestite.



La luce filtrata all'interno della camera, frangendosi continuamente, sia per l'inclinazione delle facce del tronco di piramide, sia per la superficie lucida, anch'essa riflettente, elimina ogni diversità di tono e acquista un chiarore pressoché uniforme.

All'esterno della camera ho fissato poi uno schermo ad una certa distanza, da orientare eventualmente verso una luminosità unilaterale ed eccessiva.

È sorto poi un altro inconveniente:

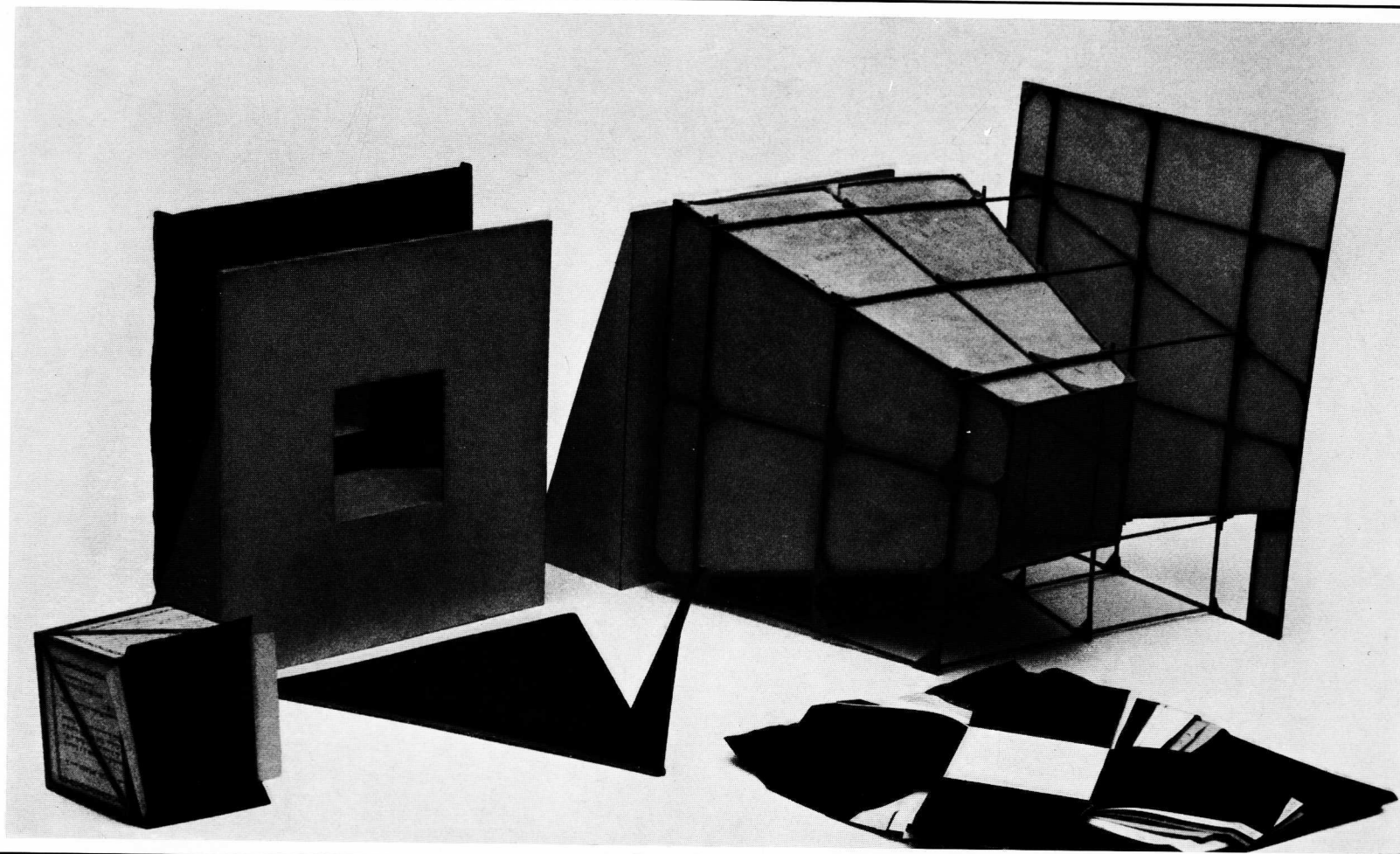
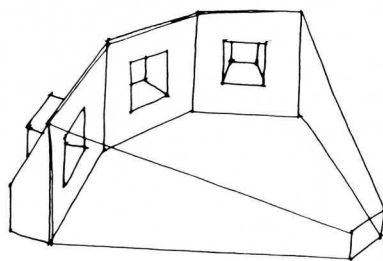
allorché confrontavo due modelli, fra l'osservazione del primo e quella del secondo passava un certo tempo. La cosa era dovuta sia allo spostamento dell'osservatore, sia allo spostamento della camera luminosa.

In questo tempo, se pur brevissimo, avveniva che l'osservatore dimenticava alcune delle differenze esistenti fra i due modelli (specialmente le più tenui) e, se le ricordava, c'era il caso che le ricordasse in maniera imprecisa.

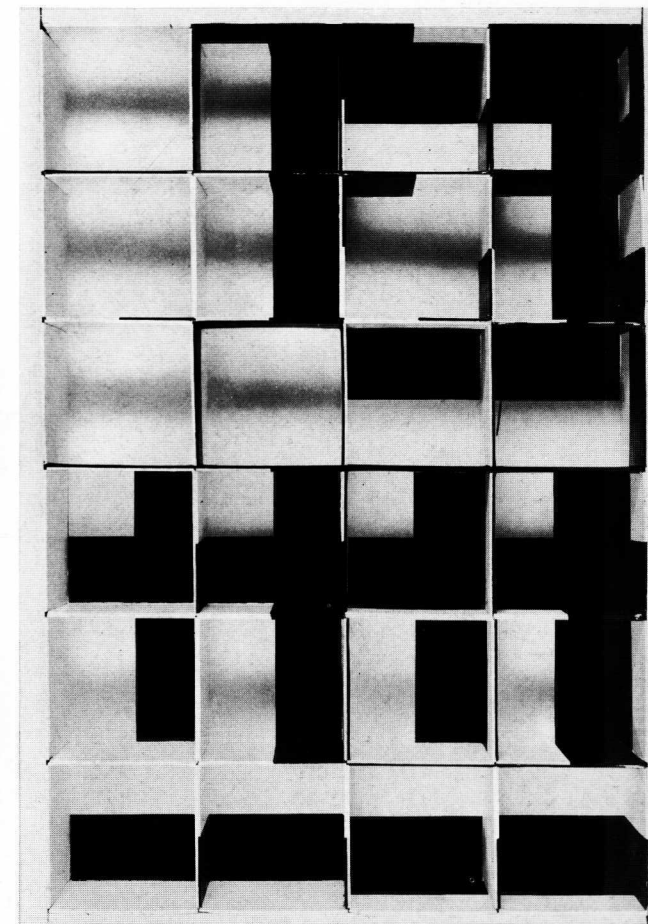
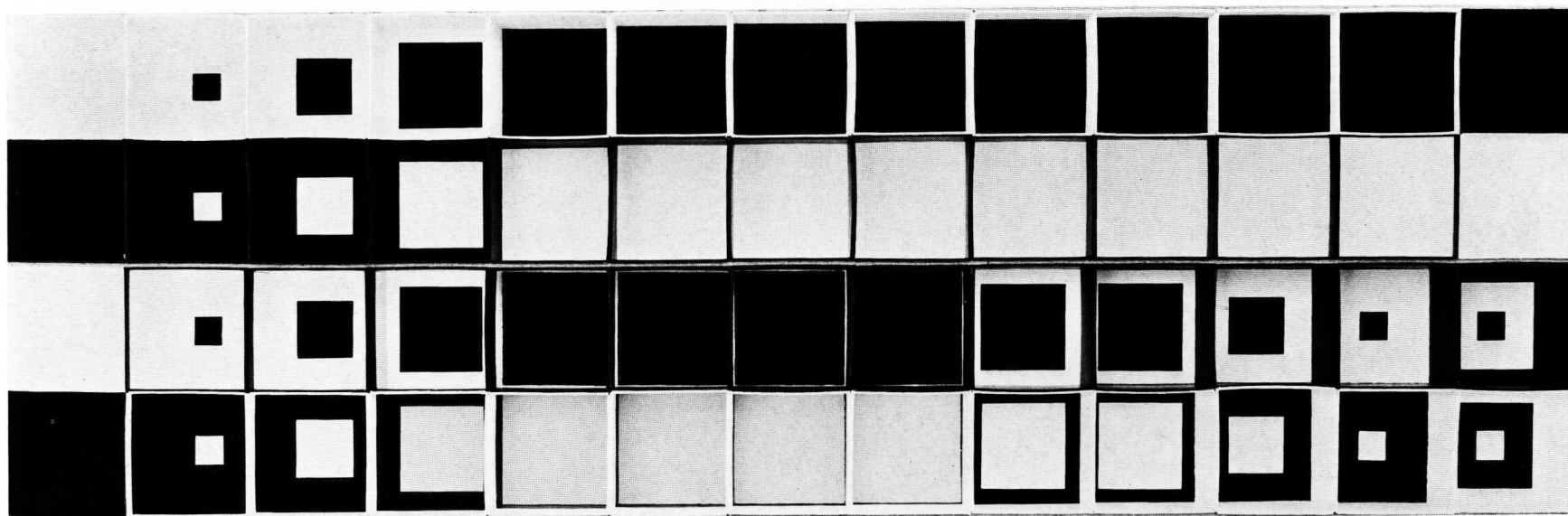
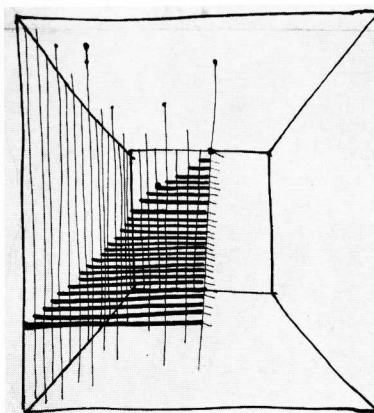
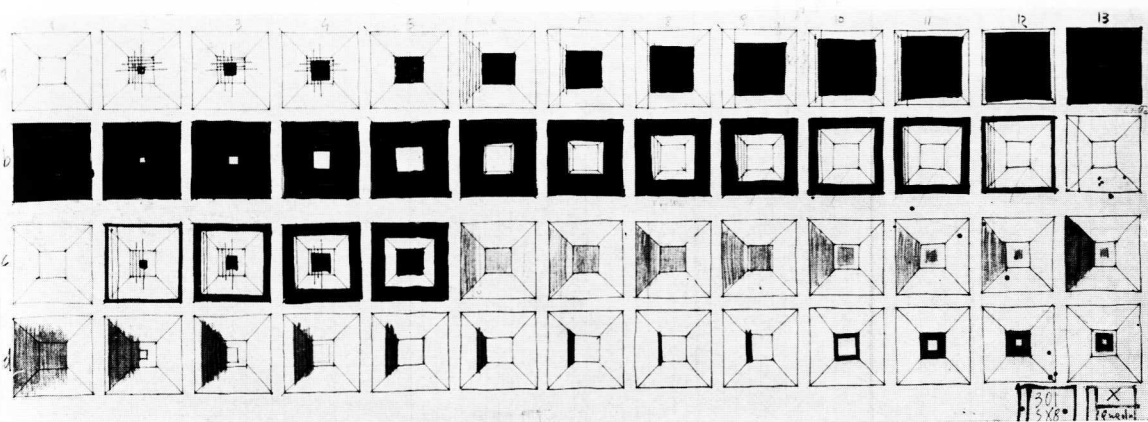
Ho allora progettato un nuovo modello, ora in costruzione, che supera gli inconvenienti delle prime esperienze e permette che ulteriori modifiche possano avvenire molto velocemente. La sua caratteristica principale consiste nel fatto che dal medesimo punto di vista si possono osservare contemporaneamente tre modelli, senza alcuna aberrazione.

Inoltre, eccetto l'armatura generale, tutte le parti sono scomponibili, in manie-

ra da poter effettuare qualsiasi genere di osservazioni.



(8)  
1952, prog. 136;  
strumenti per le ricerche sui rapporti fra colore e volume; carta e legno.



(13-15)  
1956, prog. 301;  
bianco e nero, tempera su cartone; cm 92×30×10;  
sopra: il disegno esecutivo e uno studio.

(16)  
1957, prog. 315;  
bianco e nero, cartone; cm 30×45×8.

## « 13 variazioni »

Per ambiente si intende la coesistenza di un contenuto e di un contenitore che, in qualche modo, isola il contenuto dallo spazio esterno. Questo, da solo, senza l'ausilio del contenitore, non è sufficiente a determinare un ambiente. Di qui si può dedurre che, comunque, il contenitore è la parte assolutamente necessaria perché abbia luogo un ambiente. È per questo che mi interessa analizzare l'elemento « contenitore », cioè quanto si pone come fattore primario.

In questo caso il modello preso in considerazione è un volume parallelepipedo, la cui profondità è il doppio della sua sezione quadrata (cm 60×60×120). Per permettere la visione dell'interno manca, naturalmente, una delle facce minori. La colorazione delle superfici interne è limitata al bianco e al nero opachi (massimo e minimo potere rifrangente) ed è programmata in una serie lineare di 13 modelli di identiche dimensioni. Il variare della colorazione definisce in modo sempre diverso il modello scelto, dandone, quindi, l'indicazione delle innumerevoli possibilità. Per quanto riguarda la dimensione dei modelli si potrebbe obiettare che una loro maggiore grandezza, tale da permetterne la praticabilità da parte dell'osservatore, possa dare dei risultati più vistosi. A parte le considerazioni di ordine pratico, in questo caso si

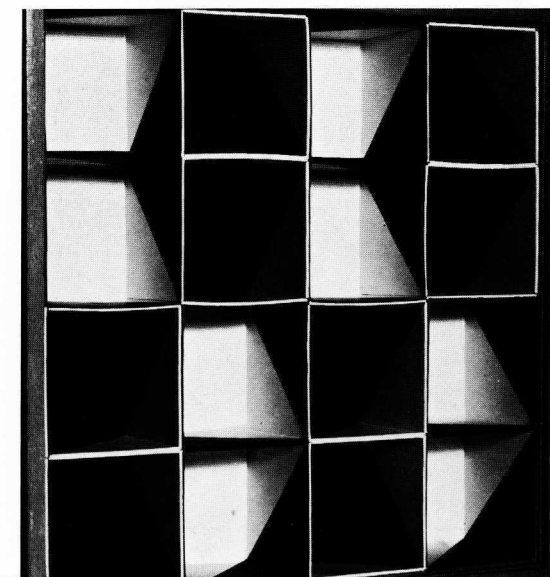
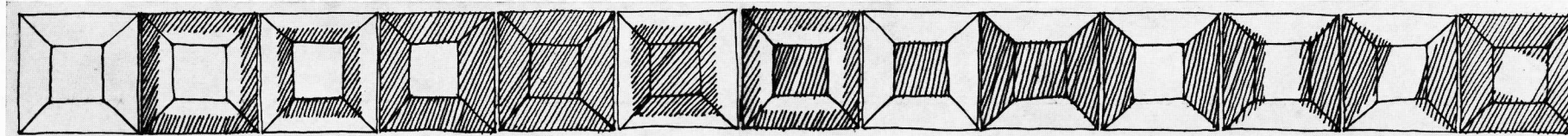
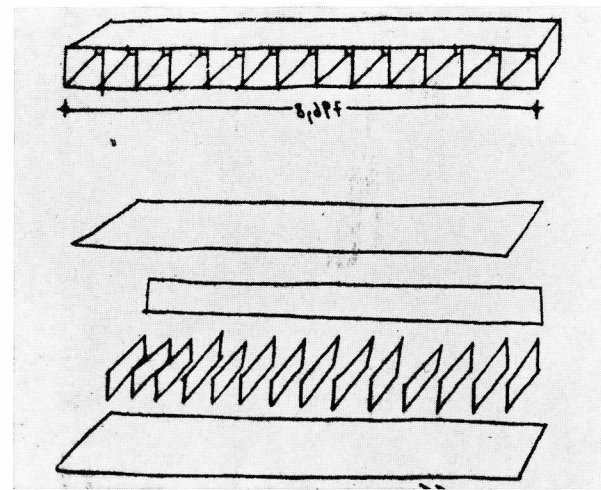
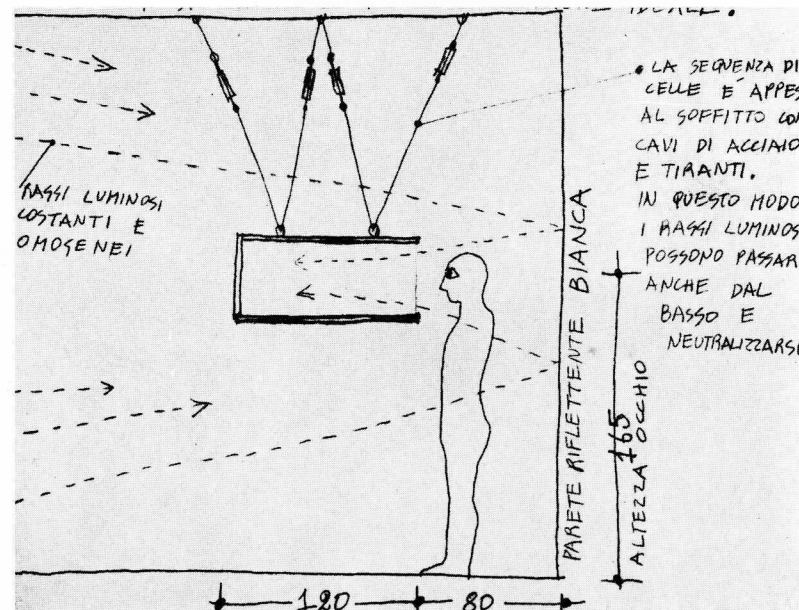
vuole analizzare soltanto la capacità di incidenza del contenitore e non del contenuto, che verrebbe ad essere rappresentato dallo spettatore stesso. Essendo poi, nell'ambito di questa esemplificazione, particolarmente significativa la quantità delle variazioni (in atto o possibili), il loro divenire attraverso uno svolgimento-sequenza corrisponde alla lettura di un ambiente « circondante ».

In questa serie di 13 modelli (che va

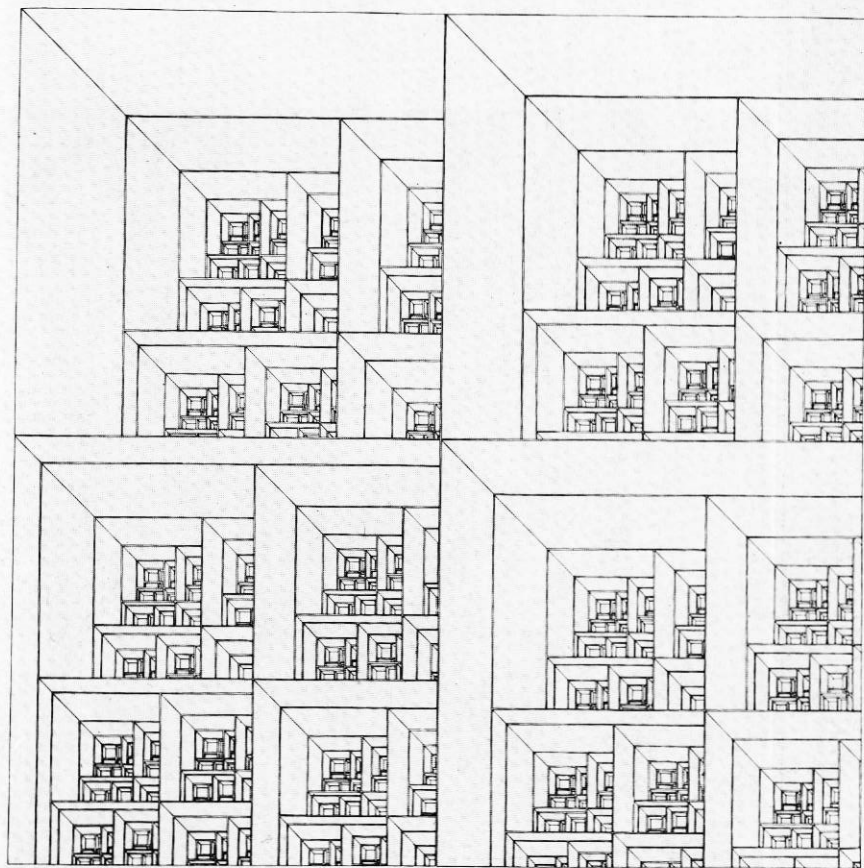
guardata da sinistra a destra) le colorazioni modularmente programmate dei primi 10 rispettano sempre i limiti geometrici del volume: lo spettatore ne percepisce le variazioni dimensionali. Nelle ultime 3, le colorazioni debordano dai limiti geometrici del volume: lo spettatore è portato a percepire i volumi anche in modo alterato. Mentre, quindi, nei primi 10 si determina tutta una serie di possibili variazioni del modello (una sequenza completa), ne-

gli ultimi 3 (che pur sono originati dall'ultimo modello della serie precedente e che si pongono come indicazioni di possibile sviluppo per un'altra serie) alle variazioni si aggiungono delle alterazioni.

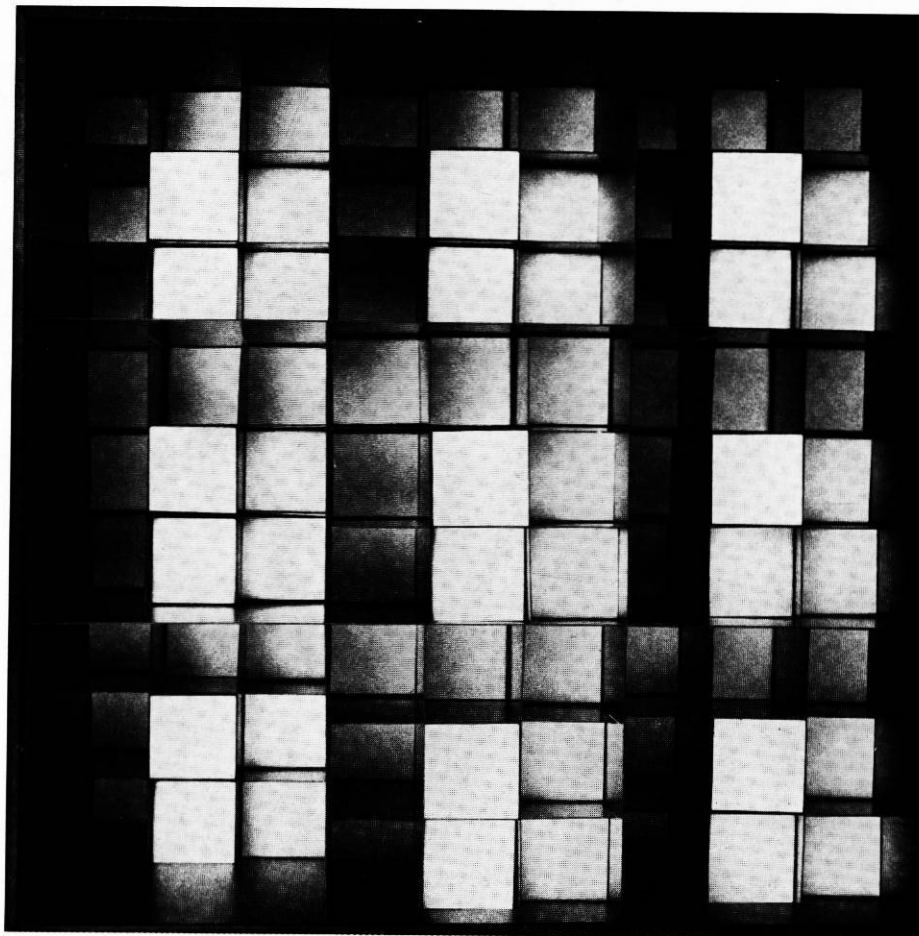
Le osservazioni devono avvenire con una illuminazione a luce normale e diffusa, senza ombre portate.



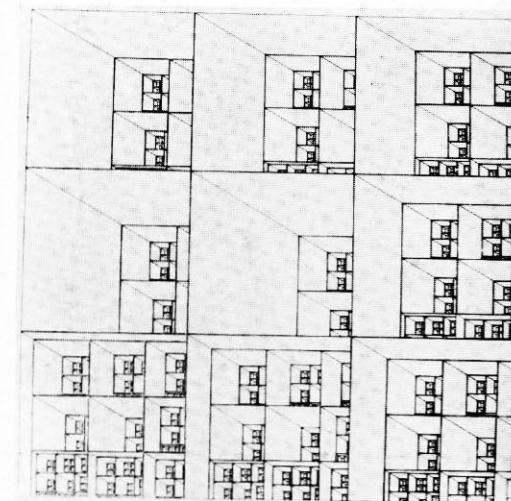




(76)  
1963, prog. 750 (non realizzato);  
cm 64×64.



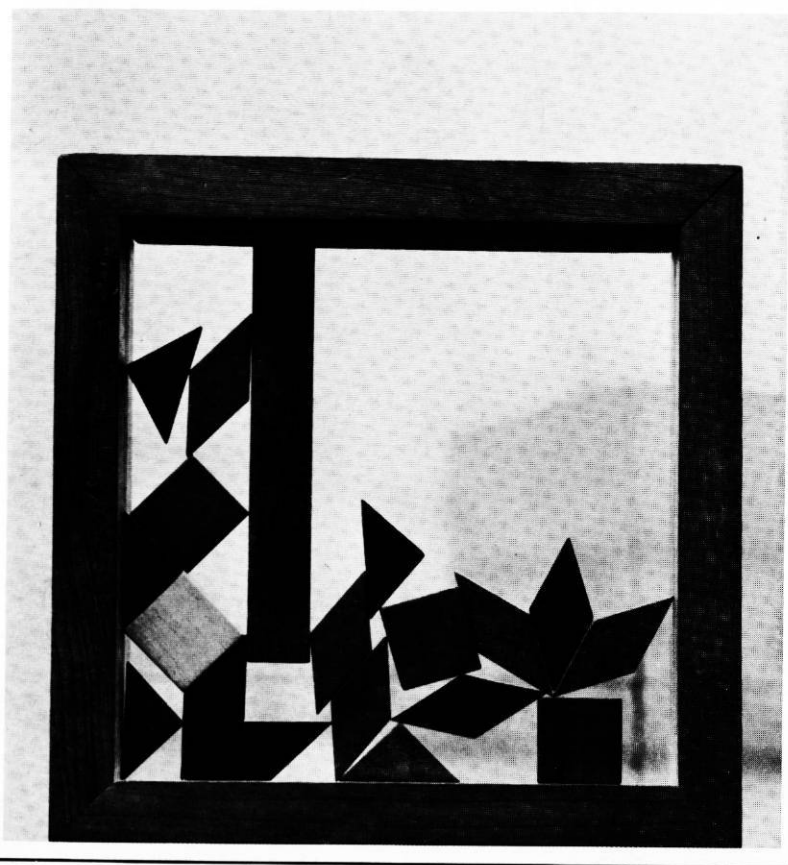
(77)  
1967, prog. 862;  
alluminio anodizzato naturale e nero; cm 57×57×50.



(78)  
1963, prog. 751 (non realizzato);  
cm 64×64.



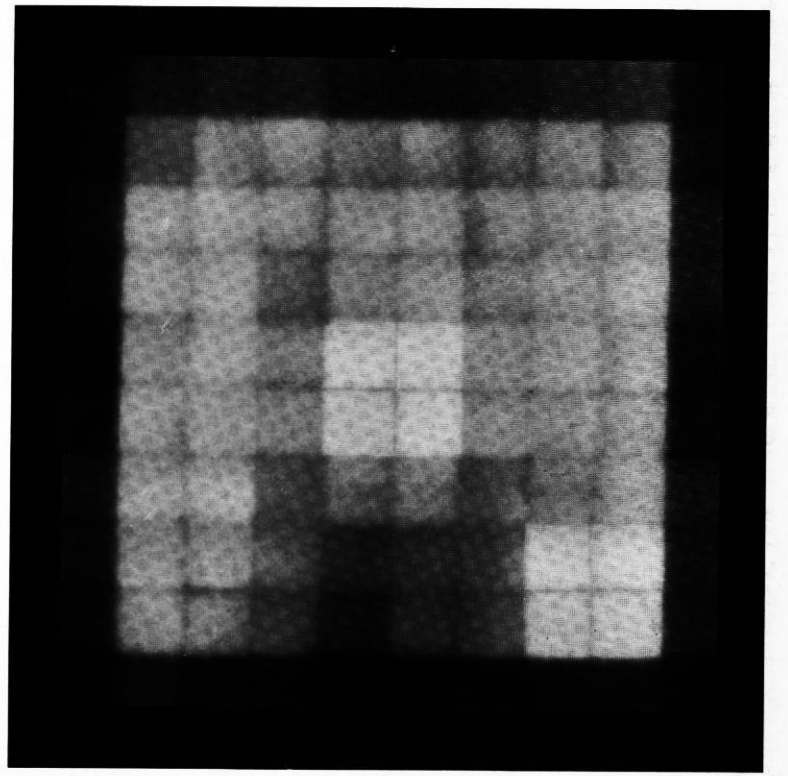
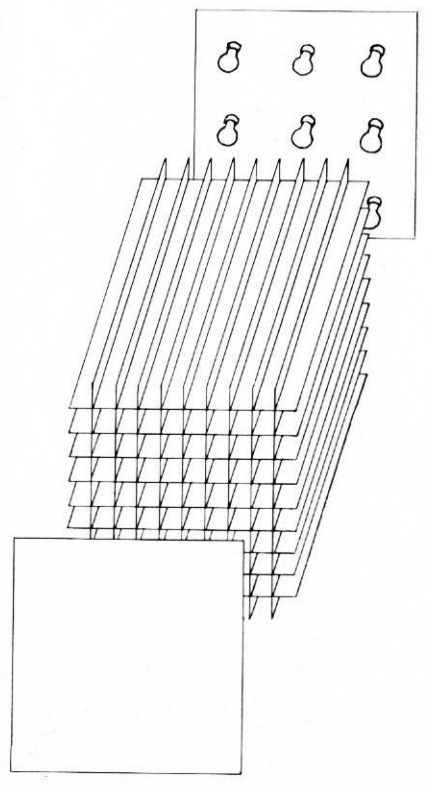
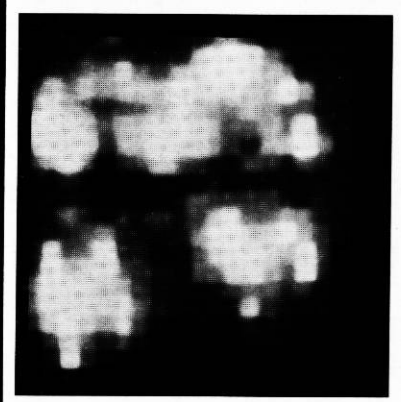
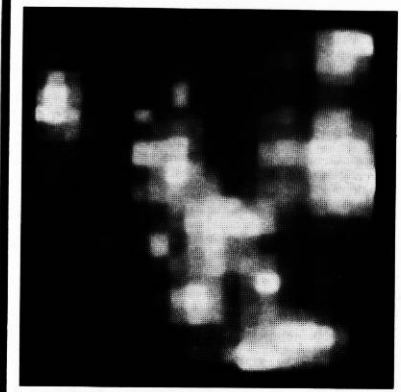
zioni ambientali (ad es., una zona boscosa). Per verificare e dimostrare questi fenomeni sono stati realizzati modelli in cui elementi modulari, autocomponendosi ogni volta per gravità, determinano sempre un'immagine ottimale e quindi significativa per questa ipotesi estetica.



**INTERFERENZE RITMICHE**

I mezzi espressivi della comunicazione visiva non si sono codificati secondo scale elementari di moduli, le cui variazioni permettano l'articolarsi delle diverse comunicazioni, come invece è avvenuto e avviene per i linguaggi che dipendono dall'udito (parola e « musica »). Infatti l'organo della vista ha per l'uomo una capacità di percezione molto superiore a quella dell'udito (per le possibilità di discernere maggiori quantità di particolari, per la capacità di passare velocemente e alternativamente dalla percezione di un particolare a quella di tutto quanto rientra nel raggio visivo e

per la possibilità di poter quasi sempre soffermarsi o riesaminare quanto lo circonda). Per il senso dell'udito invece, dove maggiore era la difficoltà di lettura, si è reso necessario identificare moduli di raffronto, in numero limitato e di forma semplice, al fine di riconoscerli facilmente. Le diverse comunicazioni venivano poi articolate con la ripetizione e variazione seriale dei moduli secondo grammatiche elementari rendendo possibile, soprattutto per quanto riguarda il linguaggio parlato e poi scritto, la comunicazione di ogni tipo di idee e di conseguenza lo sviluppo delle cul-



(98-99)  
1961, prog. 741A; le luci di 16 lampade rosse, blu e gialle, ad accensione intermittente programmata su tempi diversi, interferiscono reciprocamente attraverso uno schermo a cellule regolari; cm 50x50x30.

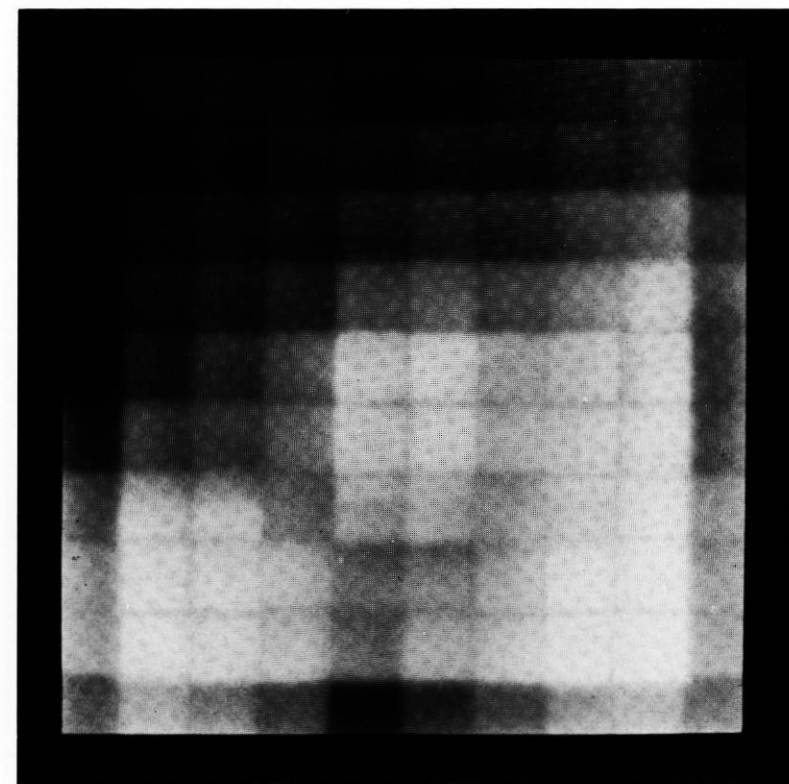
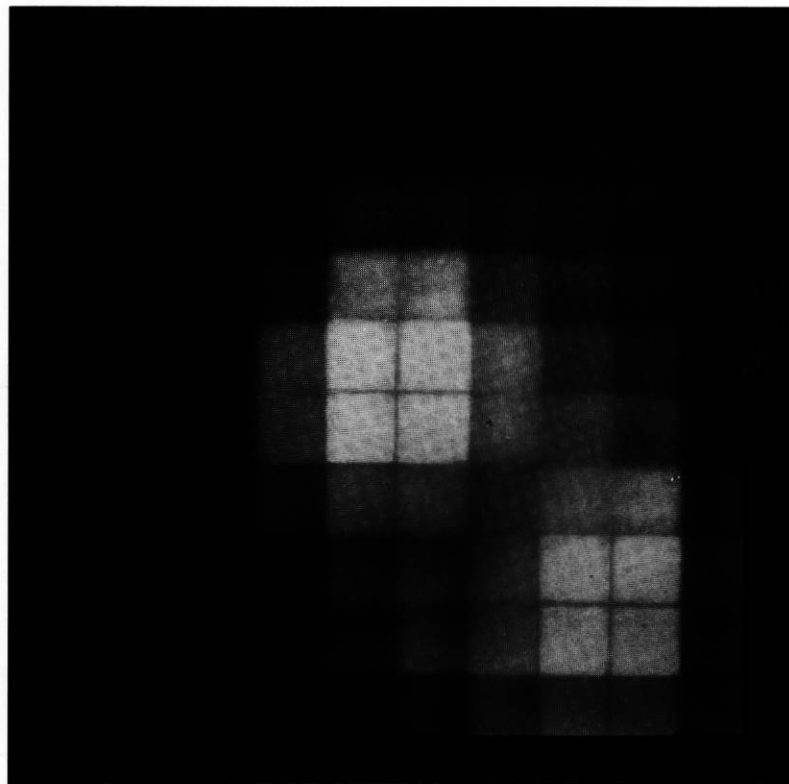
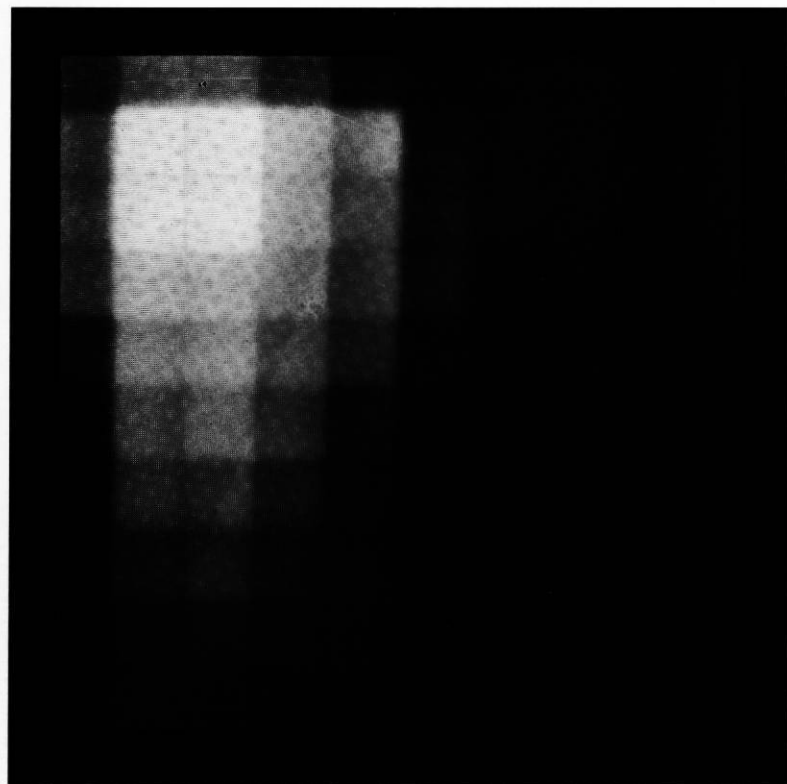
(100-104)  
1961, prog. 741B; le luci di 9 lampade monocrome, ad accensione intermittente programmata su tempi diversi, interferiscono reciprocamente attraverso uno schermo a cellule regolari; cm 30x30x30.

ture. Al contrario le facoltà dell'occhio e la capacità manuale con cui l'uomo imita abbastanza fedelmente quanto percepisce, non hanno sviluppato alcun sistema codificato, ma tanti artifici diversi tra loro e per di più variati al loro interno. Pertanto è improprio parlare di « linguaggio » visivo quanto, più correttamente, di artifici visivi.

Il tentativo di iniziare la codificazione di moduli visivi analoghi a quelli sonori è, in questo momento, utopico; infatti,

oltre le condizioni fisiche stesse, oggi esiste una realtà culturale strutturata diversamente. Tuttavia le nuove tecniche permettono di comunicare visivamente utilizzando anche le proprietà temporali. La necessità di ricordare più facilmente le immagini, che variano nel tempo, è una « difficoltà » in qualche modo analoga a quella propria dei messaggi recepiti dall'udito. Pertanto si sono realizzati alcuni modelli dove è possibile programmare tra loro serie di mo-

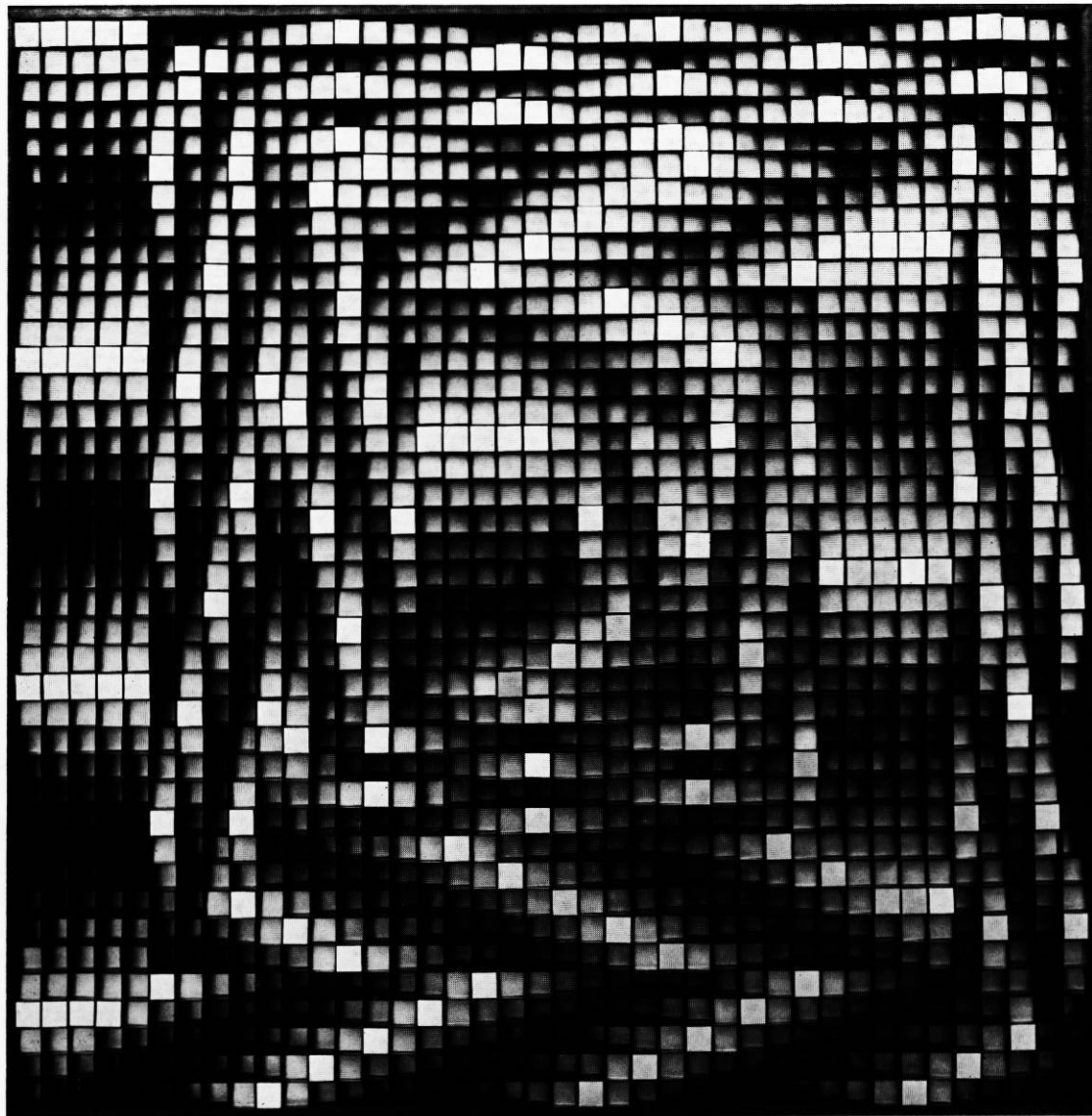
duli luminosi in un divenire temporale, le cui variazioni vengono determinate dalle interferenze del relazionarsi tra progressioni temporali e progressioni spaziali.



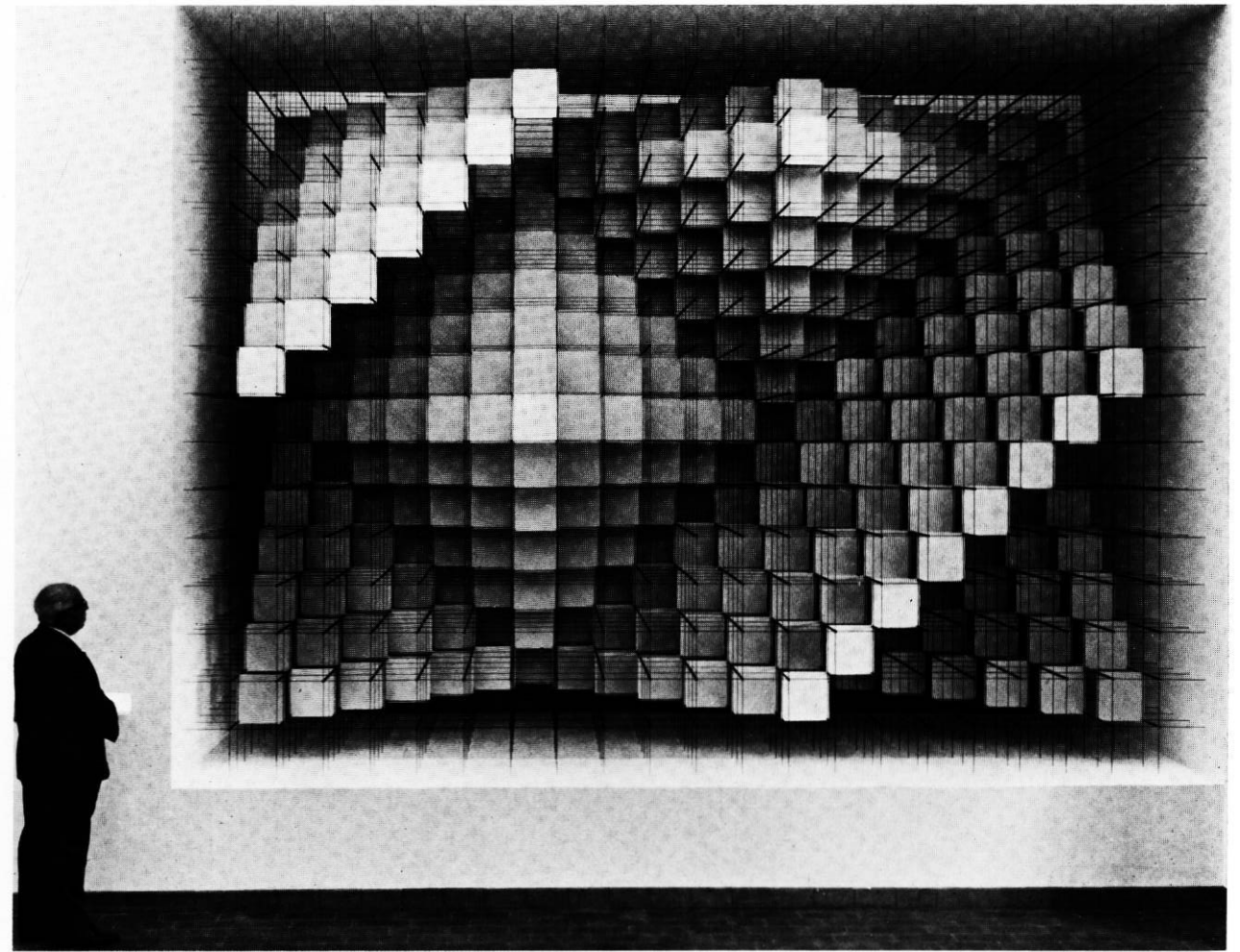
do un andamento determinato. Lo spazio, riducendosi, cambia le sue dimensioni e proporzioni e di conseguenza le sequenze si relazionano in modi progressivamente diversi. Nel secondo tipo di programma si cerca di analizzare le relazioni che nascono dal sovrapporsi di una determinata

forma ad una concretazione di moduli a essa preesistente (ad es., una statua di pietra. A questo proposito è facile osservare che statue antiche, all'origine di nessun pregio, assumono ai nostri occhi particolari qualità estetiche perché l'avvenuta erosione del materiale ne mette in evidenza

la struttura: gli attuali valori estetici nascono sicuramente dall'attenuarsi dell'arbitrarietà della forma nella simbiosi con la struttura sottostante). In questo caso sequenze di moduli si dispongono gradatamente solo secondo le loro possibilità di aggregazione o sviluppando una forma ad esse



(113)  
1964, prog. 743;  
alluminio anodizzato naturale e nero; cm 120×120×10.



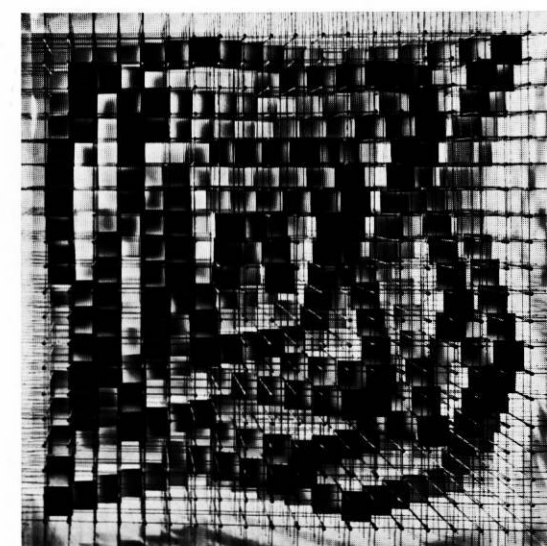
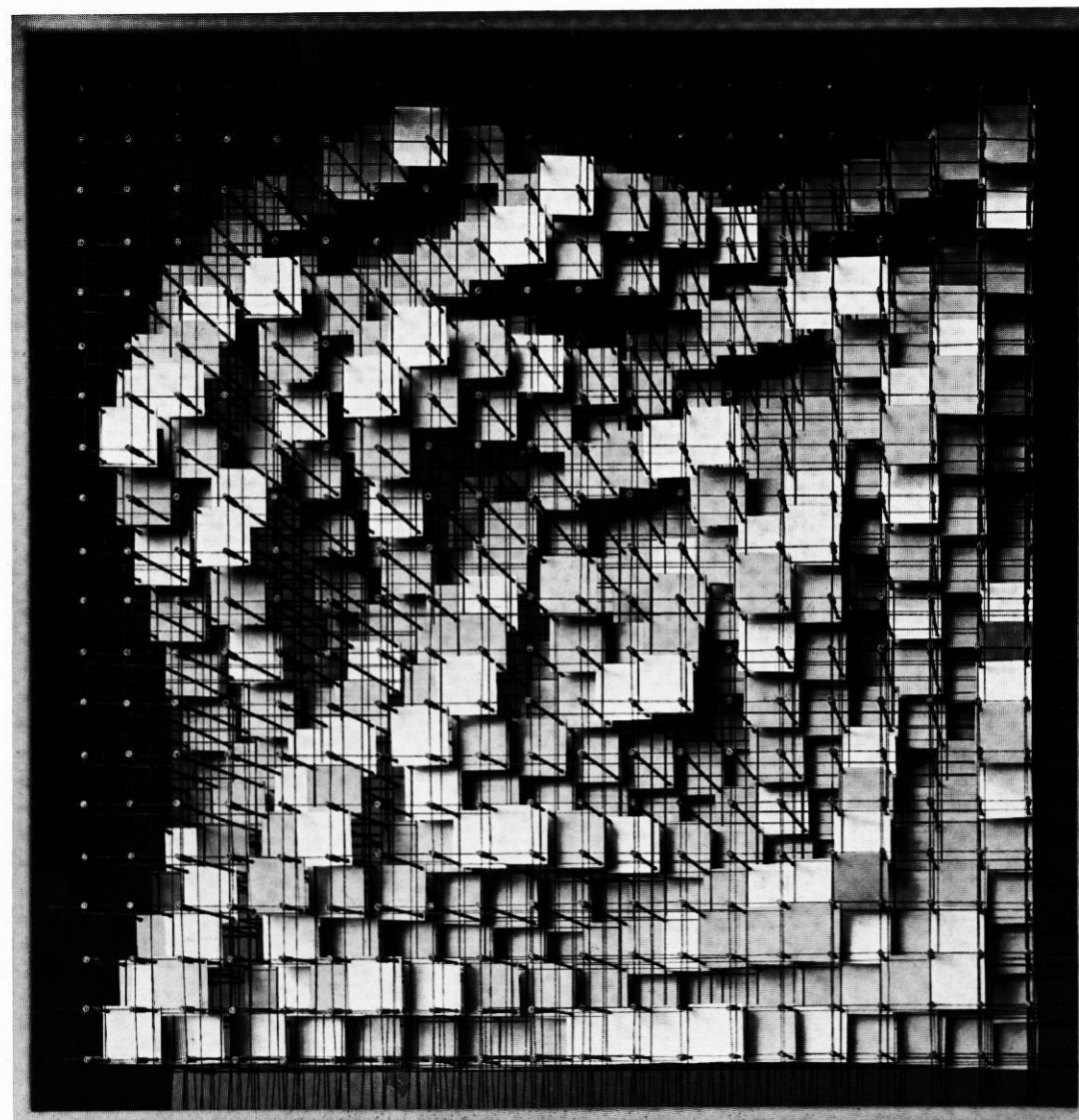
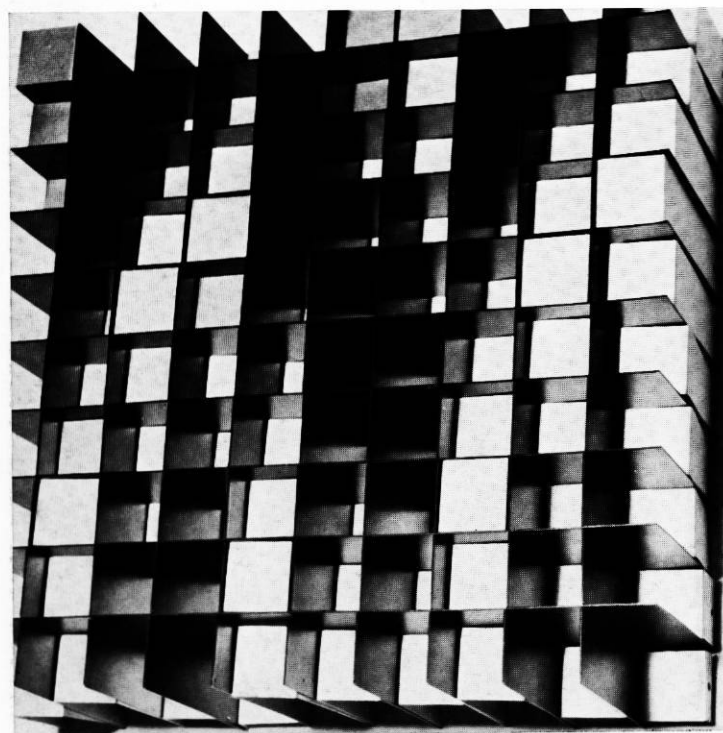
(114-115)  
1964, prog. 708;  
acciaio nero e alluminio anodizzato naturale; cm 480×320×160.

modulo stesso sono direttamente o indirettamente implicati i diversi modi di relazionarsi, sono il momento determinante della ricerca e del suo progetto.

Con i diversi programmi si tenta di attuare modelli analoghi al procedere delle serie di particelle naturali, che si relazionano tra loro omeostaticamente, nell'occupare lo spazio.

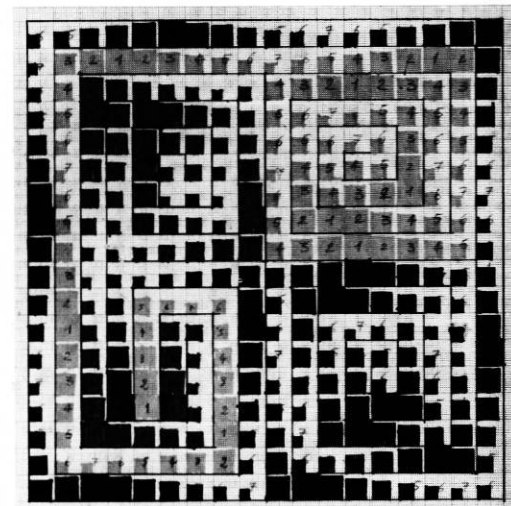
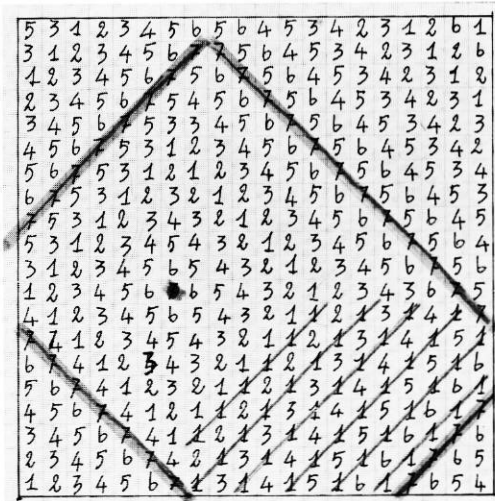
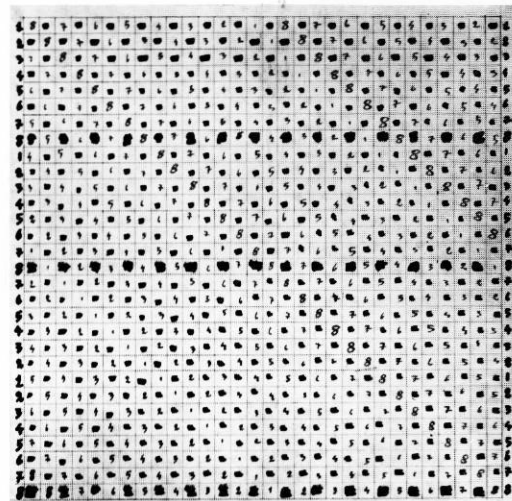
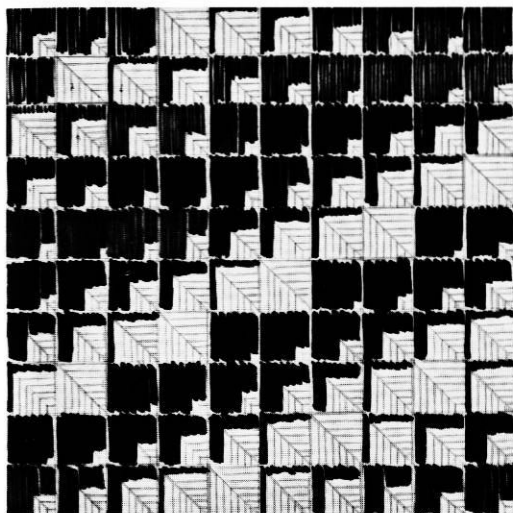
Cioè, definito lo spazio entro il quale si dovrà sviluppare il programma, si stabilisce un determinato ordine con cui i moduli devono occupare quello spazio, ossia le loro progressioni di spostamento lungo i tre assi cartesiani. Si attua quindi l'occupazione dello spazio senza apportare alcuna variazione al programma iniziale e il risultato, qualun-

que esso sia, è significativo per la ricerca. Tuttavia, poiché il ricercatore stesso è ancora condizionato da valutazioni di tipo « estetico » non razionalizzate, tali da fargli ritenere non ottimale la leggibilità di quanto si voleva dimostrare, non interviene con correzioni o modifiche parziali ma varia o sostituisce il programma iniziale e ristrutturata un nuovo

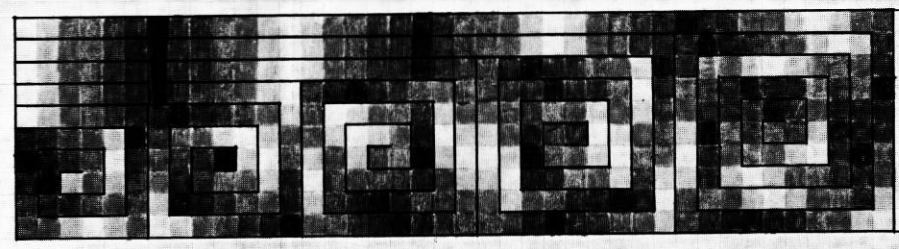


(108)  
1962, prog. 716;  
alluminio anodizzato naturale e nero; cm 30×30×10.

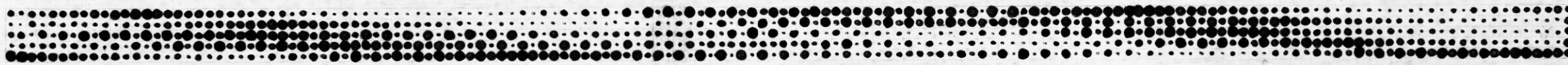
(109-110)  
1964, prog. 744;  
alluminio, ottone e acciaio; cm 70×70×27.



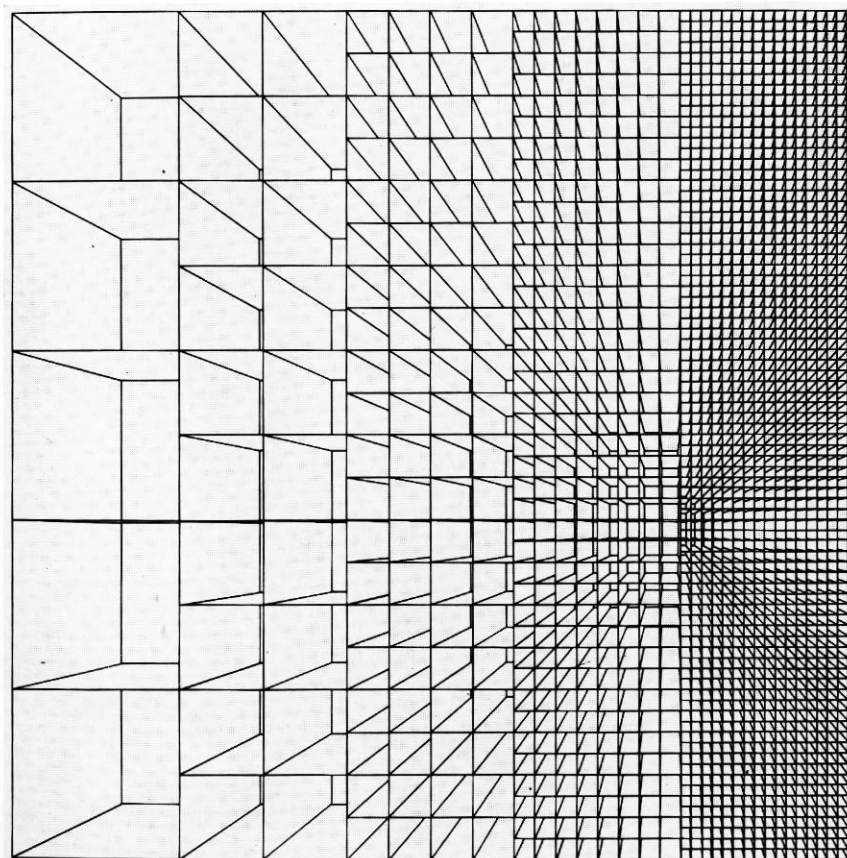
1	2	3	4	5	6	7	6	5	4	3	2	1	2	3	4	5	6	7	6	5	4	3	2	1	2	3	4	5	6
6	7	6	5	4	3	2	1	2	3	4	5	6	7	6	5	4	3	2	1	2	3	4	5	6	7	6	5	4	7
5	4	5	6	7	6	5	4	3	2	1	2	3	4	5	6	7	6	5	4	3	2	1	2	3	4	5	6	3	6
4	3	2	1	2	3	4	5	6	7	6	5	4	3	2	1	2	3	4	5	6	7	6	5	4	3	2	1	2	5
3	2	1	2	3	4	5	6	7	6	5	4	3	2	1	2	3	4	5	6	7	6	5	4	3	2	1	2	3	4



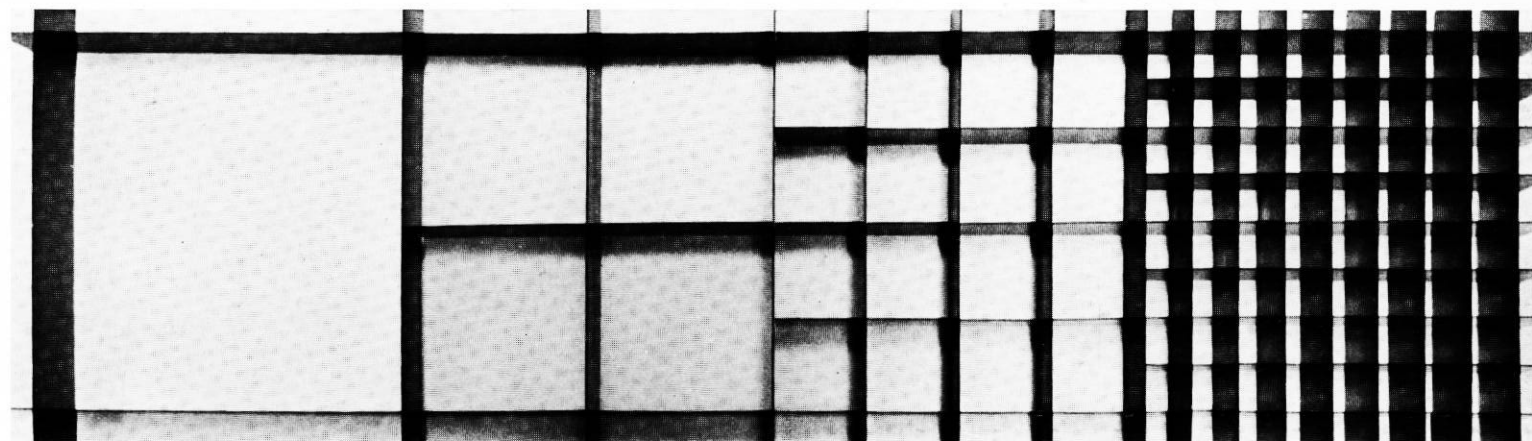
1 2 3 4 5 6 7 8 9  
 .....  
 1 2 3 4 5 6 7 8 9 10 11 12 13



(121-127)  
 1962-1965, appunti per le sequenze dei modelli:  
 prog. 716 (fig. 108), 732, 735, 793 (figg. 116-117), 795 (figg. 105-106), 865.



(130)  
1963, prog. 773 (non realizzato);  
cm 64×64.



(131)  
1967, prog. 861;  
alluminio anodizzato naturale e nero; cm 102×30×10



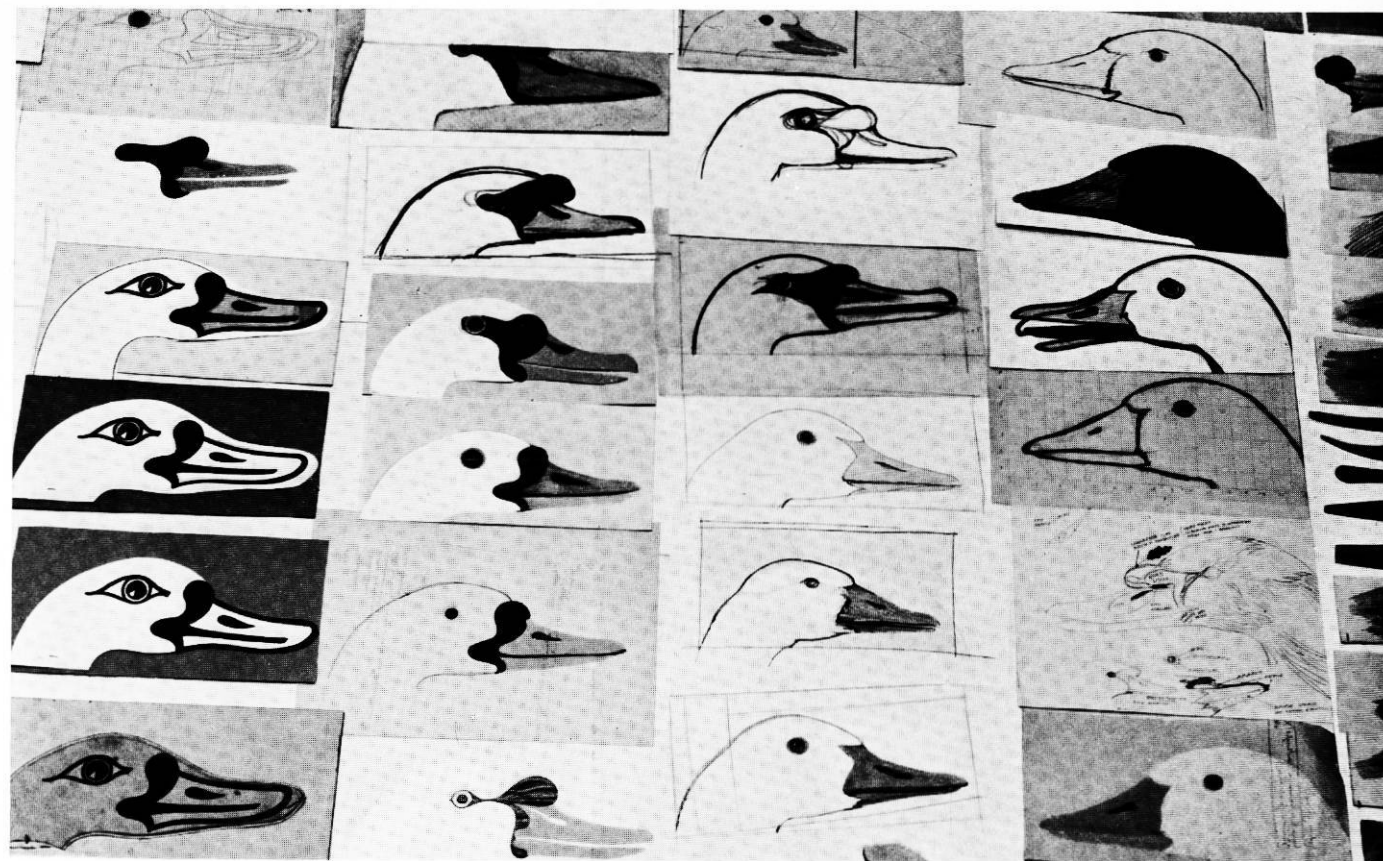
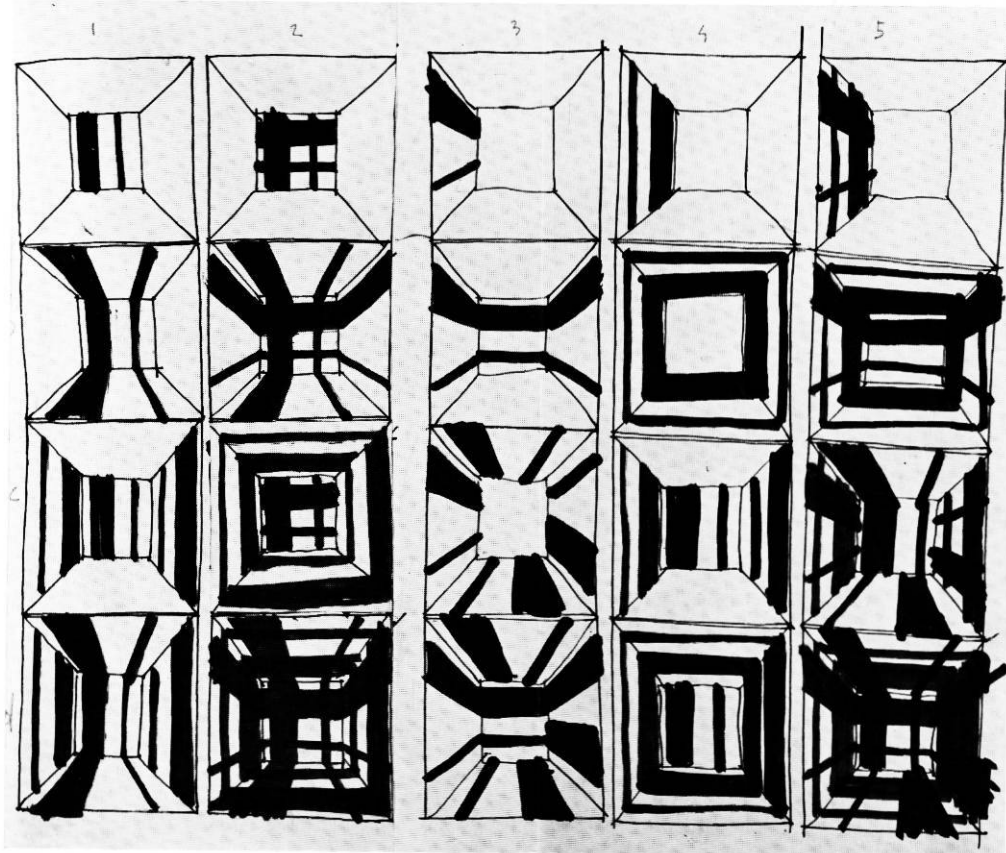
(132)  
1968, prog. 918;  
alluminio anodizzato naturale e nero; cm 91×91×11.

dimento di elementarizzazione e semplificazione proprio delle diverse ricerche specializzate di verifica, ma si attua tramite un intervento di tipo globale e spesso intuitivo che relaziona componenti verificate a diversi livelli.

La necessità prioritaria non può essere che quella di proget-

tare quanto è utile al progredire della società, progredire che si può oggi realizzare solo attraverso l'affrancamento di ogni forma di lavoro da tutti i tipi di repressione. Poiché proprio questa situazione ostacola o comunque limita e snatura ogni intervento.

In questo contesto, le ricerche come progetto che le personali condizioni socio-economiche mi hanno permesso di affrontare, si sono svolte nell'ambito dei problemi concernenti la cosiddetta opera d'arte, la produzione di oggetti sia di serie sia sperimentale, la comunicazione visiva, il gio-



(138-139)

1967, prog. 790; « l'oca » (Serie della natura, n. 8);

una parte della sequenza di modelli di raffronto elaborati per definire le relazioni fra la percektività, i caratteri tipici del soggetto e la tecnica di rappresentazione.

Nella pagina seguente l'immagine definitiva stampata in serigrafia su fliselina, bianco e arancio; cm 112x56.

co dei bambini, la limitazione dell'obsolescenza espressiva, la componibilità. In questi interventi si è cercato ogni volta di individuare le necessità prioritarie, contingenti e partico-

lari, utili all'affermazione di quella necessità di tipo generale enunciata prima.

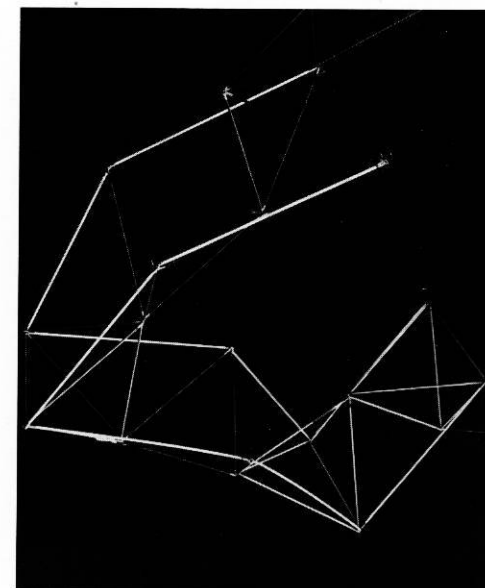
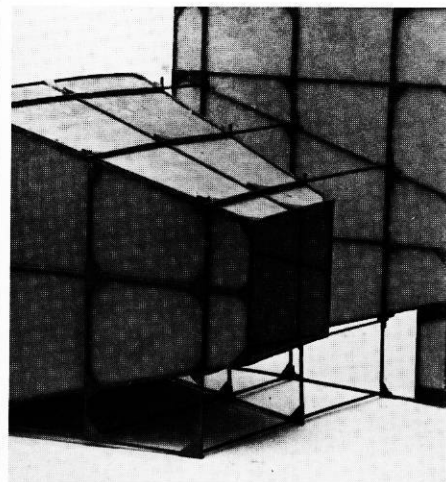
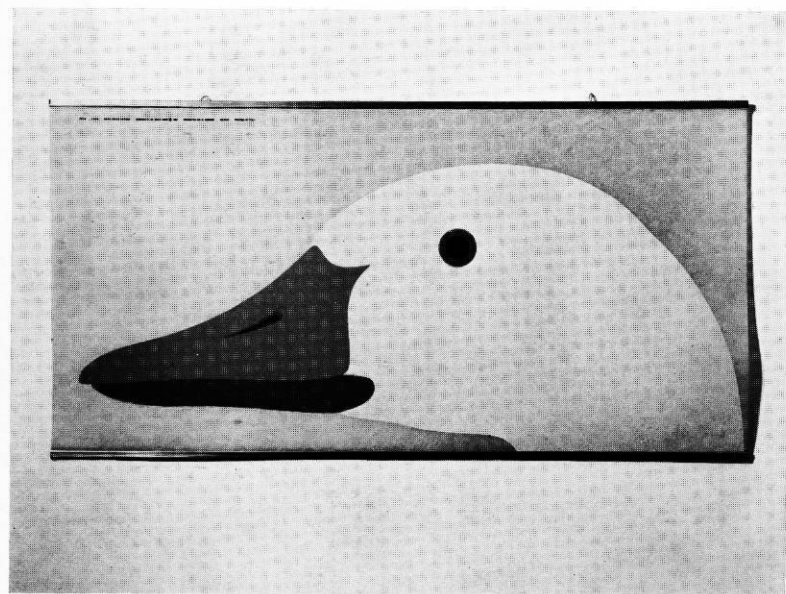
il progetto della ricerca estetica

### IL PROGETTO DELL'OPERA D'ARTE

La nascita della cosiddetta opera d'arte è condizionata da due momenti: quello della ricerca e quello del progetto. Questi due momenti, che possono essere uno successivo all'altro, sono quasi sempre interrelazionati nel loro divenire. Questa interrelazione, alla luce delle condizioni di

oggi, porta l'« opera d'arte » ad essere contemporaneamente un modello di ricerca e un manufatto (o un intervento) fruibile esteticamente: il suo autore considera inseparabili i due aspetti e ciò determina, quasi sempre, la mistificazione dei significati della ricerca. Oltre questo caso è però pos-

1) L'« opera d'arte » è solo un modello di ricerca o uno strumento per la ricerca. Il progetto di questo modello è costituito dalle sole necessità funzionali senza alcun compiacimento di carattere edonistico e senza nessuna preoccupazione per una sua eventuale immissione nel mercato.



(140)  
1952, prog. 136;  
particolare della camera a luce diffusa  
(vedi fig. 8).

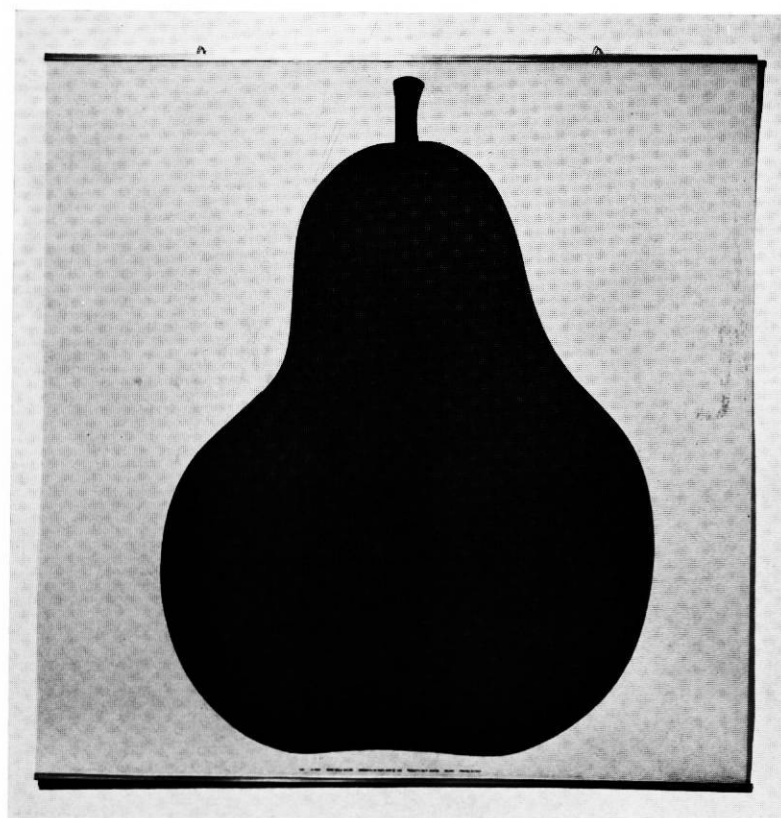
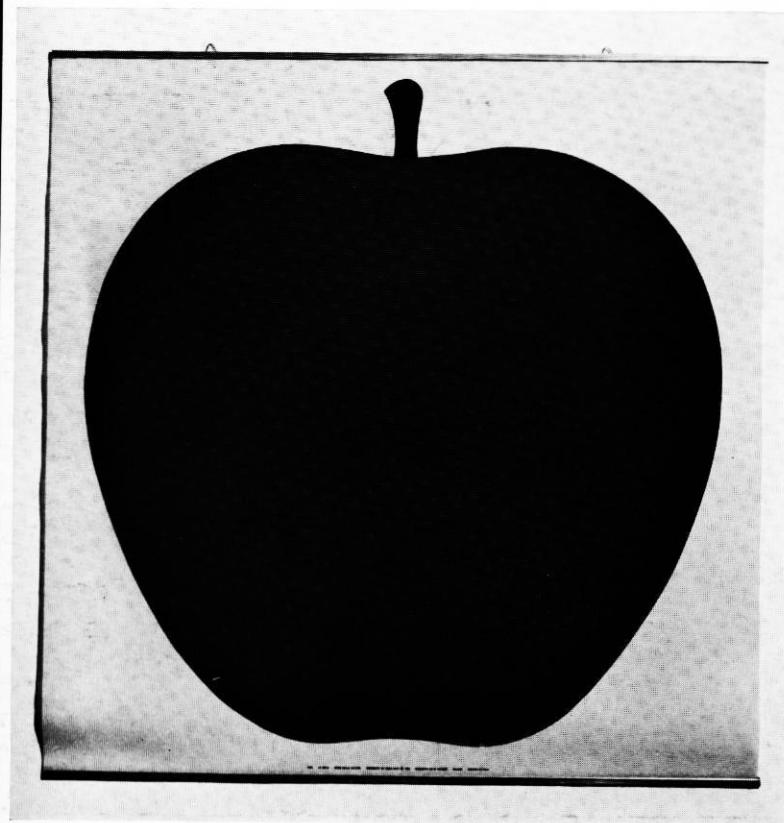
(141)  
1967, prog. 862;  
un modello in carta graffettata  
(vedi figg. 144 e 77).

(142-143)  
1954, prog. 187;  
utilizzo di elementi modulari prefabbricati  
per l'elaborazione di modelli di struttura.



4) L'« opera d'arte » è un prodotto realizzato e divulgato in molti esemplari per sovvenire alle necessità di una larga parte di utenti. Si va così dai quadri pittorici venduti dai corniciari, a immagini studiate appositamente per chi non

è in grado di comprendere i valori della ricerca, ma che comunque avverte la necessità di un « decoro » nel luogo in cui vive.



(154-155)

1960, prog. 543; « la mela » (Serie della natura, n. 1); « la pera » (Serie della natura, n. 2);

l'immagine riproduce la forma naturale con esattezza tipologica, rifacendosi alla tradizione figurativa però spogliata di ogni elemento superfluo; serigrafia in fliselina; cm 112x112; rosso su bianco, verde su bianco (vedi anche figg. 138-139).

## PROGRAMMAZIONE MODULARE

La necessità e/o la possibilità di costruire mediante l'aggregazione di componenti modulari e prefabbricate (prodotti intermedi) sembra limitare le possibilità espressive. Proget-

« Libertà nell'ordine »

L'aspetto dei manufatti, nell'ultimo secolo, è caratterizzato da una estrema libertà di linguaggio che a sua volta è determinata:

1) dalla continua evoluzione tecnologica,

2) da certi aspetti sociali e demografici propri della nostra civiltà industriale, e più propriamente:

A) dalle necessità concorrenziali delle industrie di presentare prodotti sempre diversi,

B) dalla presunzione di ogni progettista di esprimersi con linguaggio personale tale da differenziarlo dalla massa. Sono noti i risultati negativi di questo ultimo punto.

Anche se qualche rara personalità ottiene buoni e comprensibili risultati plastici controllando la propria libertà creatrice, la norma degli operatori, non guidata da una serie di regole, produce con un linguaggio arbitrario e confuso.

Un qualsiasi manufatto dei secoli scorsi, anche nei casi più modesti, non scadeva mai troppo rispetto agli esempi migliori, mantenendo comunque una certa dignità, data appunto dall'esistenza di canoni, che, pur lasciando una grande libertà, indicavano chiaramente quali fossero i valori più precisi di quella civiltà plastica.

In altre parole, sorge la necessità di trovare metodi di progettazione e composizione, strettamente legati al linguaggio e ai problemi del nostro tempo, vincolati da norme paragonabili in un certo qual modo a quelle stabilite dagli ordini dell'architettura classica.

Una delle necessità della nostra civiltà

plastica è quella della progettazione con elementi prefabbricati modulari.

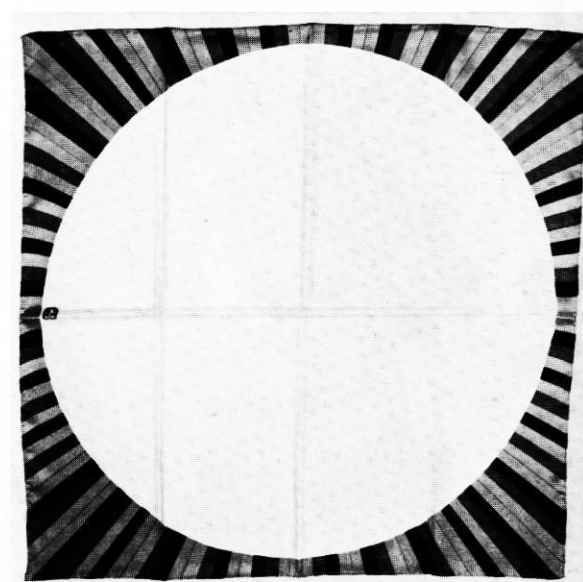
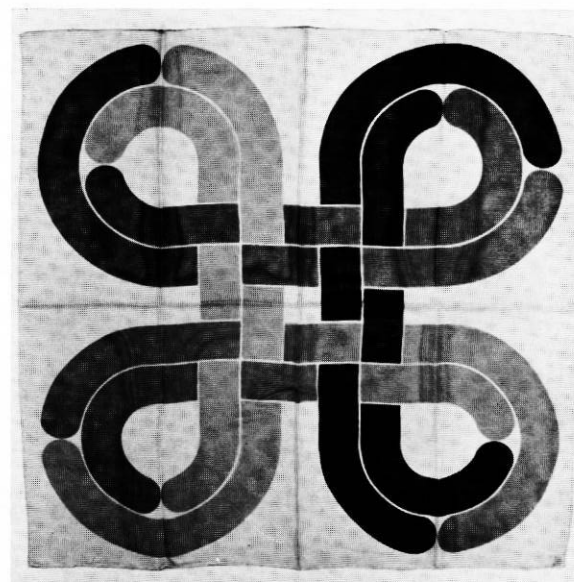
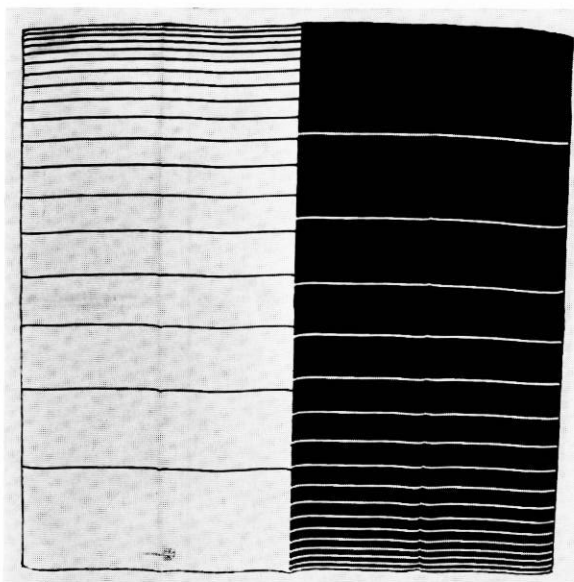
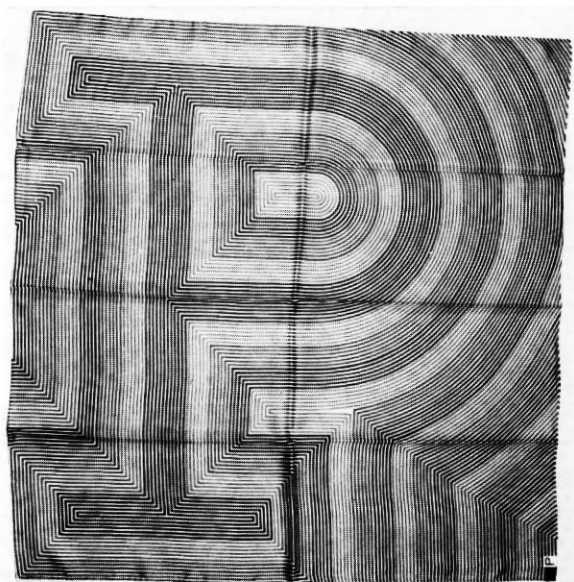
Questa necessità è ritenuta da molti un pericolo in quanto sembra diminuire quelle qualità espressive proprie dell'architettura, del design e delle arti plastiche.

Si reagisce a questo o rifiutando la prefabbricazione (e utilizzando metodi impropri), o adeguandosi passivamente a quegli aspetti di uniformità e monotonia che sono erroneamente ritenuti propri di questa metodologia.

Ricerca, sperimentare ed esemplificare metodi di programmazione di parti prefabbricate modulari, atti a divenire uno strumento comune per l'organizzazione di quegli aspetti plastici che esulano dalla progettazione propriamente tecnica. Trovare una serie di canoni entro cui sia possibile operare con la giusta libertà compositiva.

(156)

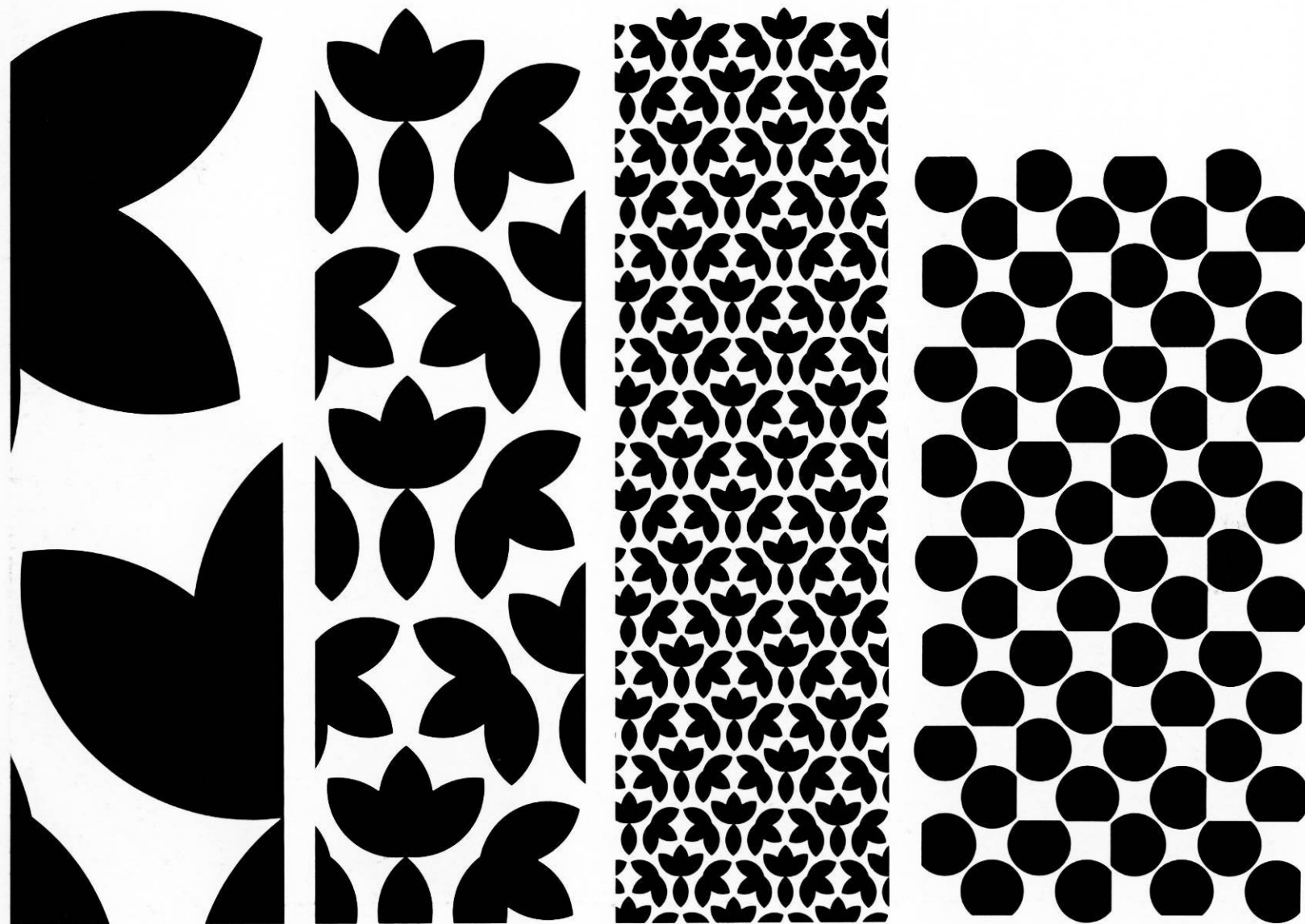
1963, proposta presentata alla Fondazione Kaufmann in occasione del programma biennale di sovvenzione di ricerca.



(196)

1965, prog. 769; il lupo (particolare del « Gioco delle favole », vedi anche figg. 179-180, 291, 324-326); la relazione fra i limiti tecnici di riproduzione e gli aspetti tipologici e caratteriali dell'animale determinano la sua forma.

limitazione dell'obsolescenza espressiva



(197-199)

1969, prog. 976; disegno per stoffa da rivestimenti; la necessità di realizzare il disegno in diverse dimensioni, senza alterarne l'efficacia, ha determinato le relazioni formali; le dimensioni di una foglia sono rispettivamente di cm 0,8 - 4 - 18.

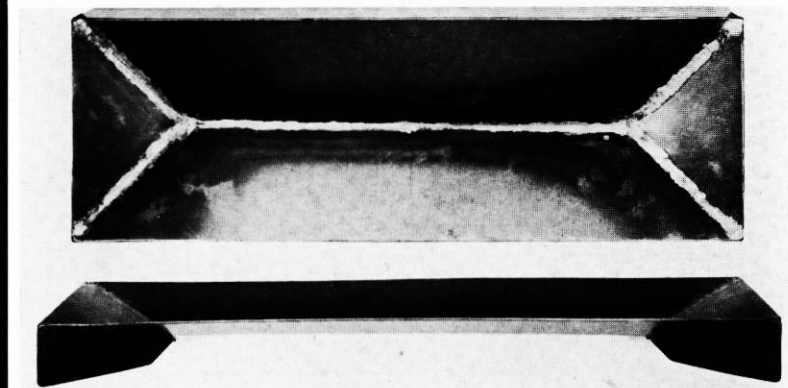
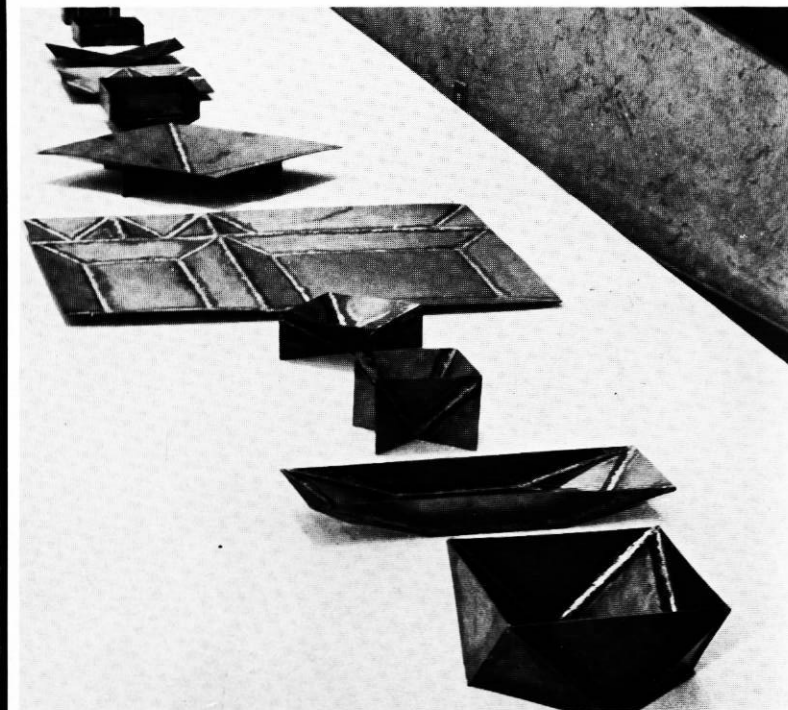
(200)

1969, prog. 984; disegno per stoffa; scacchi e punti sovrapposti determinano un nuovo disegno senza perdere la loro semplicità formale.

**LA PRODUZIONE SPERIMENTALE**

Le nuove macchine utensili, che sono facili da adoperare, semplificano il lavoro, ne riducono i costi e, senza limitare la libertà e la ricchezza formale, consentono anche la pro-

Oggetti d'uso — di metallo, di legno, di vetro, di marmo — nati da ricerche condotte sulla possibilità di utilizzare le



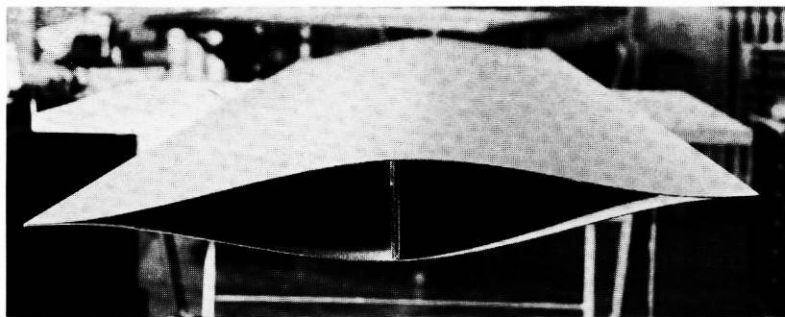
(201-202)

1958, prog. 419A; contenitori in lamiera saldata; parti di lamiera rifinite a macchina sono saldate da un operaio (non artigiano) senza rifiniture successive; il procedimento semplifica e diminuisce i costi di produzione.

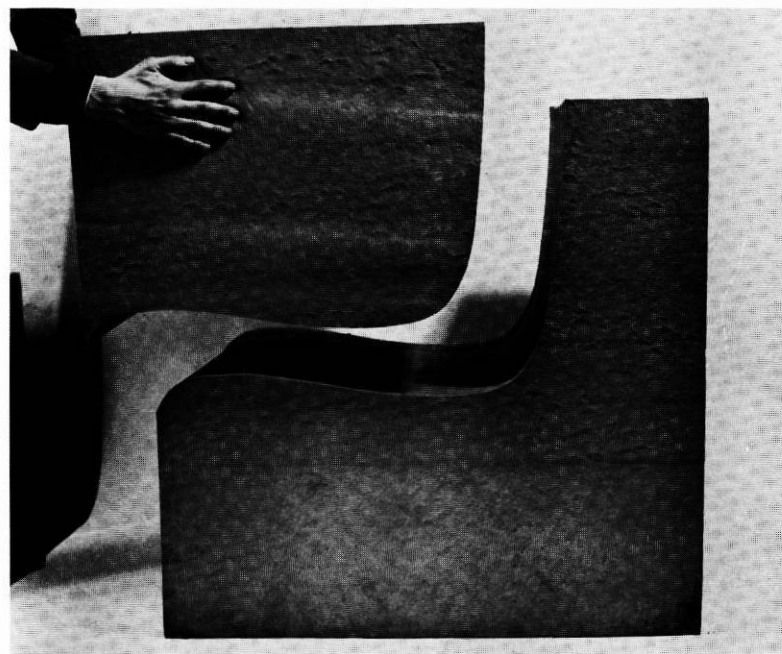
## LA PRODUZIONE DI SERIE

La produzione di serie consentita dalle nuove tecniche tende sempre più ad escludere l'intervento manuale. Si va così dalla presenza dell'operaio (che interviene sia con opera-

Oggetti d'uso realizzati mediante stadi successivi di lavorazione.



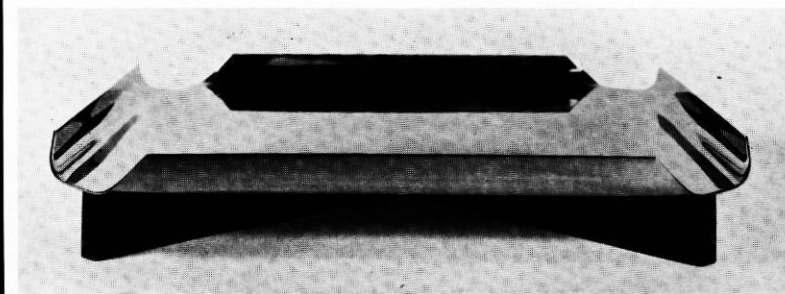
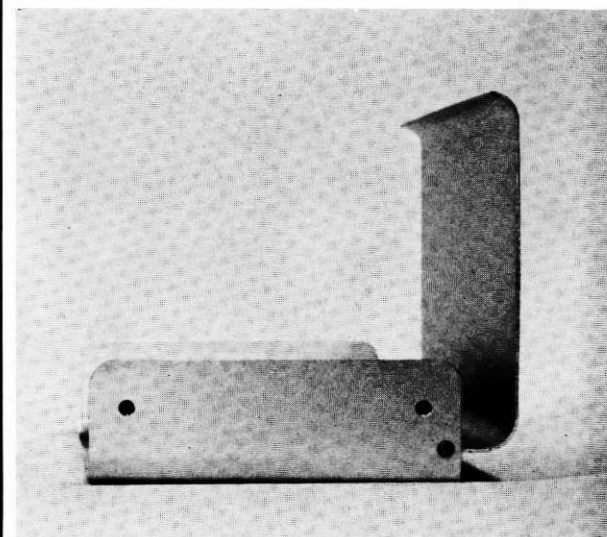
(227-228)  
1967, prog. 875; parete sospesa: ogni pannello è costituito da due fogli di laminato plastico leggero (da rivestimento) incollato lungo i bordi laterali e messo in tensione da una sola asta di legno; ogni pannello cm 76×205.



(229)  
1966, prog. 804; modello; sedile ricavato con il solo taglio (senza altri interventi) da un blocco di materiale plastico; ricerca poi utilizzata per la produzione di serie.



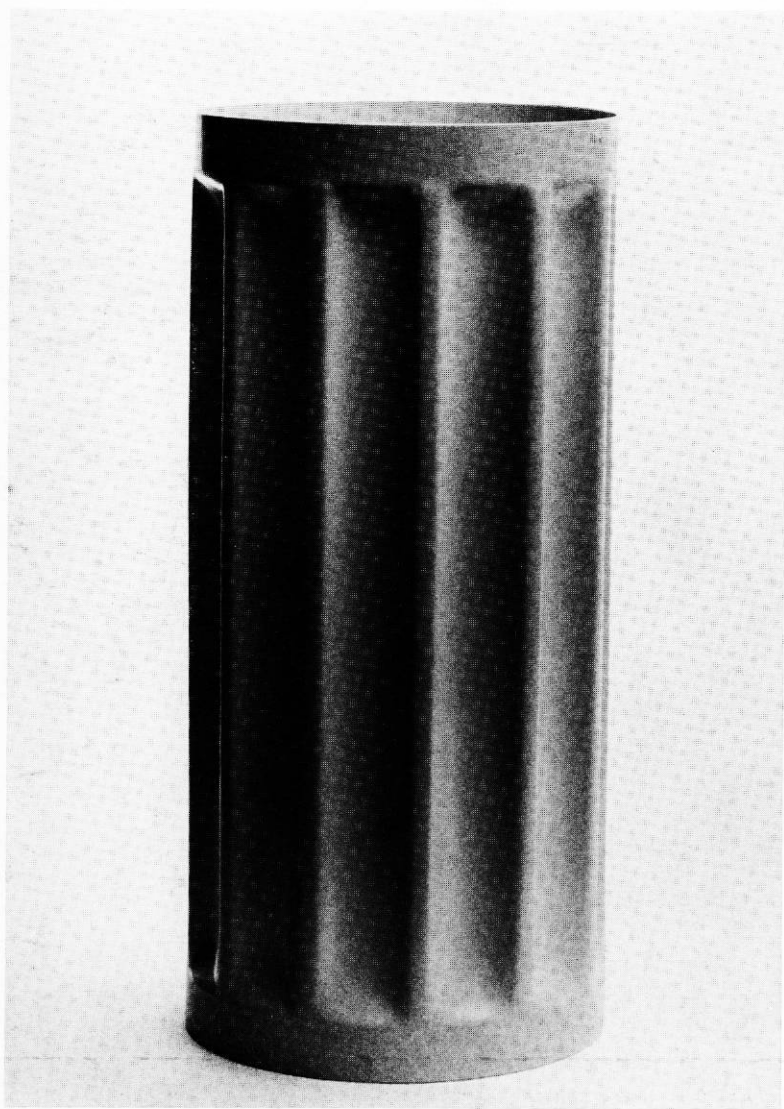
(230)  
1964-1969; strutture portanti di cartone cannettato (vedi figg. 162-170).



(231-232)  
1960, prog. 507-508; scatola e vassoio; lamiera di acciaio inossidabile tagliata e piegata, legno naturale; cm 15×30×15, cm 30×30×5.

ricerca come progetto

la produzione di serie



(275)  
1969, prog. 971; contenitore;  
tubo di PVC stampato sotto vuoto; cm 25×55.

### LA COMUNICAZIONE VISIVA

(come eliminazione del superfluo)  
Il grado di comprensibilità di quanto recepiamo visivamente varia secondo il livello di codificazione di linguaggio usato

Interventi consistenti nella comunicazione di significati mediante linguaggi codificati e con l'eliminazione di ogni immagine superflua.

o usabile dal progettista o secondo, ma secondariamente, il grado di conoscenza che di tale linguaggio ha colui al quale è diretto.

Da questa relazione nascono anche le premesse per attuare l'« immagine coordinata » (cioè la costante ricorrenza dei simboli e delle loro relazioni costituenti l'immagine signifi-



(276-277)  
1958, prog. 421, 491; due marchi.



(278-279)  
1966, prog. 823; calendario perpetuo;  
ABS; cm 17×16×9.

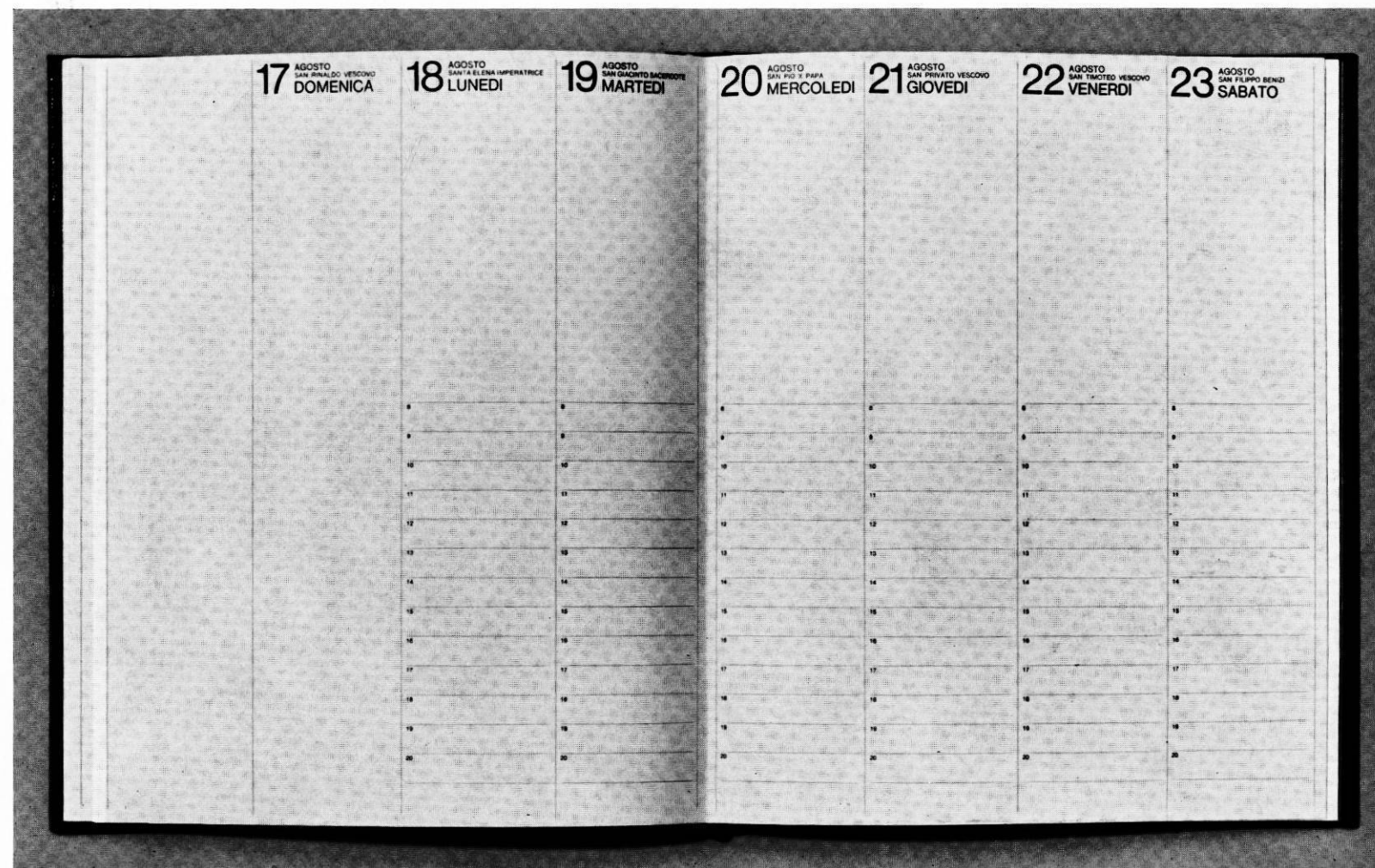


Inoltre, alla comunicazione implicita nell'immagine stessa di ogni progetto, si può sovrapporre una ulteriore comunicazione i cui contenuti trascendono quelli propriamente visivi.

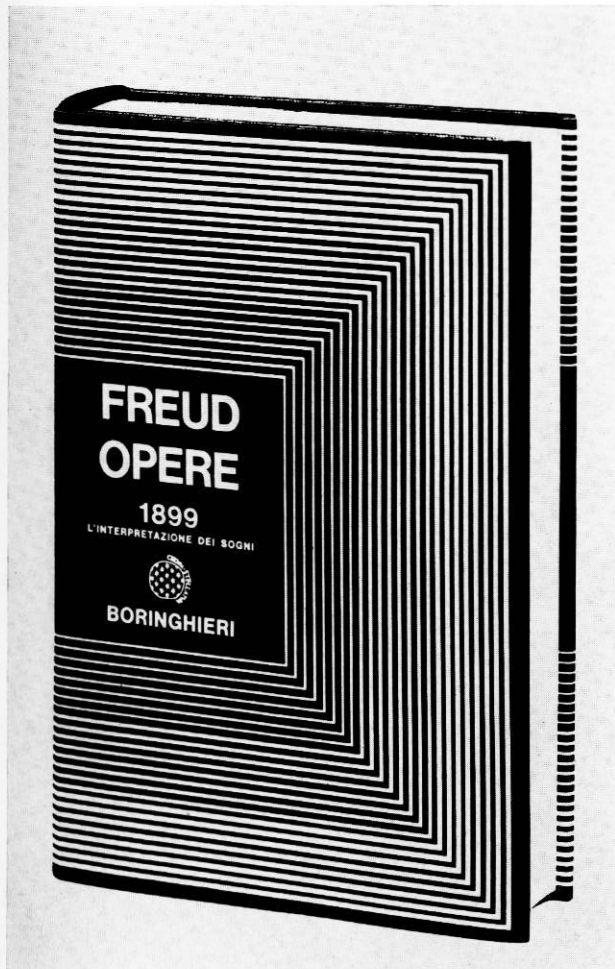
cante di un certo problema in ogni sua manifestazione).



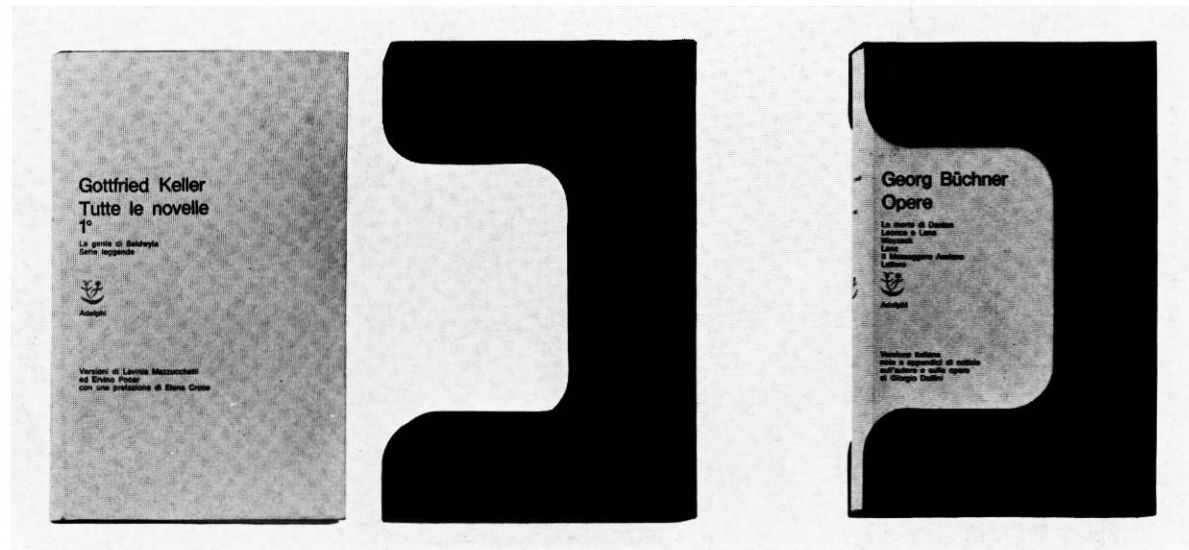
(280)  
1962, prog. 677; calendario perpetuo; supporto di alluminio,  
fogli mobili di materia plastica bianca, numeri neri; cm 31×31.



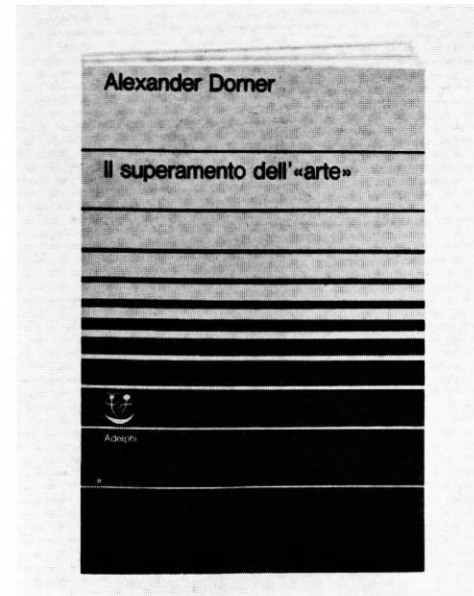
(281)  
1968, prog. 897; agenda da tavolo;  
carta bianca opaca, caratteri neri; 148 pagine, cm 22×26.



(284)  
1967, prog. 828; copertine per una collana di psicoanalisi; bianco e nero, cm 15×22.



(285)  
1963, prog. 704; copertina e custodia per una collana di classici; bianco e nero, cm 21×13.

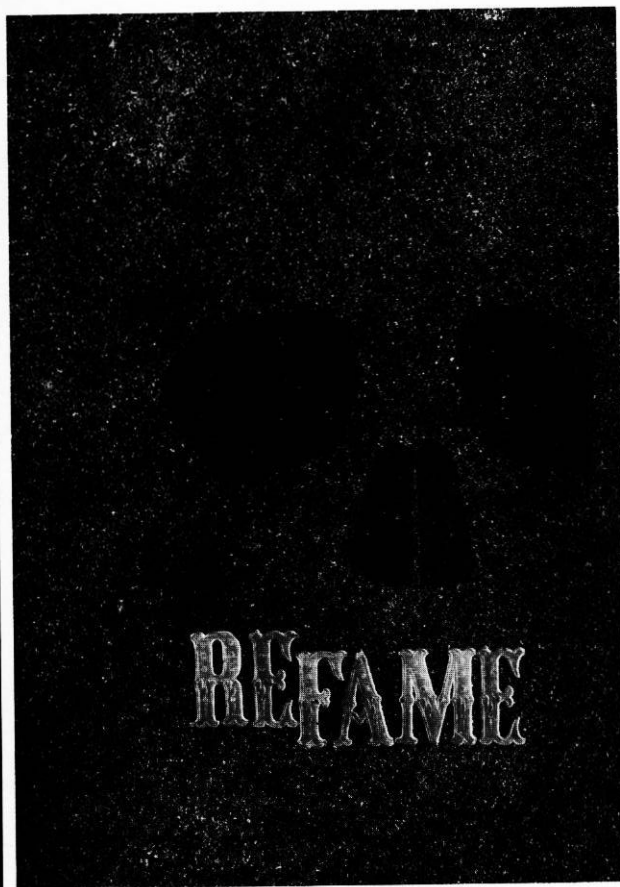


(286)  
1963, prog. 705; copertina per una collana di saggi; il rigato decrescente varia di colore per ogni volume; cm 20×14.

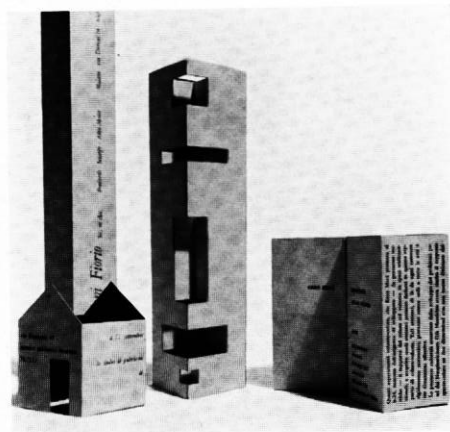


(287)  
1968, prog. 943; allestimento in occasione della XIV Triennale di Milano dedicata al Grande Numero...; legno bianco, cm 1200×500.

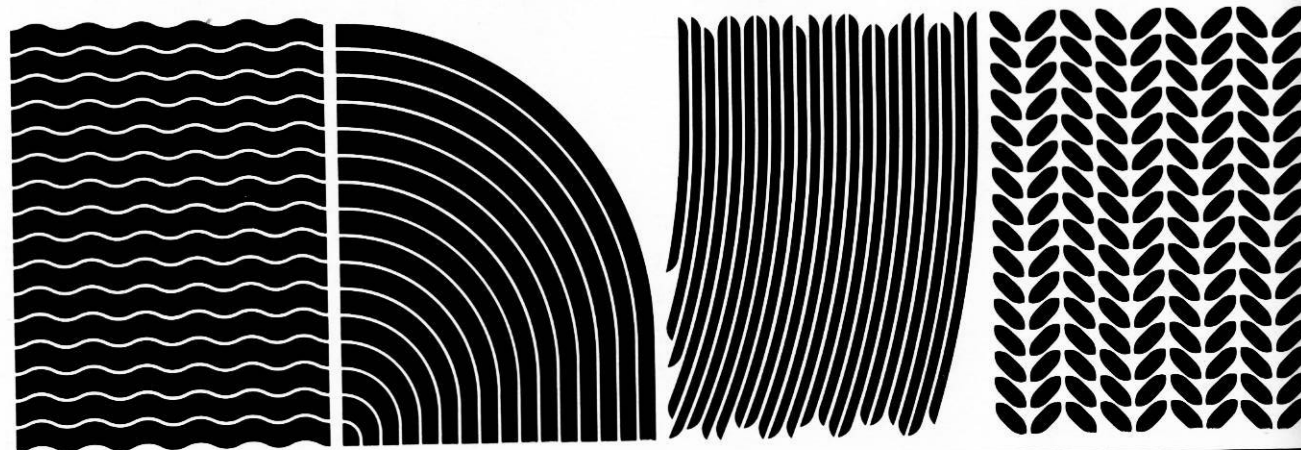
Interventi consistenti nella comunicazione di significati mediante linguaggi non codificati ma ridotti alle sole componenti codificabili.



(288)  
1955, prog. 162; manifesto per « Re Fame »  
(dramma di Andreev);  
verde-nero e oro, cm 50×35.

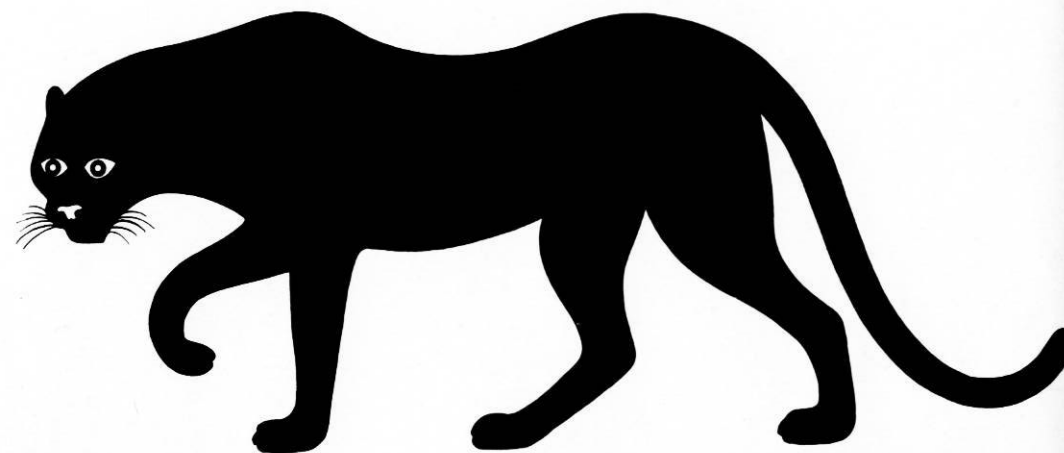


(289)  
1957-1959, prog. 333, ecc.; inviti per mostre,  
a tre dimensioni ma riducibili a due  
per la spedizione.

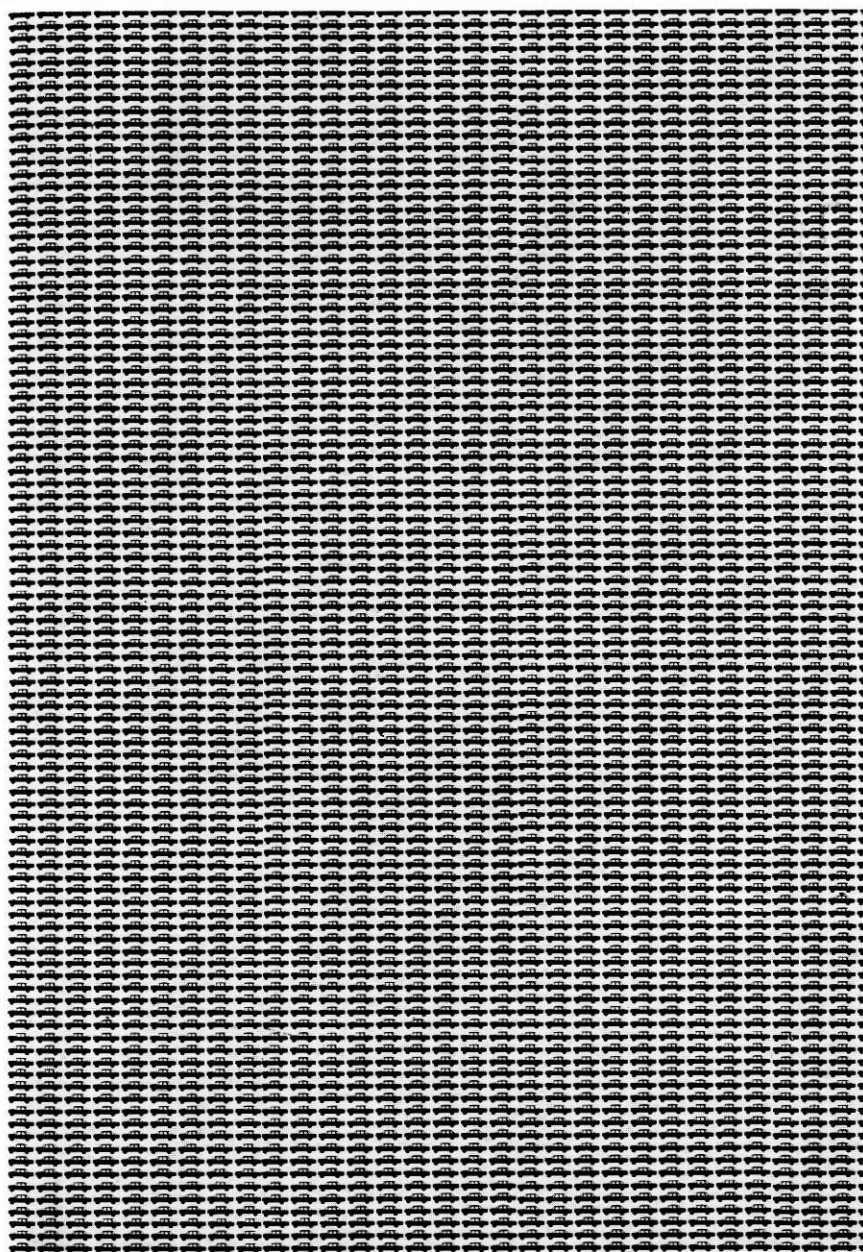


(290)  
1961-1967, prog. 603; quattro sovrastampe del « Posto dei giochi »  
quali simboli del paesaggio naturale suggeriscono al  
bambino proiezioni possibili (vedi anche figg. 327-334).

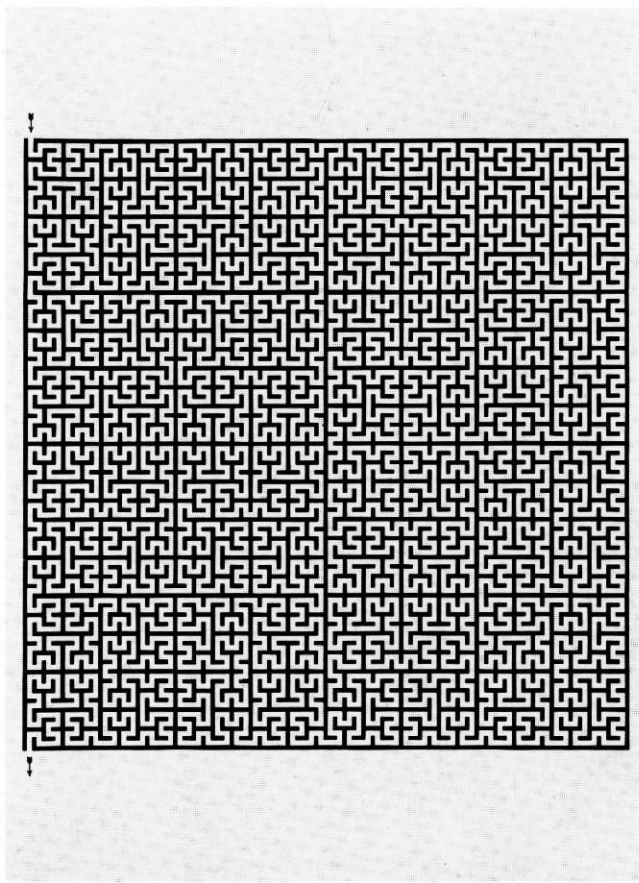
(291)  
1957-1965, prog. 346, 769; uno degli animali del « Gioco delle  
favole »; la pantera è definita nei suoi aspetti tipologici  
e caratteriali (vedi anche figg. 179-180, 196, 324-326).



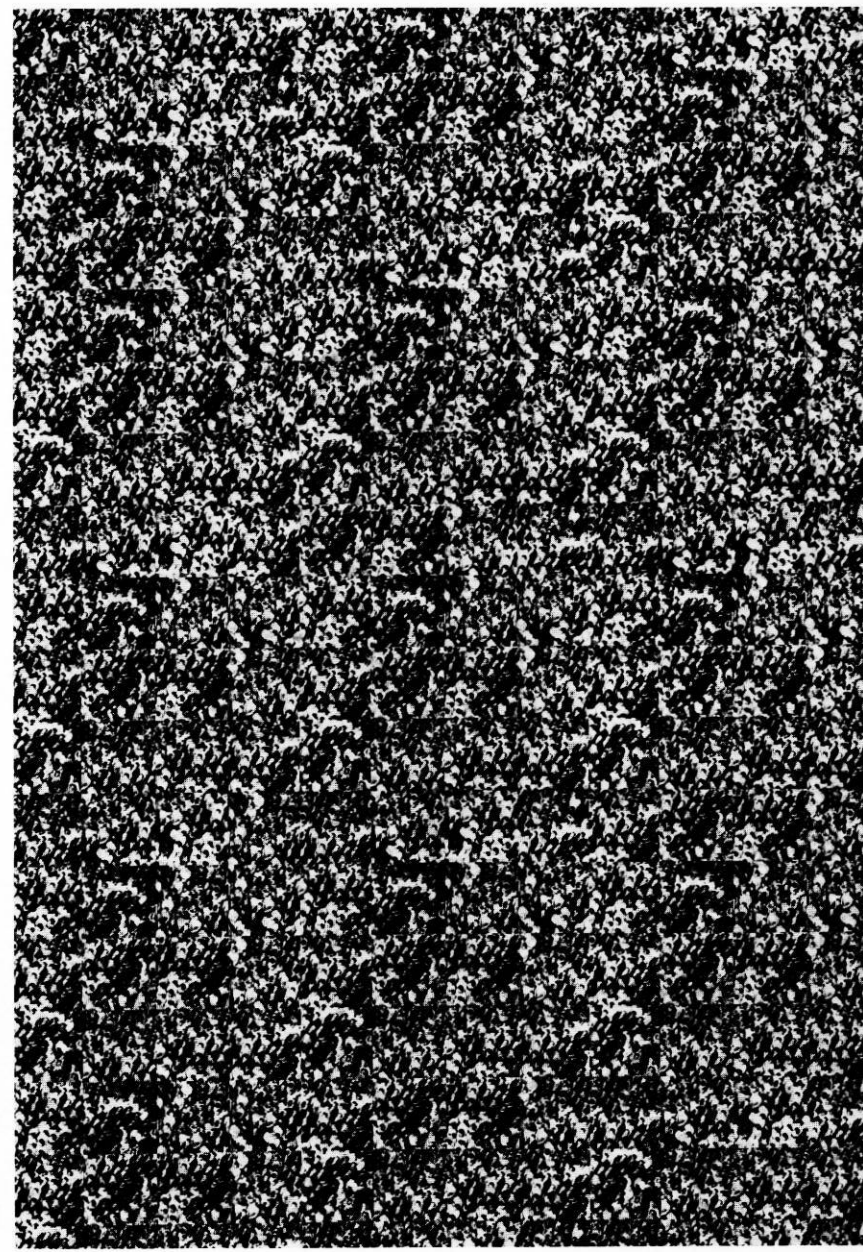




(292)  
1967, prog. 872; « Week-end », manifesto della cartella « Il traffico »;  
bianco e nero, cm 50×70;  
particolare (4.000 delle 16.000 automobili).

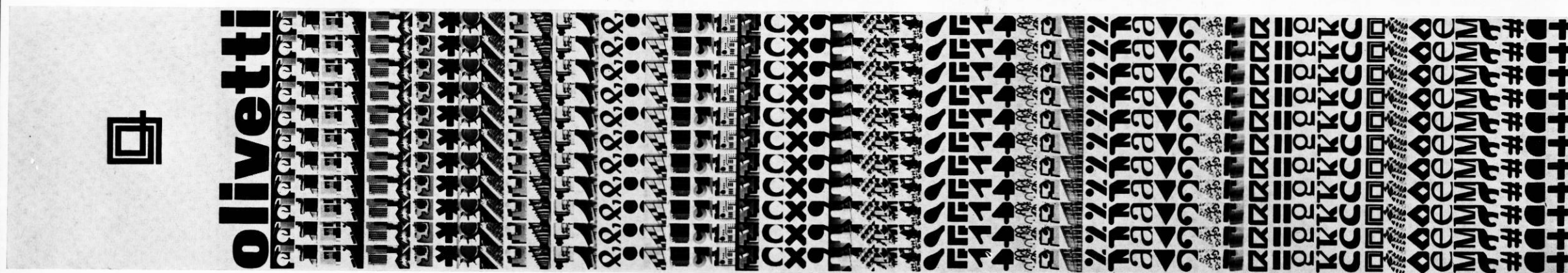
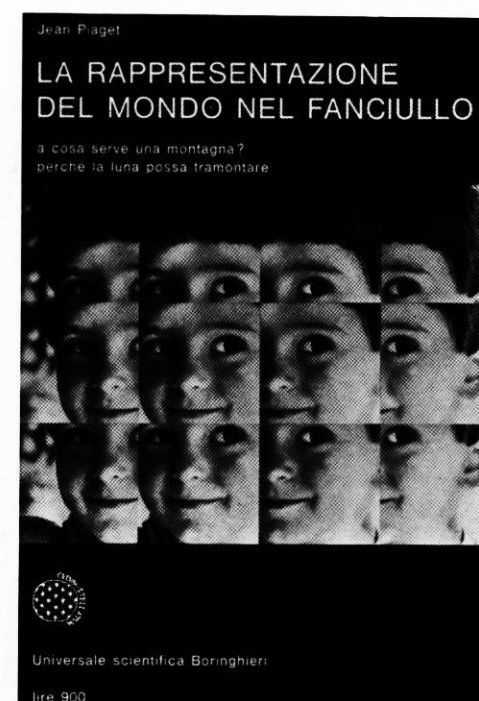
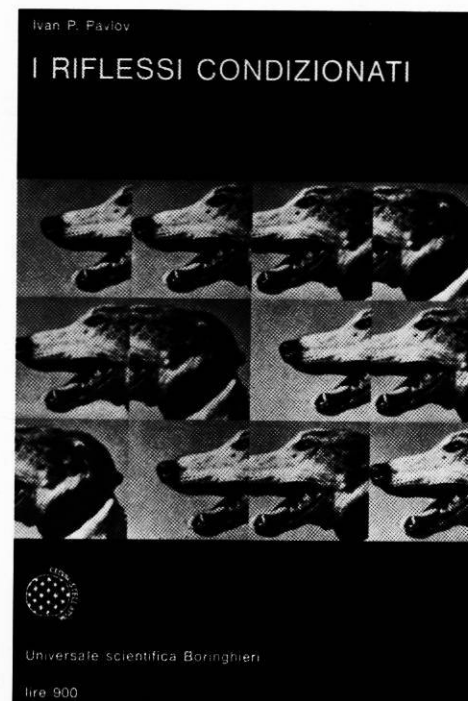
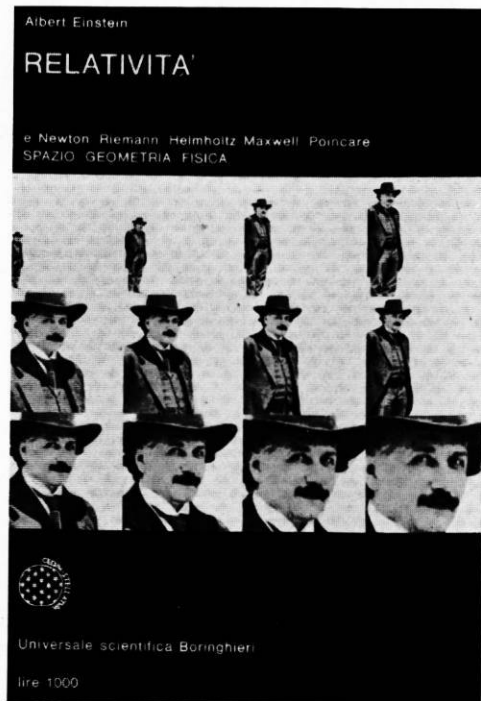


(293)  
1967, prog. 871; « Non ci sono alternative », manifesto della  
cartella « Il traffico »; bianco e nero, cm 50×70.



(294)  
1968, prog. 1011; « incremento approssimativo – ogni otto ore – degli abitanti di  
questo pianeta »; particolare (un quarto) del manifesto per il concorso bandito dalla  
Triennale di Milano sul tema del Grande Numero; bianco e nero, cm 100×70.

Interventi consistenti nell'illustrazione di significati mediante la scomposizione e la riorganizzazione modulare di immagini, al fine di un loro succedersi o persistere percettivo.



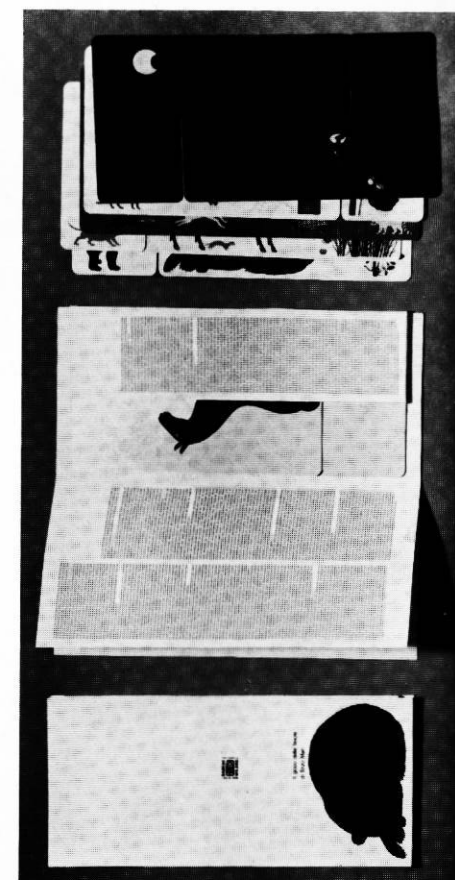
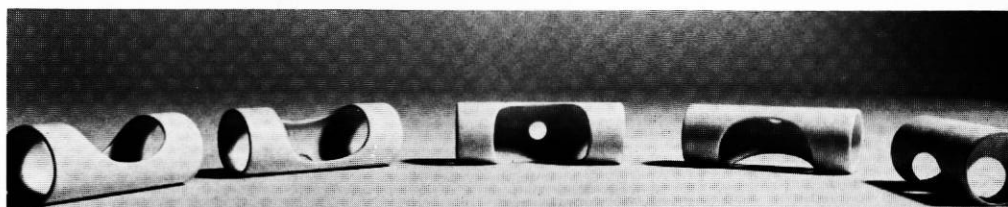
(295)  
1967, prog. 852; manifesto verticale;  
nero e bruno scuro;  
cm 138×23.

(296-299)  
1965, ecc.; prog. 756, ecc.; copertine per una collana di saggi;  
bianco e nero (in alcuni casi le immagini scomposte sono colorate);  
cm 13×20.

didattico. Le relazioni intercorrenti fra qualità e utilità e fra rinnovabilità e libertà determinano così il progetto del giocattolo.

Oggi, per il progettista, questo tipo di intervento resta una delle poche possibilità di contribuire realmente al rinnovamento della società.

Giochi nati da indagini sull'utilità, necessità e capacità dei bambini di realizzare il proprio mondo ed esercitare il proprio estro in tutta libertà.



(319-320)  
1957, prog. 351; « Sedici animali »; ricavati con un unico taglio da una lastra di legno, si incastrano perfettamente fra di loro e sono tutti riconoscibili; lo spessore, che ne determina uno stabile equilibrio, permette progressive relazioni di gioco; cm 34×24×3 (vedi anche fig. 183).

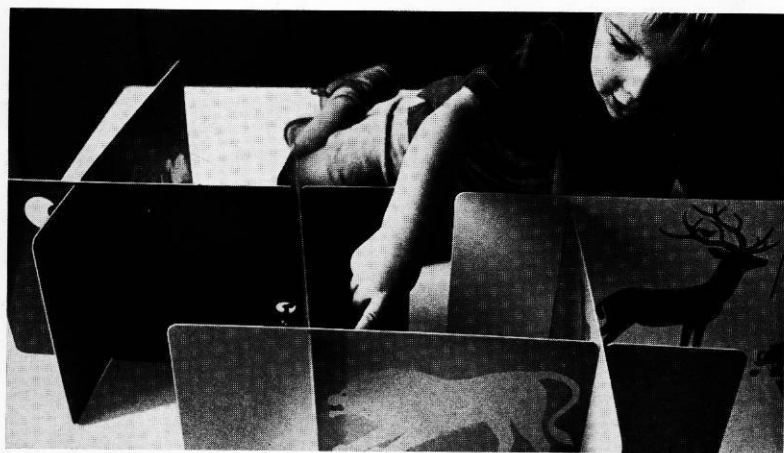
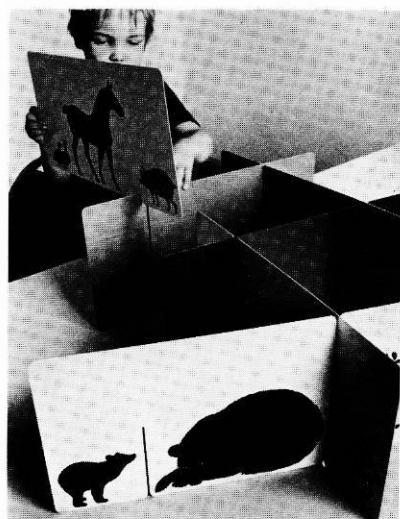
(321-323)  
1967, prog. 831; « In tutta libertà », campo di gioco per una scuola elementare (non realizzato); ognuno degli elementi prefabbricati, di cemento levigato, misura cm 150×450; fissati in posizioni modularmente diverse offrono al bambino, senza riferimenti figurativi immediati, l'occasione di attuare liberamente processi di proiezione (vascello, caverna, treno, ecc.).

(324-326)  
1957-1965, prog. 346, 769; « Il gioco delle favole »; è costituito da lastre, di cm 46×23, stampate a più colori sui due lati; ne risultano dodici quinte, composte

proprio perché manca una grammatica delle immagini. Dare allo spettatore, o comunque al destinatario del messaggio, la possibilità di intervenire direttamente o anche più semplicemente di poter osservare i meccanismi dello sviluppo delle sequenze di immagini, contribuisce, col farlo

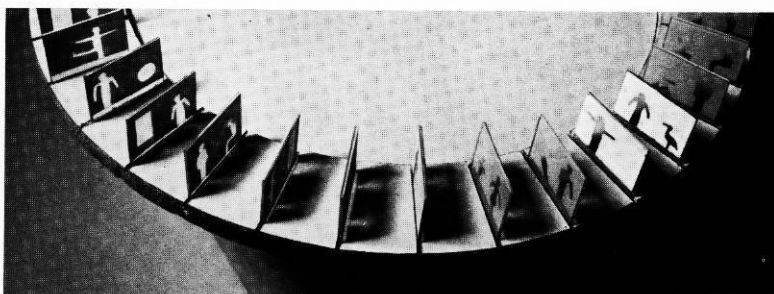
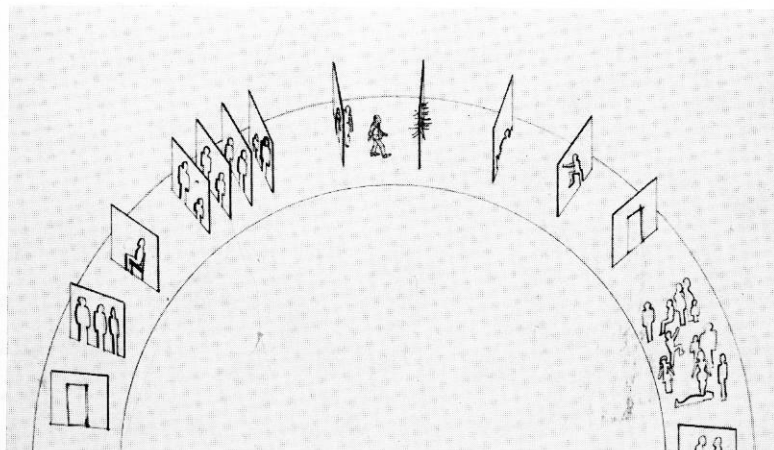
in qualche modo partecipe, a oggettivare il progetto della sequenza. Alcune occasioni hanno consentito di realizzare progetti in cui il programma della sequenza coinvolgeva più o meno direttamente l'utente.

In un gioco per i bambini il giovane utente può intervenire programmando direttamente la sequenza degli archetipi (mediante supporti modulari) che determinano lo sviluppo della favola.



(179-180)  
1957-1965, prog. 346, 769; « Il gioco delle favole »  
(vedi anche figg. 196, 291, 324-326).

Lo spettatore partecipa direttamente al divenire della sequenza di immagini e ne è parte integrante anche per i condizionamenti psicomotori.



(181-182)  
1968, prog. 874; lavoro di gruppo con Boriani, Chiggio, Colombo, De Vecchi, Massironi; un disegno e il modello del « percorso a passaggi programmati » realizzato per il teatro della Casa della Cultura di Grenoble; il movimento dell'anello scenico condiziona il pubblico ai passaggi sagomati nei pannelli sospesi.

### LIMITAZIONE DELL'OBSOLESCENZA ESPRESSIVA

L'apparente ricchezza formale degli oggetti (visti nel loro complesso), che l'attuale società dei consumi fa proliferare quasi sempre coincide proprio con un loro decadimento anche formale. Infatti la breve durata, richiesta da continue e urgenti necessità di produzione che favoriscono il susseguirsi

Interventi di tipo linguistico, ai fini di una maggior durata su progetti condizionati da necessità funzionali, tecniche ed ergonomiche.



(183)  
1967, prog. 351; animali componibili (gioco per bambini); la stretta relazione fra i diversi tipi e la loro mutua corrispondenza determina le caratteristiche formali; gli animali possono essere usati sia singolarmente sia in composizione fra loro (vedi anche figg. 319-320).



(seg.)

livello del prato circostante, può essere segnato liberamente secondo le necessità del gioco; la sua voluta essenzialità lo pone come luogo « classico » per i giochi che nascono spontaneamente dalla vita collettiva dei bambini.

## LA SCUOLA PROFESSIONALE

Le attuali scuole di avviamento professionale — e non solo quelle — a cui accedono i giovani (le cui condizioni sociali obbligano ad un rapido inserimento nelle forze di lavoro) per apprendere tecniche di esecuzione artigianale, cercano di fornire oltre l'apprendimento di queste tecniche anche nozioni di cultura generale. Tuttavia manca quasi completamente e sempre un insegnamento del metodo della progettazione di ciò che sarà realizzato con quelle tecniche dal

futuro esecutore. Se ciò sembra derivare dalla mancanza di strutture scolastiche adeguate (impreparazione degli insegnanti, tempo a disposizione, ecc.) in realtà è causato dalla volontà, più o meno dichiarata, di limitare la preparazione di quelle forze di lavoro da cui l'attuale società si aspetta solo un contributo di tipo esecutivo. Limitatamente alle possibilità dell'intervento personale si può cercare di contrastare questo stato di cose cercando

È necessario per l'allievo di primo anno di un corso di questo tipo apprendere nel breve tempo a disposizione i principali o almeno i più utili fondamenti della percezione e della rappresentazione.

Questo apprendimento non può prescindere dalla capacità di esecuzione manuale dei modelli visivi.

Ci si trova così a dover affrontare contemporaneamente, e in pochissimo tempo, diverse necessità:

- comprensione ed interpretazione dei fenomeni plastici ed ottici;
- corretto uso sia degli strumenti naturali (occhio, mano, braccio, dita) sia artificiali (matite, penne, ecc.);
- tecniche ed artifici di rappresentazione grafica;

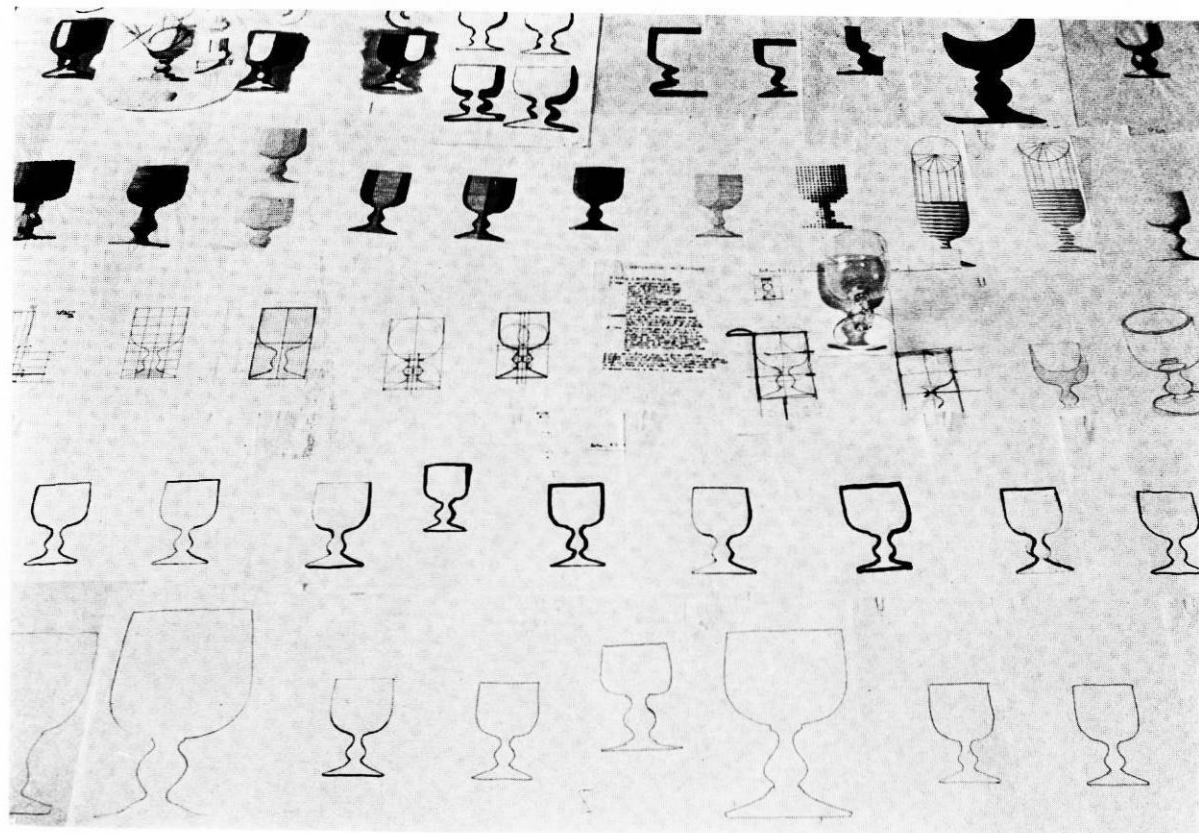
– primi rudimenti di progettazione nel senso di progetto del modello visivo.

Si è scelto un unico modello per le esercitazioni di tutto l'anno perché l'allievo, nell'affrontare in pratica i singoli aspetti via via trattati in teoria dall'insegnante, non sia affaticato o distratto dalla necessità di dover comunque risolvere « in qualche modo » le altre componenti — inevitabili — del modello visivo.

Cioè l'allievo, nelle successive ripetizioni dello stesso modello, può concentrarsi ogni volta nell'esercitazione sul nuovo aspetto trattato senza dover riconsiderare — sotto altra forma — quelli precedenti.

Il modello scelto (un bicchiere tradizionale) ha la proprietà di essere interpretabile secondo gradi diversi di

complessità; inoltre la sua simmetria bilaterale consente particolari esercizi di manualità e di percezione.



(340-341)

1959, prog. 473, 699; corso di progettazione per assistenti grafici tenuto alla scuola Umanitaria di Milano; primo anno (1963); introduzione al programma del corso e una piccola parte delle esercitazioni di un allievo.

page 5

**PREMISE**

At thirty-seven years of age, I find that I have either envisaged, or planned, or realized, certain «artifacts» in consideration of what seemed, on each occasion, to be the priority requisites. Today, I consider communicating the development of this work and the reasons behind it as a priority (my work, unusually, can be defined by resorting contemporaneously to the, in themselves, abstract and debased terms «artist», «designer»). I shall attempt to communicate this development and reflections on the general situation which have gradually derived from it, listing what seem to me to be all obvious things that were, one by one, accepted as such by the majority of my interlocutors who, however, did and do so only when strictly applied to their specific fields of interest (as the occasion might be: the diverse ways of producing art, the diverse scientific disciplines, the various levels of planning and, in all cases, the diversity in level of political maturity). This is because their tranquil ethical-professional way of life restricts their chances of recognizing the obvious connections and making some concrete effort to make knowledge of the true situation widely known; an essential factor, this, to bring about the much desired renewal of society.

For these reasons, in the light of an inevitable difficulty in interpretation (not so much for the demands of content which, on the contrary, deals with very simple things, but so as to emphasize certain pointers to help build up a global understanding of these notes of mine, which might also be viewed as a «manifesto of obviousness») I have preferred to give a certain order, indicative of what I hope to be able to say, to the arguments to be dealt with.

- 1) How the profession-status of the so-called artist has developed up to today...
- 2) For this reason this profession and those collateral to it should aim at...
- 3) Collective work is therefore necessary to the ends of a global vision and relative interventions (definition in objective terms of the individual developments of work)...
- 4) The reasons for this publication and the reference material concerning my work is to be interpreted in this sense...

1

In the meantime let us try to free the concept of «art» of any implication which is not clearly and objectively definable (eventual «auras» are not necessary to be excluded, but the determination to deal only with what, beyond the field of personal interpretation, can be proved and therefore really communicated, prevents their being taken into consideration). For this reason it is preferable to speak of the profession of the artist (I emphasize the term «profession» because of its tangible social-economic implications). To speak of this profession today calls for an examination, however brief, of the conditions underlying its evolution, at least in the context of the history of the western world. Leaving aside the last hundred years for a moment, let us try to single out the sender, the object of the message, and the receiver. The sender is to be identified with that part of society which controls economic-political-cultural power and the receiver with whoever does not. The object of the message is whatever the diverse media, in accordance with the requirements of the relationship between the sender and the receiver, communicate. This relationship has, historically, always been of a paternalistic nature, aimed at maintaining the privileges of the sender. In what, if one thinks about it, has always been a subsequent moment, the sender himself becomes the receiver of the product; but it is not so much the message it contains that he is receptive to so much as the quality of performance. The Church, for example, made use of the figurative arts to communicate her values; later, with their replacement by laudatory-humanistic ones, the Prince was to utilize the same agent to extol his own role. This vehicle of communication was, at that time, as in the previous one, the only suitable one for communicating anything – lastingly – to a society which was for the most part illiterate. Lacking a codified written language within the reach of all, communicating concepts by representing them artificially in an exemplary situation was the only way to make oneself understood by everyone. Moreover, the metaphorical language of the images also furnished accessory notions of a historical or geographic type, etc., which

served to amplify the information. Thus, whoever realized such communications fulfilled the precise and recognized function of furnishing a product of tangible utility to the community. His role therefore, was that of communication technician: he made use of institutionalized rules and canons. But the need to renew by now obsolete images, changes in customs, cultural developments and, not least, the opportuneness of diversifying one's own work to increase its prestige was to lead some of these technicians to try out new representational devices that, in effect, ended by being language researches. Such researches were never interpreted as such but only as being a qualitative aspect of the artifact. Especially by the sender for the subsequent use (see above) he himself was to make of the product. The profession remained, at all events, within the functional limits first indicated. But by the advent of the first industrial society, although nothing changed substantially, the first symptoms of estrangement were being shown in the profession. In fact if, on the one hand, accessory functions (which now begin to be discharged by public instruction, press, and travel opportunities) were beginning to run out, on the other, communication tends to be aimed less at society in general and more at the senders themselves – in this case, the bourgeoisie – who needed cultural identity. These demand an artifact that communicates the acquisition of status in imitation of that of the previous ruling classes. This means that what is communicated tends to become less important than the mode in which it is communicated – meaning by «mode», not so much the acquisition of particular languages, but rather the media of communication itself. Technological enrichment and, in particular, that of media of communication and representation, and the rapid and growing complexity and scientific and technological diversification gradually lead to the professional differentiation of the the various types of communication. (Thus, what used to be of relevance to a single profession, for example, communication by means of painting, could now be more rapidly and precisely communicated by means of such specializations as reportage photography, scientific photography, portrait photo-

graphy, interior decoration and later, the cinema, advertising, television, etc.). Many different specialized professions thus ensue; but only one is, as the term «artist» itself indicates, the custodian responsible for all cultural values. This is clearly a consequence of the previous periods in which the artist alone used the language of images and therefore ended by being the sole custodian of all the values and implications of visual communication in general. Now, instead, he outlives his function, anachronistic custodian of a profession which others have far more fitting instruments to practise. How do those directly concerned react to this anachronism? The new sender believes that the artifact-work of art qualifies him culturally, in the loftiest sense; consequently he wants the author of his artifact to retain and strengthen his almost divine role of custodian (if only for the instrumental aspects) of cultural values as a whole; and he considers all the new collateral professions only as the blind and obedient tools of developing industrial production. Whereas, on the one hand, the «artist», for these reasons and for the growing process of estrangement, mythicizes his figure more and more, on the other, the new «technicians» of communication see nothing outside their fields of specialization because of the frustration caused by this state of affairs which conditions their very training (as, as we all know, it still does at this present moment). But some «artists» (other than for the familiar reason of needing to differentiate their own work) reflect on the justifications for their profession so as to give a less misleading significance to their status. Two attitudes to work emerge, both of which have in common the determination to renew society. One tries to get down to the basic principles of visual communication; the other tries to utilize its professional agents to preach the need for subversion. These researches, without the need to communicate «something» through the agency of «fine art», tend increasingly to put themselves forward not only as the object of communication but also as a product of it: in effect these «artists» continue to operate in a social context which although taking no interest in the real reasons behind their work, requires, just the

same, the «culturally patenting» product. (This is what has characterized the history of art over the last hundred years).

Numerous operative tendencies develop from this situation, all of which, however, can be traced back to two basic streams of thought. In each case the scope is cognitive and «releasing» and is attained through a didactic process. What varies is the strategy and the priority of this process. The first stream gives pride of place to the knowledge of language media because the artifices in use deform and prevent any real possibility of communication; the second places the need to communicate particular values—anti-values to society first. But as these values are communicated through experimental languages the messages are not at all understood or are misunderstood by a narrow circle of élite within the profession. In every case therefore, it is research. At this point it would be as well to qualify this term. The term research in the sense of aesthetic research means those operations which aim at verifying perceptive phenomena and recognizing and experimenting with the modes of language for the purpose of attaining optimum means of communication.

In the light of this definition, it is evident that if the first stream (see above) checks the phenomena of visual perception, isolating and analyzing the single aspects one by one, with the intent of understanding and communicating their basic principles, the second, which gives first place to the urgency of communicating its own anti-values and thus has need of an articulated and therefore complex language, is forced to use approximative means.

It is equally clear that when one speaks of research here, the matter is not restricted to a single trend (which is the usual equivocation). Research is a method and not a label; in this sense it can be carried out from technically different slants rooted in diverse trends. Moreover, to be research in effect, it is indispensable that it should deal with entirely new problems or else offer a new approach to familiar ones. This is in any case a new aspect, the real implications of which can be understood — solely — by whoever is working out a determinate research or

by whoever is carrying out similar ones. The significance of the research can be understood by the public only after mediation, the duration of which (as events of the last hundred years confirm) is of at least two generations. Thus it is equally obvious that if the research is understood immediately by all, it is not an analysis of new facts but a more or less conscious repetition of already mediated ones (and consequently useless). But returning for a moment to those «artists» who at the end of the last century generated the first researches: having nevertheless to propagate and sell their work, they were to find neither receivers nor buyers. No economic value was to be attributed to their exemplifications of research (that is to say, their works). These remained unsold and only in a few cases were collected together by friends or relatives, less out of affection than from motives of suggestion (the artist as high-priest, custodian of the mythical values of the image, considered on the same level as a frenzied prophet). This power of suggestion, together with the complete incomprehension shown towards the research and the lack of remuneration for it ended by estranging the researcher and often, by obtaining his complicity in the situation. But after a couple of generations, collectivity was to «ripen» the results or the pre-suppositions of those researches and discover the «anticipatory» works. The occasional proprietors saw the value increase enormously, so much the more so because production had ceased, and the remainder available were snapped up and stored in the hope that they would increase in value once more. Thus the first stage of the modern art market came into being, based on the cut-price acquisition of goods that no-one wanted (a non-mediated and consequently incomprehensible research) but that were to be much in demand as a «patent» once they were recognizable as «culture» and it became an accepted thing to pay much more than its effective value for this «title».

Obviously the dealer, like the others, is not able to understand the implications of the research but must necessarily distinguish between the «artists» who have the characteristics of researcher (commonly known as a «real artist») and whoever has only the

«mythical» characteristics. Thus the dealer and his advisers end by evaluating the «work of art» only on the basis of an exterior aspect of the research. Consequently such an evaluation is made by taking into consideration whether: it is different from what the others are doing; it is different from what has been done up to now; it resumes and repropose what is already part of history, but known only in exclusive circles; it fits in with the «poetics» of a fashionable trend; it is carried out in an unusual or «strange» technique (but nevertheless with classical-style proportions); it is characterized by signs or by images that persist in all the author's other works; the anomalous behaviour of the artist.

On the other hand it is not that the meaning of the researches being carried out is not understood only by the public and the merchant, neither is it by those who believe themselves able to follow these researches closely and become their mediator, that is to say, the art-critic. Who in fact fills this function? People, with academic preparation or not, who depend, as the case may be, on the most diverse and contrasting of humanistic-type disciplines. (The fact that a responsible profession like that of one who sits in judgement can find so many representatives whose authority is widely recognized, despite the diversity of technical and methodological preparation, reminds us that these mediators are nothing more than «samples» of that bourgeois sender-buyer of the cultural patent under the guise of work of art). Of all these disciplines we shall take into consideration only those which have at least some connection with the problems of our research: the history of art and aesthetics. These present categorial limitations. As far as history of art is concerned there is an inability to understand and mediate such phenomena in process as the researches we have mentioned, that due to their being in process are a contestation of history itself; as far as aesthetics is concerned, it exists in an abstract philosophic dimension, not founded, or only casually so, in experimental phenomenical research, the only means, too, of evaluating physical reality in the con-

creteness of aesthetic phenomenology (and in particular to evaluate the phenomenological research known as «artistic» research directly, that is to say, without mediation). Moreover, both the disciplines limit what they have to say by the literary use of metaphors, lyrical expressions, historical-cultural type conventions, psychological interpretations of the author of the research (and, what is worse, often confuse the object being judged with one it resembles). Such an extraneous type of evaluation is damaging, not only because it makes it easier for the merchant to instrumentalize it to suit his policy, but also because instead of clarifying, it helps to confuse the artist when he tries to establish the reasons behind his research.

The artist, on the other hand, is unable to communicate the authentic reasons for his work (and above all communicate them clearly to himself), something which is naturally his concern. This inability can be explained by analyzing how the reality of the artist matures through three phases: a) the initial choice of position-profession; b) his formation; c) his profession.

a) On the premiss that non-alienated working-life conditions do not exist in present-day society, the position-profession of «artist» is generally looked upon as the one which, more than the others, seems to consent to otherwise unattainable individual freedom (such activity not seeming, at the outset, necessarily merchandisable); especially today when the position of the artist seems to have lost the professional implications that characterized it in the past and to have attained, at however superficial a level, freedom of choice. This type of evaluation demonstrates, in itself, the cultural limitations of those who consider personal freedom to be possible where collective freedom does not exist, instead of contributing to attaining this through what is functionally a priority. On the average, everyone would become an «artist». That the majority do not even attempt to is not only because they believe they are lacking in the necessary qualities but because the indefinable aspects of artistic communication seem to be incompatible with everyday needs. Those who do become artists are the ones who, more than

others, are (more or less consciously) in a state of extreme conflict with society: these then attempt the adventure of art-freedom. But very soon they realize that the freedom thought to be implicit in art is to be viewed from a different angle: from a social-economic type interpretation, activity unconnected with the laws of production, one comes, after the initial experiences, to understand that art activity today can only be practised in the context of research. Research activity, that in absolute is the most free and releasing as far as we are concerned, is carried on under such competitive and misleading conditions (as we shall see further on), as to become an ulterior element of conflict which superimposes itself on the initial one and doubles the state of dissatisfaction and neurosis.

b) To express itself, this ideological choice has need of technical skill that, as a rule, one learns in the art-school which, instead of providing basic training for the problems of visual communication, confer the desired status, in virtue of a period of time passed without any well-defined occupation. This explains what draws to the art-schools not only youngsters who have to satisfy the artistic aspirations of their families, but also those considered to be unsuited to all other — deemed to be more difficult — studies. In these schools, teaching is entrusted only to practising artists (without any concern for all the other necessary disciplines). They, instead of teaching the groundwork of visual communication, indispensable for any type of planning or artistic research, and the methodology of research and planning, confine themselves, due to their intrinsic professional incapacity, to showing off their own style (usually based on a subjective-type language and consequently only approximately communicable) or, in the most emancipated of cases, have the courage not to teach anything. Or else they identify the basic training with what is officially considered as such: an untidy and inert copy of «classical» artifacts (the techniques and justifications for which are outdated) with the aim of receiving revelation of the beautiful.

c) This type of training is already suf-

ficient explanation in itself. Despite this however, for a percentage which can perhaps be calculated at less than 1% a number soon become aware that the true substance of artistic activity is research. But as we have seen, the results of research have become a merchandisable product (in the light of critical mediation which, being unfitted, ends by transforming itself into the most suitable agent for this merchandising); at this point it is superfluous to worry about the research problem. It is clear that the whole thing is solely part of the machinery of consumption, in which what is produced is only a useful agent to produce that real «product», money, and consequently it is not the «qualities» of the apparent product which are important but those of the agent (which as such has different functions). What counts is not the real reasons for the research but the product that assumes its outward appearance.

But before developing this theme it is necessary to leave the specifically «artistic» sphere for a moment to speak of the special type of relationship existing between the product and its diffusion. The relationship existing between the effective production of a determinate artifact and the aspects of its diffusion and distribution are, in industrial civilization, correlated so as to have a reciprocal influence one on the other. That is to say that technology and the cost of this diffusion will be that much the higher, the greater the number of exemplars produced; the more the mass-media are developed and the product is of high technological quality, the more a qualified and therefore expensive scheme of distribution becomes necessary. In the case in hand, the art-product is (despite certain recent trials) still realized after the modes and with the timing of primitive production (when the craftsman constructed at first hand for himself and for the inhabitants of the village, without distribution problems); nevertheless, diffusion and distribution today have to make use of that strategy and those qualified and costly distribution channels which are absolutely indispensable for a «highly qualified» product to reach receivers scattered over a wide geographical area. This is effected however, principally by exploiting the ability and time of the re-

searcher himself, who to a large extent takes over the function of dif-fuser of his own apparent product. This function becomes his responsibility because his product is only a token of a cultural patenting which needs public officiation to take effect. This divine dimension, also enforcedly involves the artist at the level of all those technical-bureaucratic type diffusion activities, which ought to be handed over to specialized technicians (as is the case for all the other products of our society). There results for the artist all these feverish activities: public relations (meetings with critics, press-relations, presence at exhibition opening days, debates, etc); exhibitions of personal work (one-man shows and national and international collective shows, official manifestations and prizes which require, for the implicit motive of competition assiduous participation and personal contact, which often ranges from hanging the works to all the inherent practical and organizational jobs). Besides this, one has to take into consideration the time needed to realize the examples of personal research with a view both to promotional and commercial activity, not forgetting that the buyer wants them, each one, different from the other (to increase both the economic value and that of the patenting) and for this reason they must be made by hand, one at a time. Consequently, almost all the available time for effective research is dedicated to the production of objects which have only the appearance of research: what counts is, at all costs, to diversify one's product from that of the others', to make it immediately recognizable to the buyer – as a token of guarantee, first at the moment of buying and afterwards at the moment of exhibiting – and to the critic so that he can more easily say what he has to say. Which leads to: rhetoric (showiness in formal effects); non-consequential researches (in the sense that very often researches do not arise from deliberate analysis); limiting oneself to an illustration of the procedures or agents of real research (utilizing the « myth » of research, the signs or the models proper to other disciplines, to the ends of allegory); the struggle between trends (not because the diverse trends overlap at the level of ideologies or « poetics », but because this

struggle is exasperated to the point of involving the groundwork of that visual language which is the only premiss on which to articulate and debate the ideologies); a non-objectifiable language (in the sense that certain signs of the language undergoing research are so exasperated as to make the language itself incomprehensible).

If we have listed all these facts it is not so much to denounce the intrinsically degenerating conditions but because, taken as a whole, they prevent the formation of that groundwork in visual communication which, as we have seen, is inexistent even at the most elementary scholastic level. The lack of a basic training means that the artist is unable to clarify his personal method and objectives and the occasion of critical mediation (such mediation as can only take place between a familiar mode of relating generally recognized signs), which is necessary to express one's own reasons, never presents itself. In fact, in the race to differentiation, that is to say, to the trade-mark, each « artist » wants to communicate through « researches » which are as personalized as possible; but as the researches are language researches we are presented on each occasion with attempts at exclusively individual and therefore non-communicable language. Naturally one must not be confused by the particular rigour that distinguishes those rare exceptions (no more than one in each generation), a rigour which can be recognized as such only in relation to this situation.

In recent years the profession of artist seems to have evolved; but in reality there has merely been the addition to the old merchandise of other, some of which seems, apparently, to reject the previous conditions. In fact, whereas at the first stage of the art market the work acquired value only after a generation or two and through critical mediation of a historical type, instead, at an intermediate stage, critical connivance of a promotional type is demanded in the immediate exploitation of the capital used in publicizing a « trade-mark ».

At the present stage, in which the two previous ones continue to co-exist, further elements have been added. The artist seeks « other » ways of practising art for two reasons. The exasperating

race to diversification requires a continuous supply of new proposals (« trade marks ») to consume. The belief that his misleading status depends solely on his habitual interlocutors leads the artist to look for another status amongst new and different interlocutors. Consequently, he visualizes a more direct and immediate relationship between the work of art and the public, confining himself, however, to changing the agents and the scenes (psychomotory activation of the spectator, interventions both on the natural and the artificial landscape, surmounting of technical specializations) but not the substance of this relationship because he seeks to communicate with the public using experimental means and consequently, as has been said, incomprehensible ones. The public, in effect, receives at the most from all this only the hedonistic-ludic components.

In the rare case, the critic apparently interprets these « innovations » correctly: follows the new work closely and co-operates in the actual evolution of the poetics, aiming in one way or another to identify his profession with the operative one of the artist. But at this point he absorbs the defects of the artist (absurd aspiration to communicate through experimental languages) without losing the critic's traditional ones (absurd aspiration to interpret the meaning of a developing research without understanding its interior structures).

Even the role of the sender seems to be played in another way. The merchant makes use of these « activities » without concern for their direct merchandising, merely as a means of publicity for his organization. For the same reasons industry makes direct use of these « products » or finances their realization, above all when it is the tourist industry involved. This, in turn, forces the civic administration to organize manifestations of this type (even if all this takes on the appearance, at times, of a cover for politics). The receiver who, in the intention of the artist should be the entire society without further discrimination, continues to be found in that zone of the bourgeoisie which has always been interested in these things and that, because of the appearance of explicit social-political rebellion which artistic proposals often assume today, is convinced of

justifying its condition on the level of subversive commitment.

Summing up:

The profession of the artist changes with the birth of industrial civilization. Before this it had been a profession appointed to plan whatever was considered to be useful – by whoever held power – to communicate values of use in preserving that privilege and which, this apart, on a more generical and less rigorous level, planned and realized useful « artifacts » for the society. Afterwards, with the development of technology there derived from this profession several specializations, all of which however, of use in the protection of the aforementioned privileges. The sphere of research into language and apparent freedom of choice is left to only one of these specializations. The others are reduced – unequivocally – as all the different types of professional school denounce, to the role of passive agents of production requirements. Even if certain agent-professions try to achieve cultural autonomy, such as, for example, the so-called designers (and I am referring here principally to those who theorize on the methods and finalities of design), they are unable to visualize other than the perfecting of the instrument as such. As far as the artists-researchers are concerned we have seen that, on the contrary, doing research is an activity that (when it is not conducted pretentiously), leads only to misrepresentation. If one asks oneself why it is that in other disciplines (physics, biology, etc.) research is much more clearly articulated and consequential, the answer is that these researches are, even though insufficiently, favoured by their successive utilization in the empowering of industry. Instead, in our case, as our concern is for research into language, of use therefore to the improvement of means of communication in a broad sense, and since real communication is the most subversive thing that exists for the purposes of overcoming class distinctions, the reasons for these researches being such in appearance only are evident. If on the one hand this appearance is futile and damaging, on the other it furnishes an alibi for an uneasy conscience.

To conclude:

The position of all those who are con-

cerned with the language of images is prejudiced when the research phase is separated from that of the project. From a situation in which what is realized is planned in the light of both a research of use to the renewal of the means of planning itself, and of a mixed evaluation-conviction of its social incidence (from a situation, in other words, in which a certain cultural autonomy serves the purposes of the community relative, of course, to the social-economic conditions of the period) one proceeds to a situation in which the capacity for global vision has been lost because the diverse components are no longer so closely related. In fact, what is now realized is unnaturally planned solely in function to productivity, because the research attitude and cultural autonomy which alone can take up a critical stand towards what is not of use to the community are missing; and research reduced to a refuge in which to give vent to one's social impotence, for all its implicit subversiveness, never manages to develop the capacity to set itself a useful and straightforward operative purpose because it loses itself in the professional competitiveness which is a consequence of the merchandising of its own models.

2

It would seem impossible to emerge from this situation without changing the society that determines it. On the other hand, the present situation must be denounced at the level of category – to prevent the perpetuation of misrepresentation in everything that concerns this profession, to the point that even in action the subversive forces are permeated by the myths on which the misrepresentation itself leans. Moreover, models which can be utilized both in the course of, and after this renewal, must be carefully prepared above all for scholastic purposes. One must then begin to make functional professional contributions to the general renewal taking place. Finally, each category should, on its own initiative and in support of the collective action, actively contribute to clarifying what directly concerns it without resorting to mandates. To make a start on this and to emerge from such a situation call for (as does every research) the selection and simplification of terms and the verification of a pattern of behaviour which can only be attempted collectively since a complex social relationship cannot be left out of account.

The basic components to be taken into consideration are the moment of research and that of planning. These moments are indivisible and always interrelated: but the need to grasp the present contradiction forces us to consider them separately for the moment. Another two components consist in the category of artists (those who tend to treat language research as a priority) and the category of designers (limitedly to those who are not so much concerned with production demands as with the clarification of planning). Since a hypothesis of collective work cannot ignore major inclination for experimentation, one prefers to give the precedence to those who display more « sensibility » for subversion and have greater freedom of movement: that is to say the artists.

As the analysis of the evolution of the profession of artist should reveal, there are obviously two phases to every research. One is the determination to communicate something, the other, the « how » to communicate it. Obviously the « determination to communicate » entails, besides the indispensability of



the message, its comprehensibility; the «how» implies the determination to find other means of communicating more effectively or more faithfully to the new media, to the cognitive evolution, to the new social context. Anyone rejecting one of these two phases clearly places himself beyond the range of any possibility of social contact and consequently excludes himself from this and from any other possible discourse. It is clear that of these two phases only that of «how» involves the concept of research which we have already defined. Instead, the «determination to communicate» involves the concept of planning which, as we have already said, is the sum of the operations carried out to realize whatever, in the light of priority requisites, one considers to be useful. Today, the priority requisites – we have seen – cannot be other than the collective efforts in favour of social equality. Whereas economic equality is of prime importance to this end, total equality will however only be achieved when educational opportunities are the same for all. Therefore, at the planning level, precedence must be given to all those operations that favour this «mean» knowledge. In this sense, even though there are priority sectors, in that the realization of any planning today is, inevitably, only possible by making serious compromises, the choice of a determinate category of planning is less important than it is that the variety of planning be carried out in such a way that the reasons, the choices (and the compromises) are clearly expressed and therefore understood by the average man.

One of the essential requisites for research is that it should be absolutely free. It must be explained however, due to the degree of confusion in the researches we have been referring to, that the other requisites proper to research must also be respected: that is, the systematic analysis of variations of a previously unknown determinate phenomenon and its communication in objective terms. Moreover it should not be forgotten that the research into perceptive-visual language is in question: this is only a means to improve the quality and the efficacy of the communication of knowledge. All these considerations lead us to deduce that:

a) A research, demanding – as such – its own specialized modes and active in an as yet unknown zone, can be communicated solely to whoever is carrying on an analogous or collateral research, whereas it cannot be communicated directly to whoever is not following it closely (should it be of use to do so, it can instead be communicated by means of an already familiar language with which the developing and consequently still obscure language can be appropriately mediated). It follows that the vehicles of diffusion today are absolutely inappropriate, including the construction of models to this end (the so-called works of art, even in their most up-to-date forms).

b) It is in any event necessary, today, to give priority to those researches that concern themselves with finding languages which can be received immediately by the average man (even in this case one cannot leave out of consideration a phase of diffusion at a specialized level, in which experiments in collective communication which are to be realized, are discussed and perfected). To this end it is important not to confuse what is a simple indication of method with a gross operation in defence of cultural power. Indeed, the final operations of diffusion are to be interpreted as clearly intelligible diffusion of the process by which the results were obtained.

c) Precedence must be given to those researches which can provide the groundwork for the formation of new planners and researchers operating within the school.

d) The research cannot and must not be merchandised. It can be financed from within school circles.

e) A more direct and immediate relationship with society (either communicating determinate values, or, more simply, realizing artifacts of use to it) can only be achieved through the slanting of the project. This cannot ignore the diversity of language or the receptivity of all those who contribute or who could contribute to the collective efforts of renewal. Careful preparation of communications or artifacts must then be made, utilizing languages

which can be received by the average man (in that they are already familiar) or in any case gradually differentiated, and in which resulting clearly and easily comprehensible at once, should take first place before anything else. Since professional experience in the correct use of such a language is lacking, one cannot ignore experimentation and therefore the research spoken of in point b.

### 3

These models must be realized through collective action; but as any extensive participation in a clarification of this type seems to be lacking today, whoever intends to start it must set to work from the inside rather than from the outside, that is to say, on himself and his colleagues. When considering precise individual contributions it will be indispensable (as will be seen later) to define an ideology and then a series of rules of behaviour which will help to specify and strengthen the subsequent action to provide a more functional professional training and therefore a diverse relationship with society.

As has been seen, real contact with society does not exist today, but only with whoever (for his own purposes) claims to become the intermediary for this contact, since circumstances now prevent society from expressing itself as a direct interlocutor. Thus at the present, rather than attempt a direct relationship which could only be a conceit (individual efforts, even in the context of small categories, and precluded from a wider field of action, always are), a relationship with new intermediaries must be established. Of these, precedence goes to the school, which must absorb research activity. As the real conditions and mean experience for research to be carried out entirely within the school are missing, one can, in all those cases where the proposal and experimentation of new groundwork is not possible, intervene in existing programmes. In fact, the first requisite for any research is the method and this, when more suitable trial material is lacking, can also be applied to anachronistic activities. What is really important is to understand the research processes and to objectify (make communicable) what is being drawn up. The «exercise» will also be useful as a demystification operation. The other intermediaries have to be sought for in the political field, or amongst those groups concerned with promoting and organizing collective action in renewal, always giving the preference, wherever possible, to those situations in which – to diminish the aberrations of political delegation – one works to urge direct civic participation in public works (to indicate narrower limits of choice is more the concern of

the groups who will attempt to realize these relationships). The types of action (in our case of communication) will arise from being closely in touch with the real needs of the community; thus one will try to utilize one's personal technical capacities in favour of the community and not, as occurs today, against it. It is worth repeating here that there is no question of reproposing a version of the figure of the divinity-technician or poet who, as we have seen, voluntarily or otherwise, produces solely cultural patents. Moreover, to prevent this from being reduced to a leisure-time activity instead of being transformed into a real and continuous professional commitment (full-time) a direct sender relationship (that is to say payed) must be urged in all those cases where it is possible. This, in a context in which others are forced to do equally alienating work and in very different economic conditions, must not be interpreted as a demand for privileges, but as an indication of a not improper way of viewing working relationships. Just the same, since it is impossible to leave the present-day economic reality out of consideration, these researchers, in maintaining contacts with the old intermediaries, must at least denounce the implications, try not to realize and not to present their product as a vehicle of cultural plusvalue, that is try to plan it without those redundant research attributes which up to now have distinguished it. This can be obtained only by realizing objects with precise ends (and explicitly declaring them to be such) whilst all the research activity will (to repeat it once more) be done and clarified within the school. Precise ends means that for each occasion, for every object, a purpose and practical use for the community must be clearly specified, even in the context of our consumer society; and since this is an objectively defined context, one can cooperate on renewal with less misleading media than those used in communicating through «art». Moreover, the relationship with the sender will take on more precise aspects.

On the contrary, it is of prime importance that those who are already concerned with the project, should promote the formation of a trade-union in place of the present ambiguous cor-

porations; only through action of a trade-union type will it be possible to operate efficaciously so as to change working conditions, this meaning, solely, the opportunity of intervening in decision-making phases of production, to speak for the receiver of the product. These actions of a collective type naturally cannot leave individual positions out of consideration. As far as professional activity is concerned (that which is economically necessary), it must be directed towards projects of greater use to the ends of what has been said above. As far as research activity, which must be instated in the school, is concerned, it is of prime importance for every researcher and every planner, prior to communication, to make a critical definition, unaided by intermediaries, of the reasons for his own work, its sociological implications, the technical ones, and above all, those of language. In fact, collective activity will become feasible only to the extent to which these «artists» manage to communicate the purposes and modes of their personal researches to one another. That is, objectively evaluating and discussing the diverse experiences of language, they will be able to begin to articulate common and variable groundwork components so as to collocate the diversity of experience and successively, to make it really communicable.

4

The opportunity offered me of presenting my « works » in an « anthological exhibition » has permitted me (financially) to make my contribution this attempt to define and communicate my work. An operation of this type is to be interpreted today, not as an additional activity to my aesthetic research, e.g. on the modes of visual language and consequently of communication, but, because of this, as research itself.

I have isolated and considered all the working episodes, rejecting solely variants that were realized for strictly professional needs. The reference material concerning these episodes is linked progressively on three bands parallel to the illustrative material, set out in a single horizontal sequence (so as, within the dimensional limits of the page to be able to follow the development of the sequence of images together with that of the reference material). Each sector of the first band (« research as verification » and « research as planning ») introduces some of the sequences of the second, each of these, in turn, some of the third; (other texts and captions, written when the research referred to was taking place, are printed between the illustrations).

In this way, I have tried, by revealing the articulation of the diverse components of my research (with its problematics and conditions, its types and techniques, its evolution), to show how this articulation has brought the convictions set out in this introduction to maturity.

Finally, the contradictions, the compromises and the inaccuracies in my work are clearly to be seen in the light of what has been written up to now.

page 12

#### RESEARCH AS VERIFICATION

The use of the term research, with the specific meaning of aesthetic research, signifies those operations which are directed at verifying perceptive phenomena and at singling out and experimenting particular forms of language to the ends of optimization of means of communication.

Researches of this type are realized through exemplifications and models that require a partially intuitive procedure.

Researches of prime importance for the global comprehension of perceptive phenomena and consequently of service in giving concrete shape to expressive language, are: both those conducted on the perceptive ambiguity of three-dimensional interior space (that is to say, environmental) in that they implicate our adjustment to our surroundings, and those conducted on the analogy between the serial structurations of natural phenomena and the programming of perceptive phenomena, because all the potentialities of language, not excluding the formal, are implicit at the structural level in these relations. Because of this, the two researches have evolved, from '52 up to today, not only separately, but also reciprocally integrating their results. Moreover, the need to vary the materials and realization techniques of models has, on occasion, provided a pointer for the development of further enquiry.

page 12

#### PERCEPTIVE AMBIGUITY OF THREE-DIMENSIONAL INTERIOR SPACE

The perception of three-dimensional space (with the specific meaning of environment) is one of the more ambiguous because understanding of it can only be reached through the complex interrelations of messages which are received in different ways by the diverse senses of our body. The more so since each specific knowledge makes itself felt almost invariably through one single sense with which the memory alone of the experiences of others then integrates. This means that the perception of depth is never direct but only hypothetically reconstructed, and therefore phenomenically ex-

perimented at different levels of reality.

These premisses provide a pointer to diverse types of research which are exemplified and verified by means of models that, for practical and economic reasons are realized on a reduced scale. Nevertheless the observation of sequences of variations (programmed within a series of originally identical comparative models) determines an ordered sequence of visual memories which, even though retaining their peculiarities, knit together to form a comprehensive perception. There is therefore the possibility of global reception of otherwise quite distinct phenomena.

The models are almost always formed of a series of cubic spaces because their structural simplicity facilitates reception of variations, and here, our urban conditioning obviously plays its part.

page 12

#### IMAGES OF ENVIRONMENTS

These researches aimed at the representation of environments whose phenomenical properties were imagined and hypothetically experienced, then translated through the expedients of two-dimensional representation. As a result of research into the most serviceable language for what was to be communicated, the need to verify the conditions of environmental space in their concrete reality gradually assumed primary importance. Two-dimensional representation, in fact, limits the communication of the phenomenical properties intrinsic to each space solely to those contingent aspects of service to a subjective vision. In these early researches, other types of verification can be hypothesized, but the interpretation of these cannot but take into consideration those on the perception of space.

page 13

#### RELATIONS BETWEEN COLOUR AND VOLUME: INSTRUMENTS

These notes and the relative instruments were born out of the intention of making a first-hand

enquiry into the phenomenology of three-dimensional space and consequently, as a priority, of the modifying space surrounding it.

The cultural situation of those years (for the rest, even today, very little changed) isolated and restricted the development of this type of research, which consequently could only in part be gone into deeply. Only at a later moment did the condition of having to divulge the research in the context of occasions proper to the visual arts and the need to observe and document, no matter how, the evolution of the investigation, lead to the realization of sequences of models.

page 16

#### RELATIONS BETWEEN COLOUR AND VOLUME: SEQUENCES OF MODELS

A sequence of identical models within which a series of variables has been programmed, consents to contemporaneous observation or at least observation in immediately successive moments. A comprehensive model results, which can be perceived globally but which is, however, to be read as a progression, because the single models reproduce single environmental situations which can be understood only if perceived separately.

page 19

#### RELATIONS BETWEEN CONTENT AND CONTAINER

Relating a particular volume to a comparative module improves perception of its consistency. The relation is the more evident and significant, the more the two elements (or at least one of them) are simple and correlated. The maximum correlation is obtained by incorporating one element into the other, thus setting up a content-container relationship.

It is possible to perceive the content either through the realization of models on a scale which consents to internal prac-

ticability, or by making the container transparent. If practical-economic conditions are an obstacle to the first possibility, the second also permits, besides observation of the container interior, other verification possibilities: from the contemporaneous observation of the external space together with what is contained within, to the optodynamic deformations that, for example, a spherical volume creates on the perceptible outlines of a body contained within it.

page 23

#### VIRTUAL ENVIRONMENTS

The need to experiment with new techniques in constructing models to improve on the economy of realization and the need, from time to time, to define particular phenomena more precisely, with more appropriate techniques, led to a series of researches in which these two components developed each relating, in turn, to the other. Models resulted which, both for the conspicuousness of certain parts and the lack of others, defined the environmental conditions in a virtual manner. In this case too the variables are ordered in sequences of models whose programming is partly conditioned by the structural necessity for aggregation of components.

These researches can be subdivided into two groups. In the first, the environments are defined by a succession of detached and parallel external planes. This results in a series of planes with concentric apertures of equal or decreasing form, the perimeters of which, by indicating sections of a virtual volume, set out at regular intervals, consent to its reading. The environmental depth of a number of models can be more clearly related by the parameter of the sections. In certain cases the sections are defined linearly. In the second group, the environments are defined by the spreading out of adjoining planes

that progressively utilize the single surface from which they were obtained.

page 28

#### APPARENT ENVIRONMENTS

An environmental space, all or a part of whose components have reflecting properties, has its perceptive ambiguity accentuated. The reflecting part doubles the space around it, one or more times, either symmetrically or at diverse inclinations. Because of the angle of reflection, movement on the part of the observer corresponds to a greater displacement of the image. This difference in movement endows the relationship with particular kinetic properties.

page 31

#### RELATIONS OF DEPTH OR DIMENSION

By varying the depth of a three-dimensional space one varies environmental perception of it. This premiss has given rise to a research that has developed in two types of exemplifications: in the first, a number of originally identical models have progressively diverse depth, the other consists of groups of models of the same depth, of equal height and width, but proportionally and progressively diverse. In a few cases, the two characteristics have fused.

Besides the observation of the single phenomenical variations, comprehensive images are obtained that are received like those from a single environment, passed through and measured in a temporal succession. These images always require that the observer has an identical viewpoint for each model. This can be resolved either by looking at the models separately and then reuniting the single visual memories, or by the realization of a comprehensive model in which the single cavities are set out in a spherical bowl with the observer at the centre. For diverse reasons (not the least, economic ones) the series of models have been arranged

on flat surfaces. The observer who opts for a comprehensive vision (non-memorized) receives images in varied perspective, because the viewpoints for each single environmental model are always different and the interior walls are exposed to view in progressively diverse dimensions.

This reading, too, gives a comprehensive perception of space analogous to that explained initially, that is to say, the reception of a single environment, passed through and measured in a temporal succession. Contemporaneous reading of the two similar but unequal phenomena, rather than resolving the perceptive ambiguity, amplifies its margins, because the two phenomena are measured with diverse parameters.

This results in two directions of research, one which aims at reducing the ambiguity by progressive measurement as one observation replaces another, the other which increases it by superimposing comprehensive observations on the diverse phenomenical characteristics.

page 36

#### INSTRUMENTS FOR VIRTUAL VOLUMES

Verifying the greatest number of three-dimensional spaces possible, without having to construct comparative models, leads to hypothesizing instruments capable of producing virtual volumes in different series or in evolution.

Of the technical means available the simplest and most efficacious seem to be those which utilize the properties of artificial light. In fact all the points generating light (or other parts), which cannot be utilized to realize a particular volume, can be annulled and successively re-utilized with the maximum economy of means.

page 38

#### ANALOGY BETWEEN SERIAL STRUCTURATIONS OF NATURAL PHENOMENA AND THE PROGRAM-

#### MATION OF PERCEPTIVE PHENOMENA

All natural phenomena, of any order, complexity and dimension, from those directly visible to man (mineral, vegetable, animal) to invisible physical phenomena which are only assumptions and intuitions, are always organized in accordance with series of numerous equal particles that are concretized in modular structures that vary by degrees (in accordance with very simple schemes) so as to form new modular units. These, in turn, are restructured, varying the initial scheme more or less (as, for example, from sub-atomic particles, to atoms, to molecules, to cells, to the veins of leaves, to branches, to trees, to the forest). At each of these levels, the series of particles tends to follow the elementary scheme which distinguishes it, as faithfully as possible, and never to vary from it. When, however, two or more different orders of particles intersect by chance, each series varies just so much as is necessary to regain its initial equilibrium. These variations which can be defined as serial, cause those slight differences between one particle and another of the same series, that characterize their individuality. Both because their organization is analogous, and because they cannot escape conditioning by a physical world structured in this way, phenomena concerning our perception also adhere to this system. Organization of formal language is implicit in these relations. Any consideration of an aesthetic nature cannot but take into account this reality.

Diverse types of research have originated in these premisses and are exemplified in models which have been realized through the programmed aggregation of prefabricated modular elements.

page 38

#### GOLDEN SECTION OR SYNAESTHETIC SERIES

The aim of these early researches was to verify the possibilities of codification of the expressive means of visual language. To this purpose the expedients of two-dimensional re-

presentation were utilized to organize sequences of modules. As the languages which depend on the organ of hearing – the spoken, and therefore, written word, and «traditional» music – are received, the identification of general principles with analogous characteristics to these, was aimed at. The adoption, in other words, of an elementary scale whose repetitive variations consent to the articulation of diverse communications.

One aspect of the researches was the use of that system of relations which effects spatial organization through golden section module sequences, another, to hypothesize and try to realize an instrument of communication in which visual and sound languages corresponded and might be perceived contemporaneously. (When it became clear that the diversity between sight and sound organs of perception made it impossible to define verifiable perceptive relations at any level of comprehensibility of use to an expressive language, the realization of this instrument was abandoned).

page 39

#### ON «NATURAL» ARRANGEMENT

In the course of an analysis of the reasons that determine a «work of art», it was observed on more than one occasion that in many of these the most frequently met with component (separate or mingled with other more ambiguous ones) was that the marks which defined this work (e.g. the brush-strokes) fell into place «with naturalness». This definition, almost always, became the only element of objective evaluation (to be found not only in the course of personal enquiry, but also in statistical enquiry) amongst those that contribute to determining the so-called aesthetic tension. Consequently, it may be useful to explain the relation between the arrangement of the marks in question and the definition of naturalness.

One of the phenomena of the natural landscape around us, which we receive with major facility and frequency, is the disgregation of the variously related modular structures that determine it. This disgregation, due to the force of gravity, resolves itself in the fall of modular components and their restructuration in accordance with the aggregation possibilities of the initial modules and the new conditions of equilibrium.

This phenomenon is so widespread that it ends by largely conditioning our image of the natural landscape (so much so, as to determine the usual meaning attributed to the expression «with naturalness») and consequently conditioning our reception of the way in which the artificial modules of a «work of art» fall into place. In fact, the way these (for example, a series of brush-strokes) fall into place, is organized in accordance with a program that takes into consideration the relating of their modular matrix (e.g. the brush) to the need to define a certain form despite temporal and ergonomic type limits (e.g. the gesture of the painter). Thus, natural modules (e.g. falling rocks) precipitate and reorganize themselves, conditioned by their modularity (e.g. the tendency to break up along lines of stratification), by gravity and by the need to adapt to other environmental structurations (e.g. a wooded zone).

Models have been realized to verify and demonstrate these phenomena, in which the modular elements, re-composing themselves each time in accordance with gravity, always determine an optimal image which is thus significant for this aesthetic hypothesis.

page 41

#### RHYTHMIC INTERFERENCES

The expressive means of visual communication have not been codified into elementary scales of modules whose variations consent to the articulation of

diverse communications as, instead, has been, and is the case, of languages dependent on hearing (words and «music»). In fact, in man, the perception capacity of the sight organ is much superior to that of hearing (for its aptitude for discerning greater quantity of detail, for its capacity to pass quickly and alternately from the perception of a detail to that of everything within visual range and for its being almost always able to pause, to re-examine the surroundings). On the contrary, with the sense of hearing, where the difficulty of reading was greater, a limited number of comparative modules of simple form have to be identified, so as to facilitate recognition. The diverse communications have then to be articulated by the repetition and serial variation of modules in accordance with elementary grammar, so as to make it possible – above all, with regard to the spoken and then written language – to communicate every type of idea and, consequently, further the development of culture. The faculty of the eye and the manual disposition with which man, with a certain fidelity, imitates what he perceives, have not, on the contrary, developed any codified system but merely so many artifices, differing one from another, and each, moreover, varied within itself. Consequently it is more correct to speak of visual artifices than of visual «language».

At the present moment, the attempt to codify visual modules analogous to those of sound is a utopian ideal; in fact, besides the physical conditions themselves, the cultural reality existing today is diversely structured. Nevertheless, new techniques consent to visual communication which also utilizes temporal properties. The need to retain images, which vary in time, more easily, is a «difficulty» in some way analogous to that appertaining to messages received by hearing. Consequently

a number of models have been realized, amongst which it is possible to program series of luminous modules in temporal evolution whose variations are determined by the interferences arising from the relating of temporal and spatial progressions.

page 43

#### THEMATIC VARIATIONS

So as to verify and demonstrate the relations between natural organisms and perceptive structures a series of models formed by the programmed aggregation of prefabricated modular components have been realized.

These components are prefabricated not only for technical-economic type reasons in the exemplification, but also because the natural modules on which they are based can be considered to be « prefabricated ». Even though, in reality, these germinate progressively, they contain, in fact, a « prefabricated » code of development.

The process of prefabrication involves the possibility-necessity of being prepared with quantities of components including a margin of surplus, before even having defined a specific demonstrative model. The availability of a surplus of components consents to experimentation and verification (easily and speedily) of a series of variants before « fixing » the definitive solution. This availability is the instrument which serves the researcher in determining a model. The modularity of the elements (their aggregation properties, that is) consents in the course of verification to the singling out of other possibilities of relation, besides those foreseen at the moment of planning, which are inherent in their constitution itself.

In that different ways of relating are directly or indirectly implicit in the module itself, the module and its programming possibilities are the determinant moment of the research and of its project. Through the diverse programs one attempts to realize models

analogous to the behaviour of series of natural particles that, in filling space, relate homeostatically one to another. That is to say, once the space in which the program to be developed has been determined, one establishes a determinate order in which the modules are to fill that space, that is, their displacement progression along the three cartesian axes. The occupation of the space is then effected without making any variation to the initial program and the result, whatever it may be, is significant for the research. Nevertheless, as the researcher himself is still conditioned by non-rationalized, « aesthetic » types of evaluation, which lead him to doubt the optimal legibility of what he wished to demonstrate, he does not intervene with corrections and partial modifications, but varies or substitutes the initial program and re-structures a new model. (It is obvious that the possible variables are numerous and that it is unnecessary to exemplify them either by realizing all the models or by constructing some of them with kinetic properties).

The model can be determined only by the modules of which it is composed, or, with the intention of making it more accessible, the space which contains it can also be taken into consideration. This will be scanned by the components of a concrete and visible structure within which the modular progressions will develop.

Up to now the researches have developed around two types of program that correspond to two different problems. The first type tries to exemplify those disturbances that, at a natural level, take place with the interrelation of different series of particles and which make two or more otherwise identical concretizations (e.g. the leaves of the same tree) distinct and recognizable. In these models, regular sequences of modules take up a space which is de-

termined by a particular trend. The space, being reduced, changes its dimensions and proportions and consequently the sequences interrelate in progressively different ways.

The second type of program tries to analyze the relations that emerge when a particular form is superimposed on a concretization of modules which were pre-existent to it (for example, a stone statue. With regard to this, it is easy to observe that ancient, originally worthless statues, in our eyes, take on particular aesthetic qualities because the erosion of the material which has taken place, reveals the structure: the actual aesthetic values certainly arise from the attenuation of the arbitrariness of the form in symbiosis with the underlying structure). In this case sequences of modules fall into place gradually only according to their possibilities of aggregation or by developing a form which is peculiar to these possibilities.

Furthermore, in certain cases, there has been taken into consideration a module consisting, not so much in a concrete unit as in a delimited space, perceptible as an environmental model (this module derives directly from experience acquired in the researches into the perceptive ambiguity of three-dimensional interior space). The development of sequences of these modules exemplifying, within reference structures, the two types of program, has, because of the perceptive ambiguity and its kinetic properties, also enriched the possibilities of organizing these models of codification of visual language.

page 50

#### DIMENSIONAL PROGRESSION

Space can be filled not only by series of modules which are identical in both form and dimension, but also by sequences of identical modules that develop with progressive variation of their dimension or their pro-

portions. Just as in nature, when series of particles germinate progressively, one from another.

page 52

#### RESEARCH AS PLANNING

Whereas « research as verification » implies those operations carried out as a systematic verification of hypotheses as to the nature of our surroundings, « research as planning » refers to those operations by which concrete form is given to whatever has been considered as being of primary importance in the light of verification of the hypotheses. Where, on the contrary, the results of this verification cause delay, the urgency of the priority needs may call for concretization without verification (as often occurs in the social-political context). In this case, the project ends by being a component of research as verification. Moreover, planning almost always involves the acquisition of data relative to many different subjects. Consequently, contingent reasons prevent the same degree of verification of different types of hypotheses. Thus, research as planning can almost never follow the procedure of reduction to rudiments and simplification proper to the diverse specialized researches of verification; instead, it concretizes by means of intervention of a global type, often intuitive, that relates verified components at different levels.

The priority need cannot be other than to plan for what is of service to the advancement of society; advancement that, today, can only be realized by liberation of every kind of work from all kinds of repression. Because it is precisely this situation that impedes or, in any event, limits and deforms any intervention.

In this context, the research as planning, that personal social-economic conditions have allowed me to undertake, has evolved in the sphere of problems concerning the so-called work of art, the production of objects in series and as experiment, visual communication, children's games, the limitation of expressive obsolescence, possibilities of assemblage. In these interventions, there has been, on each occasion, an attempt to identify the priority, contingent and special needs, of service to the assertion of that general type of necessity stated earlier.

page 52

#### THE PLANNING OF AESTHETIC RESEARCH

Aesthetic research, that is, that analytical process that aims, through exemplifications and models, at the clarification of language and its ends, cannot but take into consideration a methodology of work: that is, the need for constant planning. This is provided by submitting both the intuitive and rational elements to ascertainment by means of the analysis of particular variations programmed within a series of originally identical comparative models. In this way the development of constants can be singled out and followed, and analogies and relations obtained. Planning, therefore, by providing a structure and a program, consents to and effects verification.

page 54

#### PLANNING IN THE WORK OF ART

The birth of the so-called work of art is conditioned by two phases: that of research and that of planning. These two phases that may follow on one to another are almost always interrelated as they evolve. This interrelation, under present-day conditions, causes the « work of art » to be at one and the same time a model of research and an artifact (or an intervention) which can be enjoyed aesthetically: its author considers the two aspects as inseparable and this almost always leads to a misrepresentation of the meanings of the research. Besides this case, however, a further four aspects can be singled out.

page 54

1) The « work of art » is only a research model or an agent of research. The planning of this model derives solely from functional need without any concession to hedonistic satisfaction or concern for its eventual entry on the market.

page 55

2) The « work of art » is a model or an agent of research which can, however, be releas-

ed through present-day commercialized channels. The planning of such a model takes the reality into account; the work therefore ends by having a built-in market utility.

page 56

3) The « work of art » is solely the repetition in series of a model of research to the ends of wider dissemination. Moreover, the researcher, whose work is not recognized, and consequently paid, as such, has a possibility of economic recovery. The laws of the present-day market end, however, by almost entirely suffocating the positive aspects of this dissemination.

page 58

4) The « work of art » is a product realized and disseminated in many exemplars to satisfy the needs of a large number of consumers. It ranges from the picturesque views sold by the frame-maker, to images which have been studied appositely for those who are unable to understand the values of a research but who feel the need for a « décor » in their homes.

page 58

#### MODULAR PROGRAMMATION

The need and/or the possibility of constructing by means of the aggregation of modular and prefabricated components (intermediate products) seems to restrict expressive possibilities. Planning by means of systems of organization analogous to those of natural phenomena consents to the extension and enrichment of formal solutions.

page 63

#### PROGRAMMING OF IMAGE SEQUENCES

When the average spectator receives messages composed of non-codified image sequences (codified messages here signifies solely alphabetic ones or those limited by ancient tradition to conventional signs), he is unable to understand the mechanisms or the artifices or the grammar of such messages.

(or understands them in a confused manner), precisely because he lacks a grammar of images.

To give the spectator, or the person receiving the message, the chance of intervening directly, or even more simply, of being able to observe the mechanisms of the development of the image sequences, contributes, by involving him in some way, to giving the planning of the sequences a concrete form.

Certain occasions have consented to the realization of projects in which the spectator was more or less directly involved in the sequence programme.

page 63

The spectator does not intervene, but has the opportunity to perceive the coming into being of an « other » image determined by the continuity in integration of clearly identifiable self-sufficient images through devices of importance for the part they play in the realization of the programming of the images.

page 64

In a children's game the young consumer may intervene by personally planning the sequence of the archetypes (using modular supports) which determine the development of the fable.

page 64

The spectator participates directly in the evolution of the sequence of images and, also due to psychomotor conditioning, becomes an integrating part.

page 64

#### LIMITATION OF EXPRESSIVE OBSCURITY

The apparent formal richness of the objects (seen from an overall point of view) produces in abundance, coincides in almost every case with their decline, also at a formal level. In fact, the limited durability demanded by continuous and pressing production needs that favour the rapid succession of fashions,

inevitably determines their hasty production through superficial and approximative planning. This often resolves itself into a mere re-proposal or variation on a formal detail.

On the other hand, the consumer seems unable to evaluate this state of affairs because the continuous proliferation of superficially new and different forms prevents him from understanding and evaluating the single formal language.

This situation can be opposed by attempting to single out, in each case, the type of language suited to increase the durability of an object both in a temporal sense and in that of its fitness for adaptation. By clarifying the type of language, the rules – that is to say, the methods of planning – are determined. The object which results, thus has a didactic function too, at least within the limits of self-communication.

page 64

Interventions of a linguistic type, with the aim of extending the durability of projects conditioned by functional, technical and ergonomic necessities.

page 66

Interventions of a linguistic type, with the aim of extending the durability of projects conditioned by the needs of communication or of « décor ».

page 68

#### EXPERIMENTAL PRODUCTION

The new, easy to use, machine tools, which simplify work and reduce costs, without restricting freedom and formal richness, also lend themselves to the production of a small number of exemplars; they are, therefore, an instrument of research. To these can be added those materials whose intrinsic properties have not yet been recognized or utilized.

page 68

Objects for use – in metal, in wood, in glass, in marble – deriving from researches into the possibilities of utilizing indus-

trial techniques and present-day industrial tools in place of traditional handicraft execution.

page 71

Objects for use deriving from morphological researches into the possibilities of intervention, by means of elementary operations, tools and techniques, on semi-finished industrial products such as tubes, sections of metal or plastic material.

page 72

Objects for use deriving from research on a diverse or more appropriate utilization of semi-finished products such as laminated plastic, cardboard, etc.

page 73

#### PRODUCTION IN SERIES

There is a growing tendency in the production in series consented to by the new techniques, to exclude manual intervention. From the presence of the workman (who intervenes both in the control of the machine tools in operations on semi-finished materials, and in the assembly of prefabricated components and in finishing operations) one passes to the situation in which he is no longer necessary (in that the objects are wholly determined by machinery, being moulded in a single piece or in parts to be assembled by the consumer himself). In this case the sole human intervention in the realization of a product ends by being that of the designer. This situation might seem to be a prelude to a utopian disappearance of work as an alienating condition.

In any case, the planning, by taking into consideration specific techniques, determines the entire productive cycle.

In certain cases planning may envisage different realization techniques that will consequently lead to a variety of solutions.

page 73

Objects for use realized by means of successive working phases.

page 75

Objects for use or furniture realized solely by moulding techniques.

page 78

Objects for use deriving from the same project, but realized only with moulding techniques or through successive working phases. The choice of realization techniques is determined by the relationship established between functional requisites, those dependant on how well the object lasts (both in the sense of time and on how serviceable it is) and economic ones (amortization of the apparatus required).

page 80

#### VISUAL COMMUNICATION

(as elimination of the superfluous) How comprehensible what we receive visually is, varies with the level of codification of language used by the designer or available to him, or secondarily, to the extent to which the person to whom it is directed knows this language. Moreover, the message implicit in the appearance itself of each project can be subordinated to a further message whose content transcends the specifically visual.

page 80

Interventions in the communication of meanings through codified language and the elimination of every superfluous image. There also derives from this relationship the premisses for the realization of the « coordinate image » (that is to say, the constant recurrence of symbols and their correlations constituting the significant image of a certain problem in all its aspects).

page 84

Interventions consisting in the communication of meanings through non-codified languages reduced to codifiable components solely.

page 86

Interventions consisting in the illustration of meanings through the breaking down and modular re-organization of images to establish continuity or duration of their effect on perception.

page 87

Intervention consisting in the construction of containers in accordance with the connection between the need to protect and the need to communicate what is contained.

page 88

Interventions consisting in the creating of supports for what is to be communicated or displayed according to different degrees of visual superimposition.

page 90

#### CHILDREN'S GAMES

In designing anything that is to be produced for children's games, it must always be borne in mind that the state of infancy is the discovery of the surrounding world and from this, the formation of personal attitudes. As intervention in this sector inevitably involves conditioning, it is not to be undertaken except with the maximum of ethical involvement and didactic purpose. The interrelating of quality and utility, of renewability and freedom, thus determine the planning of a plaything.

Today, for the designer, this type of intervention remains one of the few opportunities open to him to make a real contribution to the renewal of society.

page 90

Books for children who are still unable to read, on the cycles of nature, designed to provide an answer to the first « whys » without having to resort to banal childish language.

page 91

Games arising from inquiries into the child's capacity to create his own world and give vent to personal fancy in ab-

solute freedom, the utility of this, and the need for it.

page 94

#### TRADE SCHOOLS

The actual schools of professional training attended by young people whose social conditions demand their rapid absorption into the labour forces, in addition to the teaching of handicraft skills, try, and they are not alone in this, to give some notions of general culture. Nevertheless, the teaching of planning methods related to what the future executor will eventually realize with these skills is almost always completely lacking. Although this may appear to derive from inadequate scholastic structures (the impregnation of the teaching staff, time at disposal, etc.) in reality, it is caused by the more or less openly declared will to limit the preparation of those labour forces of which the present society requires only an executive-type contribution.

Within the limited possibilities of personal intervention, resistance to this state of affairs can be attempted by trying to supply, in addition to the acquisition of manual skill and indispensable techniques, sufficient indications of method as can lead to a grasp of the real significance of what has to be realized. A further intervention can be made by trying to pass on to the pupils those principles of research (rejection of any cultural dogma, verification through comparison of variations within originally identical models, etc.) that will then find their echo at every level of their daily lives, in all their uncertainties, and in their cultural development.

Three years teaching a course for graphic design assistants has allowed me to experiment this type of intervention. Whereas in the first year methods of planning regarded the images most suited to represent whatever is of service to the planning of a visual communication, in the second, they concerned the techniques of documentation of what contributes to its realization. In the third year, an evaluation was made of the diverse and contrasting interests confluent in the realization

of a manufactured product, and the social-economic implications that derive from these.

page 96

#### **INTERVENTIONS FOR A MORE DIRECT PARTICIPATION IN PRIORITY PLANNING**

Our social conditions do not consent to an unequivocal realization of research activity as a useful contribution to social evolution: only what, at the level of verification and at that of planning, favours economic exploitation and therefore rejects collective utility, may be realized.

To claim that due to their cognitive and consequently didactic implications, researches of this type can, today, be in themselves an efficacious contribution to rapid social change, besides being an illusion (as the experience of the last century has shown), helps to justify the ends of economic exploitation. On the other hand, active participation in collective subversive activity outside one's particular professional activity (this being understood as an alienating, or, on the contrary, as dis-alienating activity) may lead only to intervention at the level of general problems, and not at that of particular problems (of category), in that interlocutors experienced in trade-union action, above all to the ends of protecting the reasons of research and therefore of the school, are lacking today. (It is also true that the general problems are a priority and that, in all events, contributing to their resolution is a necessity, but as experience of previous revolutions has taught us, defending the autonomy of research is particularly necessary today).

Consequently, if on the one hand research activity without compromise is impossible today, it is equally necessary to pursue it, putting up with the inevitable incongruencies, so as to denounce the implications publicly and to promote that trade-union activity which does not exist today.

I have therefore sought to intervene in different ways, however confusedly for the context of the opportunities and professional requirements.

page 96

Interventions that utilize professional « capacity » to experiment with the possibilities of integration in the sphere of priority communications. Interventions that find no outlet for development because, up to now, those who should have been the real senders have not taken into consideration the promotion and successive utilization of this type of research.

page 98

Interventions that make use of professional « knowledge » to promote trade-union activity within the categories of « artists » and « designers ».

Initially the interventions concerning the artists, restricted to those who were carrying out in some way analogous researches, tried to contribute to the collective work both a method and a common ideology together with their promotion and defence; later, and in a broader context they sought to give active encouragement to provocative collective action.

The activities concerning the designers sought, in a more conservative context, to arouse awareness of the conditions of an occupation which is in closer contact than others at the decisional moment of economic exploitation.

This activity, carried on in group work, debates and various types of interventions, meets its greatest obstacles in the vexed professional competitiveness (both of artists and designers).