

	Foreword	4
	Prologue	7
1	<i>perception movement</i>	12
2	<i>symmetry breaking symmetry</i>	154
3	<i>measurement observation</i>	190
4	<i>mathematics physics</i>	238
5	<i>cybernetics computer science computer art</i>	294
6	<i>evolution theory system theory game theory</i>	368
7	<i>theory of science art theory</i>	418
8	<i>psychoanalysis actionism</i>	508
9	<i>vision deconstruction</i>	546
10	<i>visual communication</i>	586
	Index	602
	Lenders	615
	Imprint	616

1

**perception
movement**

16	Peter Weibel Contours of a History of the Theory and Art of Perception in Austria	33, 35, 38, 39 33, 34, 38, 39, 48	Josef Hoffmann Koloman Moser Adolf Hölzel Ernst Stöhr Leopold Stolba Anton Hofer Maria Luzia Stadlmayer-Bieber Ilse Bernheimer Otto Erich Wagner Friedrich v. Berzeviczy-Pallavic Adolf Loos Ludwig Wittgenstein Max Benirschke Fritz Zeymer Lily Greenham L. W. Rochowanski Cizek Schule Johanna Reismayer-Fritsche Paul Kirnig Gertrude Neuwirth Valéria Dienes Trude Fleischmann Erika Giovanna Klien Béla Uitz Oskar Donau János Mattis-Teutsch Irmgard Lang Sándor Bortnyik Gertrude Fischel Fritzi Nechansky Gerta Hammerschmied Heinz Reichenfelser Hans Hofmann Sylvia Penther Hans Pitsch Gertrude Tomaschek Elisabeth Karlinsky Raoul Hausmann László Moholy-Nagy Anna Béothy-Steiner Étienne Béothy Lajos Tihanyi
33	Peter Weibel The Abstract Ornament and the Quadratic World of the Wiener Werkstätte around 1900	33 34 34 36, 37	
41	Bernhard Leitner Viennese Kineticism	36 37	
45	Éva Bajkay Viennese Kineticism and the Hungarian Avant-Garde	37, 51, 62 37	
46	Peter Weibel Viennese Kineticism and Hungarian Constructivism	39 38 38	
57	Peter Weibel On the Origins of Hungarian Constructivism in Vienna: MA 1920-25	38 39 40, 52	
71	Éva Bajkay Hungarians at the Bauhaus	40, 42, 62 41, 52	
78	Catherine David Vision, Motion, Emotion: Moholy-Nagy's Experimental Activity	42 42	
81	László Moholy-Nagy Light Requisite for an Electric Stage	43 44, 57 45, 47	
82	Raoul Hausmann/Hans Arp/Iwan Puni/ László Moholy-Nagy A Call for an Elementary Art!	46, 48, 49, 62 48, 52 48, 49	
83	Raoul Hausmann Optophonetics	49, 72, 73 50, 62, 63	
84	Miklós Peternák Light and Sound from Hungary	50 50	
87	László Alexander Color Light Music	51 51	
89	Nikolaus Braun The Concrete Light	51 52 52	
90	Oskar Rainer Musical Graphics	53 53	
91	Miklós Peternák Vision in Motion	54, 72, 74, 75 54, 62, 78-81	
96	László Lengyel The Brain of the Scholar, the Eye of the Painter, and the Heart of the Poet: György Kepes	55 55 55	

98	Victor Vasarely Optical Kinetics	56, 72, 74, 75, 76	László Péri
		56, 62, 63, 67	Lajos Kassák
		71	Margit Téry-Adler
100	Lajos Németh Homage to Nicolas Schöffer	72	Gyula Pap
		73	Alfred Forbath
102	Friedrich Kiesler The Vision Machine	74	Andor Weininger
		75	Farkas Molnár
		76	Marcel Breuer
104	Nikolaus Schaffer Georg Jung or Almost a Color Religion	86	György Gerő
		87, 88	László Alexander
112	Walter Gerbino / Riccardo Luccio Biographical Sketch of Gaetano Kanizsa	89	Nikolaus Braun
		90	Hans Kohn
114	Gaetano Kanizsa Subjective Contours	90	Franz Urbach
		96, 97	György Kepes
		99	Victor Vasarely
118	Imre Pál The Role of 3D Images	101	Nikolas Schöffer
		104, 105	Georg Jung
119	Pál Greguss Dénes Gabor – The Inventor of Holography	106, 148	Marc Adrian
		107	Helga Philipp
120	Ilona Kovács Béla Julesz: Inventor of the Computer Generated Random-Dot Stereograms	108, 109	Hermann J. Painitz
		110	Wolfgang Buchner
		111	Hans Florey
122	Béla Julesz Dialogues on Perception	113	Gaetano Kanizsa
		125, 126	Alfons Schilling
129	Pál Greguss PALoramic Imaging and Art in View of Information Theory	127, 128	Max Peintner
		132	Pál Greguss
		133, 134	András Mengyán
135	Antal Nemcsics The Coloroid Color System	135, 136	Antal Nemcsics
		137-139	Attila Csáji/Norbert Kroó
		140	Éva T. Bortnyik/Csaba Tubák
137	Attila Csáji/Norbert Kroó Creating Images with Lasers: a Method for Superpositioning	142, 145	Peter Kubelka
		142, 143	Ferry Radax
		143	Herbert Vesely
141	Peter Weibel Viennese Formal Film	144, 146, 147	Kurt Kren
		149	Hans Scheugl
149	Peter Weibel Expanded Cinema	149	Ernst Schmidt jr.
		150	Peter Weibel
153	Gert Pfurtscheller Planning and Imagination of Movements	150	Valie Export
		152	Martin Arnold

2**symmetry
breaking symmetry**

157	Erwin Chargaff A Few Unscientific Thoughts About Symmetry	164	Victor Vasarely
160	Magdolna and István Hargittai The Concept of Symmetry in Modern Chemical Research	167-169	Vera Molnár
165	Vera und Francois Molnár Making and Breaking Symmetry in Visual Art	170	Tibor Gayor
179	Szaniszló Bérczi Changes in Symmetry Caused by Cellular Automata	171	Hildegard Joos
182	Michael Stöltzner Symmetry and Natural Laws	172, 173	Simon Hantai
187	Otto E. Rössler, Arthur P. Schmidt, Peter Weibel The Interface Concept in the History of Physics	174, 175	Peter Türk
		176	Walter Obholzer
		177	Sabina Hörtner
		178	János Saxon Szász

3

*measurement
observation*

193	<i>Miklós Rédei</i> John von Neumann – Mathematical Physicist		
198	<i>Alexander Zartl</i> Taking the Side Roads: Erwin Schrödinger in the 1940s		
201	<i>Erwin Schrödinger</i> Letters to Mihály Polányi and Leo Szilard		
208	<i>Harald Atmospacher</i> Wolfgang Pauli – Not Just a Physicist		
211	<i>Walter Thirring</i> Quantum Ergodic Theory		
212	<i>Anton Zeilinger</i> Bell's Theorem, Information, and Quantum Physics		
218	<i>Peter Weibel</i> Endophysics and Art		
220	<i>Otto E. Rössler / Peter Weibel</i> The Two Levels of Reality – "Exo" and "Endo"	221	<i>Gottfried Bechtold</i>
224	<i>Peter Weibel</i> Victor F. Weisskopf – The Exactitude of Quantum Physics	221, 222	<i>Peter Weibel</i>
224	<i>Peter Weibel</i> Eugene P. Wigner – The Philosopher and the Problem of Measurement	223	<i>Ruth Schnell</i>
225	<i>Karl Svozil</i> Is the World a Machine?	228	<i>Gábor Császári</i>
234	<i>Harald A. Posch</i> Microscopic Reversibility and Macroscopic Irreversibility	229, 230	<i>Attila Csörgö</i>
		231	<i>János Sugár</i>
		232	<i>Dóra Maurer</i>
		233	<i>Herwig Turk</i>

4

mathematics
physics

241	<i>Gyula Staar</i> Mathematics, the Lighthouse of Hungarian Science	
253	<i>Pál Erdős</i> How I Became a Mathematician and World Wanderer	
255	<i>Martin Neuwirther</i> Raoul Bott – The Unconventional Thinker	
256	<i>Wilhelm Frank</i> Modern Logic and Mathematics in and from Vienna	
262	<i>Christa Binder</i> Olga Taussky-Todd – A Mathematician from Austria	
263	<i>Gilbert Helmbert / Karl Sigmund</i> The Nestor of Mathematicians – Leopold Vietoris	
265	<i>Peter Weibel</i> The Mathematical Community in Austria	
269	<i>Martin Neuwirther</i> Wolfgang M. Schmidt – The Geometer of Numbers	
270	<i>Peter Weibel / Eckehart Köhler</i> Gödel's Proof of Undecidability	
275	<i>Gerszon Kéri / Tamás Varga</i> Ernő Rubik's Cube and Its Groups of Rotations	
277	<i>Michael Stöltzner</i> Gödel on the Relationship Between Mathematics and Physics	
282	<i>Gábor J. Székely / Dénes Petz</i> Entropy	
285	<i>Leo Szilard</i> On the Decrease of Entropy in a Thermodynamic System	
288	<i>Leo Szilard</i> Curriculum Vitae	
291	<i>Albert Einstein</i> Letter to President Franklin D. Roosevelt (August 2, 1939)	272 <i>Josef Linschinger</i>
292	<i>Leo Szilard</i> Memorandum, Attached to Einstein's Letter to the President (August 15, 1939)	273 <i>Dóra Maurer</i> 274 <i>Peter Weibel</i>

5

cybernetics
computer science
computer art

- | | | | |
|-----|---|----------|---------------------------|
| 297 | <i>Heinz von Foerster</i>
Circular Causality | | |
| 301 | <i>Heinz von Foerster</i>
Cybernetics of Cybernetics | | |
| 303 | <i>Ernst von Glasersfeld</i>
Radical Constructivism | | |
| 304 | <i>Gyözö Kovács</i>
The Early History of Cybernetics and Hungary | | |
| 307 | <i>Peter Weibel</i>
John von Neumann | | |
| 308 | <i>Tihamér Nemes</i>
Cybernetic Machines | | |
| 315 | <i>Nicolas Schöffer</i>
The Cybernetic City | | |
| 318 | <i>Gyözö Kovács</i>
László Kozma | | |
| 321 | <i>Heinz Zemanek</i>
Information Theory and Technology in Austria after 1945 | 319, 320 | <i>Attila Kovács</i> |
| 329 | <i>Hermann Maurer</i>
How Things Often Repeat Themselves | 341 | <i>Gábor Bódy</i> |
| 331 | <i>Axel Pinz</i>
Digital Visual Information | 344 | <i>Gyula Stáva</i> |
| 334 | <i>Thomas Natschläger</i>
Networks of "Spiking" Neurons | 345 | <i>Krisztián Frey</i> |
| 338 | <i>Miklós Peternák</i>
Hungarian Computer Art | 348 | <i>Tamás Waliczky</i> |
| 342 | <i>Leslie Mezei</i> | 348 | <i>Gusztáv Hámos</i> |
| 346 | <i>Charles A. Csurí</i>
A Technique for Computer Sculpture | 349 | <i>George Legrady</i> |
| 350 | <i>John George Kemeny</i> | 358, 359 | <i>Kurt Ingerl</i> |
| 352 | <i>Peter Weibel</i>
The Explosion of the Visual: Machine-aided Perception | 360-362 | <i>Richard Kriesche</i> |
| 357 | <i>Otto Beckmann</i>
ars intermedia | 362 | <i>Gottfried Bechtold</i> |
| | | 363 | <i>Robert Adrian X</i> |
| | | 364 | <i>Public Netbase</i> |
| | | 365 | <i>Kunstlabor</i> |
| | | 366, 367 | <i>knoubotic research</i> |

6**evolution theory
system theory
game theory**

- 371 **Franz Pichler**
The Contribution of Raoul H. Francé: Biocentric Modeling
- 376 **Veronika Hofer**
Ludwig von Bertalanffy
- 378 **Franz Pichler**
Searching for Arthur Koestler's Holons
- 382 **Ernö Kállai**
The Hidden Face of Nature
- 384 **Étienne Béothy**
The Theory behind the "Golden Series"
- 387 **Peter Weibel**
Fritz Hartlauer's Contribution to the Theory of Morphogenesis
- 389 **Christa Sommerer / Laurent Mignonneau**
Art as Living System
- 391 **Werner Leinfellner**
Evolutionary Epistemology
- 393 **István Kardos**
A Television Interview with Albert Szent-Györgyi
- 395 **László Beke**
The Aesthetics of Chance
- 398 **Werner Leinfellner**
A Short History of Game Theory
- 402 **Chikako Nakayama**
The Concept of Equilibrium: John von Neumann and Karl Menger
- 404 **Eckehart Köhler**
John C. Harsanyi as the Master of Social Theory
- 407 **Werner Leinfellner**
Evolutionary Game Theory
- 411 **Peter Schuster**
Molecular Evolution and Game Theory
- 416 **Karl Sigmund**
Game Theory and Artificial Life
- 386 **Étienne Béothy**
- 386 **Étienne Hajdó**
- 386 **Zoltán Kemény**
- 387 **Fritz Hartlauer**
- 395 **Tamás Lossonczy**
- 396 **András Wolsky**
- 397 **Dóra Maurer**

7

theory of science
art theory

421	<i>C. J. Nyíri</i> The Austrian Element in the Philosophy of Science		
424	<i>György Kampis</i> Béla Zalai: An Original Hungarian Thinker		
425	<i>Rudolf Haller</i> Poetic Imagination and Economy – Ernst Mach as Scientific Theorist		
431	<i>John Blackmore</i> Mach's Influence on Six Great Hungarian Scientists		
441	<i>Péter Szegedi</i> The Galilei Circle and the Polányis	481, 483-485, 488	<i>Friedrich Achleitner</i>
444	<i>László Ropolyi</i> György Lukács and the Sunday Circle	481 481, 483-485	<i>H. C. Artmann</i> <i>Konrad Bayer</i>
449	<i>Éva Karádi</i> G. Lukács, K. Mannheim, and the Sunday Circle	482-485	<i>Oswald Wiener</i>
455	<i>György Lukács</i> Leo Popper 1886–1911. An Obituary	483-487 489, 490	<i>Gerhard Rühm</i> <i>Heinz Gappmayr</i>
456	<i>Friedrich Stadler</i> The Vienna Circle	493	<i>Oswald Oberhuber</i>
463	<i>Eckehart Köhler</i> The Circulation of the Concept of Philosophy in the Vienna Circle	494 495	<i>László Lakner</i> <i>Rudolf Petrik</i>
465	<i>Elisabeth Leinfellner</i> Wittgenstein and Mauthner – Mauthner and Wittgenstein	496	<i>Wolfgang Ernst</i>
468	<i>György Kampis</i> Popper's Hungarian Disciple: Imre Lakatos	496 497	<i>Richard Kriesche</i> <i>Peter Weibel</i>
470	<i>György Kampis</i> Arthur Koestler as Philosopher of Science	498	<i>Valie Export</i>
472	<i>Peter Weibel</i> Paul K. Feyerabend – The Scientist as an Artist	498, 499 500	<i>Gottfried Bechtold</i> <i>Loys Egg</i>
473	<i>Nadja Rottner</i> Some Portraits of Austrian Art Historians	500	<i>Dominik Steiger</i>
478	<i>Katharina Scherke</i> Arnold Hauser and the Social History of Art	501 504, 505	<i>Constanze Ruhm</i> <i>Balázs Beöthy</i>
481	<i>Konrad Bayer</i> the vienna group	504, 505	<i>Csaba Nemes</i>
491	<i>Oswald Oberhuber</i> How to Kill Art??!! or Artists without Art!	504, 505 506	<i>Roland Pereszlényi</i> <i>András Halász</i>
497	<i>Peter Weibel</i> Context Theory of Art (1971)	506	<i>Ernö Tolvaly</i>
502	<i>Peter Weibel</i> Constructed Art History	506 507	<i>György Jovánovics</i> <i>Miklós Erdely</i>

8**psychoanalysis
actionism**

- | | | | |
|-----|---|-----|-----------------------------|
| 511 | Ferenc Erös
On the History of Hungarian Psychoanalysis | 536 | Péter Forgács |
| 515 | Johannes Reichmayr / Elke Mühleitner
"The Internationality of the Unconscious" –
Otto Fenichel's Circulars 1934-1945 | 540 | Günter Brus |
| 521 | Peter Weibel
Biographical Sketches of the Psychoanalytical Movement | 541 | Hermann-Nitsch |
| 537 | Peter Weibel
Vienna Actionism: Direct Art, Body Art, Material Art | 542 | Otto Muehl |
| | | 543 | Rudolf Schwarzkogler |
| | | 544 | Valie Export |
| | | 545 | Tibor Hajas |

- | | | | |
|-----|--|---------------|-------------------------------------|
| | | 551 | <i>Vilmos Huszár</i> |
| | | 551, 553, 556 | <i>Farkas Molnár</i> |
| | | 552 | <i>Alfréd Forbáth</i> |
| | | 553 | <i>Friedrich Kiesler</i> |
| | | 554 | <i>Andor Weininger</i> |
| | | 555, 556 | <i>Marcel Breuer</i> |
| | | 557 | <i>David Georges Emmerich</i> |
| | | 558 | <i>János Megyik</i> |
| | | 559, 560 | <i>Gábor Bachman</i> |
| | | 560, 561 | <i>László Rajk</i> |
| | | 561 | <i>Tibor Szalai</i> |
| | | 562 | <i>Friedl Dicker / Franz Singer</i> |
| | | 562 | <i>Karl Steiner</i> |
| | | 563 | <i>Paul Theodore Frankl</i> |
| | | 564 | <i>Joseph Urban</i> |
| | | 565-567 | <i>Friedrich Kiesler</i> |
| 549 | <i>Sándor Bortnyik / Marcel Breuer
Farkas Molnár / Andor Weininger</i>
The Demands of the Age | 568 | <i>Wenzel Hablik</i> |
| | | 569 | <i>Max Peintner</i> |
| 555 | <i>Marcel Breuer</i>
Genesis of Design | 570 | <i>Walter Pichler</i> |
| | | 570 | <i>Fritz Wotruba</i> |
| 559 | <i>László Beke</i>
Deconstruction in Hungary | 571 | <i>Hans Hollein</i> |
| | | 572 | <i>Laurids Ortner</i> |
| 565 | <i>Dieter Bogner</i>
Friedrich Kiesler | 572, 573 | <i>Haus-Rucker-Co</i> |
| | | 573, 579 | <i>Coop Himmelb(l)au</i> |
| 568 | <i>Franco Bevilacqua</i>
Wenzel Hablik. Architecture Between Utopia and Reality | 574 | <i>Zünd up</i> |
| | | 575 | <i>Raimund Abraham</i> |
| 570 | <i>Günther Feuerstein</i>
Visions and Realities. The Austrian Scene in the 1960s and 1970s | 575 | <i>Friedrich St. Florian</i> |
| | | 576 | <i>Bernhard Hafner</i> |
| 578 | <i>Dieter Bogner</i>
Coop Himmelb(l)au | 576 | <i>Günther Domenig</i> |
| | | 576 | <i>Eilfried Huth</i> |
| 581 | <i>Manfred Wolff-Plottegg</i>
Quick and Dirty | 577 | <i>Carl Pruscha</i> |
| | | 577 | <i>Gernot Nalbach</i> |
| 583 | <i>Victor Papanek</i>
How to Draw a Hexagon | 580 | <i>Otto Beckmann</i> |
| | | 581, 582 | <i>Manfred Wolff-Plottegg</i> |
| 585 | <i>Bernard Rudofsky</i>
architecture without architects | 584 | <i>Agnes Denes</i> |

- | | | | |
|-----|--|----------|------------------------|
| 589 | Rolf Sachsse
Herbert Bayer or the Universal Designer | | |
| 591 | Angela Jansen
What Can Information Graphic Designers Learn from Otto Neurath Today? – Isotype and Information Graphics | | |
| 594 | Joseph Binder
Graphic Design | | |
| 595 | Ecke Bonk
in<=>formation [The Speech of Weimar] | 589, 590 | Herbert Bayer |
| 597 | Peter Weibel
Logo Culture | 594 | Joseph Binder |
| | | 596 | Ecke Bonk |
| 600 | Jeff Bernard
Thomas A. Sebeok and the Signs of Life | 599 | Manfred Erjautz |