

THE GRADUATE FACULTY  
NEW SCHOOL FOR SOCIAL RESEARCH  
65 FIFTH AVENUE • NEW YORK, N. Y. 10003  
MAILING ADDRESS: 66 WEST 12TH STREET • NEW YORK, N. Y. 10011

741-5727

DEPARTMENT OF PSYCHOLOGY

February 25, 1977

Professor Fabio Metelli  
Università di Padova  
Istituto di Psicologia Sperimentale  
Piazza Capitanato  
35100 Padova, Italy

Dear Dr. Metelli:

It is with great pleasure that I learned of your plans to visit our country during the next academic year. The Psychology Department here has asked me to invite you to visit us during your stay in the United States. Arien Mack, Leon Festinger, and I (as well as other members of the department) would be very much interested in discussing your work and ours with you. In addition, if you could manage it, our students, many of whom know your work, would be greatly interested in hearing you. All of us hope very much that you can come and look forward with pleasure to your visit.

With kind regards.

Cordially yours,

*Mary Henle*

Mary Henle  
Professor

MH/dhs



WAYNE STATE UNIVERSITY

COLLEGE OF LIBERAL ARTS

DETROIT, MICHIGAN 48202

DEPARTMENT OF PSYCHOLOGY

MACKENZIE HALL

(313) 577-2800

22 January 1977

Prof. Fabio Metelli  
Istituto di Psicologia Sperimentale  
Piazza Capitaniato  
Padova, ITALY

Dear Prof. Metelli:

I was pleased to hear that you are considering a visit to the western hemisphere this year.

As you know, our universities have been hard-pressed financially during the recent economic depression. However, we would be in a position to pay your expenses for a visit to Detroit from Toronto or New York City, and if conditions are favorable, perhaps a small honorarium.

A specific topic can be agreed upon later for a lecture here, but many of us would want to learn of your studies in motion and form perception. We still recall with pleasure your discussions of perception of transparency on the occasion of your last visit.

I do hope that your application for a travel grant will be approved and that we may have the pleasure of listening to you at a departmental colloquium this year.

Cordially yours,

A handwritten signature in cursive script that reads "Ross Stagner".

Ross Stagner  
Professor of Psychology  
and Conflict Analysis



8 March 1977

DEPARTMENT OF PSYCHOLOGY  
LOS ANGELES, CALIFORNIA 90024

Professor Fabio Metelli  
Istituto Di Psicologia Sperimentale  
Universita Di Padova  
Piazza Capitaniato  
35100 Padova  
Italy

Dear Professor Metelli:

I am delighted to invite you to spend a leave here in the Department of Psychology. Dr. Carterette, Director of the Perceptual Systems Laboratory tells me that he will be happy to receive you for as long as you wish to come -- as little as a few months or as long as a year. He will put his laboratory at your disposal and is particularly eager to work on mutual problems of auditory or visual perception. He is particularly anxious to hear about developments in Italian pure and applied scientific psychology. Professor Gengerelli, whom you have known for some years, also extends to you an invitation to discuss methodology, philosophy and other related aspects of Italian psychology.

It will be possible to provide you with a private office during your stay. The University facilities available to you include the libraries, galleries, recreational diversions and the like. In order for me to complete arrangements with Chancellor Young, I will need for you to provide me with an official letter containing the reasons for your desire to visit here along with the details of expected arrival and departure.

Looking forward to your visit, I am,

Sincerely,

A handwritten signature in dark ink, appearing to read "I. Maltzman".

Irving Maltzman  
Professor and Chairman

cc: NATO,  
Scientific Affairs Division  
1110 Bruxelles, Belgium



DEPARTMENT OF PSYCHOLOGY  
LOS ANGELES, CALIFORNIA 90024  
8 March 1977

Professor Fabio Metelli  
Istituto Di Psicologia Sperimentale  
Dell'Universita Di Padova  
Piazza Capitaniato, 5  
35100 Padova  
ITALY

Dear Professor Metelli,

I was pleased to have your letter of 19 February 1977. You must be very happy that your daughter has become an academician and a mathematician at that! My congratulations to her on the award of a fellowship to come and study here in the United States.

With regard to your own wish to spend some time here at UCLA with me and others in the Perception group, I can only say that I should be delighted to receive you. It would give me an opportunity to hear not only about your own latest work on the perception of transparency, but to learn about developments and new contributions in Italian psychology as well. I have discussed your potential visit with Professor Irving Maltzman, Chairman of the Department of Psychology here at UCLA, and can say that he welcomes you. He has agreed to provide you with an office and the usual amenities of the University which scholars of your stature ordinarily receive.

I have written to the Scientific Affairs Division of NATO in a separate letter and send along a copy. In addition, Chairman Maltzman will write you a letter and a copy of his letter will go along with my letter to NATO.

With warm regards,

A handwritten signature in black ink, appearing to read "Edward Carterette", with a long horizontal flourish extending to the right.

Edward Carterette  
Professor of Experimental Psychology  
Member, Brain Research Institute

cc: Professor Irving Maltzman  
encls: letter to NATO  
ECC:gkj

UNIVERSITY OF CALIFORNIA, BERKELEY

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF PSYCHOLOGY

BERKELEY, CALIFORNIA 94720

March 14, 1977

Professor Fabio Metelli  
Istituto Di Psicologia Sperimentale  
Dell'Universita Di Padova  
35100 PADOVA  
Piazza Capitaniato, 5 ITALY

Dear Professor Metelli:

I was delighted to hear that there was a possibility that you may come to visit us in Berkeley again. As you know from your last visit, there is a considerable degree of interest in your perceptual research--both in the Department of Psychology and in several of our Institutes. Should you be able to come, we could easily arrange quarters for you in Tolman Hall where, we hope, some of us could participate in your current research. At the very least, we will have an opportunity to discuss your most interesting recent findings.

If there is anything I can do to facilitate your coming here, please let me know, for I would regard a visit from you as a great contribution to our work here.

Sincerely yours,

A handwritten signature in cursive script that reads "David Krech".

David Krech  
Professor Emeritus

DK:sar



THE UNIVERSITY OF KANSAS / LAWRENCE, KANSAS 66045

Department of Psychology  
913 864-4131

April 1, 1977

Professor Fabio Metelli  
Istituto di Psicologia Sperimentale  
Dell' Università di Padova  
351 Padova

Dear Professor Metelli:

I was delighted to have your letter saying that you hope to come to the United States during the next academic year. I have been greatly interested in the work that you have done following up the paper that I published in the Psychologische Forschung and the Smith College Studies in Psychology dealing with problems of transparency and assimilation. I started with an idea about the nature of the phenomena involved but was unable to pursue it in the exact way that you have done, and will be greatly interested in talking to you about the advances that you have made in the whole field during these last years. And I am sure that it will be very valuable to the psychologists working in your field in this country to have a first hand exchange with you.

My husband and I hope very much that you can spend some time with us in the course of your travels. I am only sorry that we cannot accept your invitation to visit you in Padova and see your laboratory there.

With cordial greetings from both of us,

Sincerely yours,

Grace M. Heider  
Professor Emerita - University of Kansas



# Cornell University

Ithaca, New York 14853  
Department of Psychology  
Uris Hall

May 5, 1977

To Whom it May Concern:

This is to certify that I would find it very profitable if Professor Fabio Metelli of the University of Padova could spend some time at Cornell on a visit to describe his recent research on visual perception and to discuss my own investigations. There are also several other psychologists here whose inquiries would profit from the opportunity to talk with Metelli. He is unmatched as an experimenter in certain areas, and a great expert.

The Cornell psychology laboratory is not the only one in the USA where Metelli would be welcomed and listened to. There are investigations going on here, however, by faculty members and graduate students, that are closely related to what he does.

*James J. Gibson*  
James J. Gibson  
Professor, Graduate faculty

JJG:rw



University of Toronto

TORONTO, CANADA

M5S 1A1

DEPARTMENT OF PSYCHOLOGY

15 December 1976

Professor Fabio Metelli  
Istituto di Psicologia Sperimentale  
Dell'Università di Padova  
Piazza Capitanato, 5  
35100 Padova, Italy

Dear Professor Metelli:

I was very pleased to learn that you have it in mind to take a trip to North America. Our common interests in the perception of motion and form establish a significant platform for our discussions; and so both personally and professionally I would welcome you with great pleasure on your arrival in Toronto. Your opinion on the work we are undertaking at Toronto would be valuable to have, and I am sure that we should have many useful discussions of problems in perception.

With very best wishes,

Sincerely,

A handwritten signature in cursive script that reads "Paul A. Kolars".

Paul A. Kolars





ORGANISATION DU TRAITE DE L'ATLANTIQUE NORD  
NORTH ATLANTIC TREATY ORGANIZATION

1110 BRUXELLES

DIVISION DES AFFAIRES SCIENTIFIQUES  
SCIENTIFIC AFFAIRS DIVISION

241 00 40  
TEL. : 241 44 00  
241 44 90

SA.9.3.04(VL)678-BAB

29th June, 1977

Dear Professor Metelli,

Thank you for your letter of 27th May and its enclosures.

We have indeed been receiving copies of letters of invitation to you from various institutions in the United States but we did not receive your original letter dated 15th March, in which you apply for a grant to support these visits.

I now have pleasure in enclosing herewith, an application form for a NATO Visiting Lectureship grant under the terms of the Human Factors programmes. If you complete the form and return it to us not later than 31st August, it will be presented to the Special Programme Panel on Human Factors at its forthcoming meeting in October.

Thank you for your interest.

Yours sincerely,

B.A. BAYRAKTAR

Professor F. Metelli,  
Istituto di Psicologia Sperimentale  
dell'Universita di Padova,  
35100 Padova,  
Piazza Capitaniato,  
Italy.

LOUISIANA STATE UNIVERSITY  
AND AGRICULTURAL AND MECHANICAL COLLEGE  
BATON ROUGE · LOUISIANA · 70803

DEPARTMENT OF PSYCHOLOGY

April 18, 1977

Professor Fabio Metelli  
Istituto di Psicologia Sperimentale  
Universita di Padova  
Piazza Capitaniato  
Padova, Italy

Dear Professor Metelli:

I have discovered that you likely will be making a trip to the United States sometime next year and am writing to invite you to make a colloquium presentation discussing your work on visual perception.

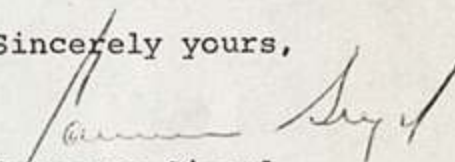
Given some lead time, we can schedule this colloquium at your convenience, although our preferred time is on any Tuesday afternoon. The University calendar for 1977-78 is as follows:

Fall Semester: August 25-December 7  
(Holiday period, November 23-November 28)

Spring Semester: January 16-May 3  
(Holiday periods, February 6-7 and March 17-27).

I hope it will be possible for you to respond favorably to this invitation.

Sincerely yours,



Laurence Siegel  
Chairman

LS/ewm

TULANE UNIVERSITY

*Department of Psychology*

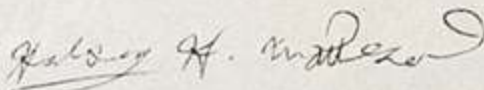
NEW ORLEANS, LA. 70118

April 15, 1977

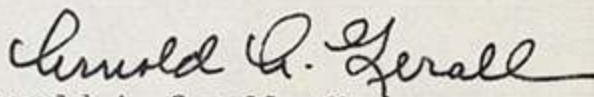
Prof. Fabio Metelli  
Istituto di Psicologia Sperimentale  
Universita di Padova  
Piazza Capitaniato  
Padova, ITALY

Dear Prof. Metelli:

We would be very happy to have you as a colloquium speaker at Tulane during the coming year. We can schedule the talk at your convenience, and we can leave the choice of topic to you.



Halsey H. Matteson  
Associate Professor



Arnold A. Gerall, Chairman  
Department of Psychology

Addendum to the Application Form

The purposes of my visit to some Psychology Department in the U.S. are:

1. To provide information about research being done in visual perception by the group of Perceptologists of Padova University.

2. To discuss my points of view with U.S. specialists in visual Perception.

3. To Obtain information about research done in this field and to see (at if possible to use) instruments not available in Italy.

Therefore it would be suitable to consider the schedule as flexible, in order to be able to prolong my period of permanence where contacts are particularly fruitful and shorten it were my presence does not seem to be very useful.

General areas to be visited: New York (New York Universities, Ithaca, Buffalo); Michigan (Detroit) and Canada (Toronto); California (Berkeley and Los Angeles); Kansas (Lawrence); Louisiana (New Orleans and Baton Rouge).

Approximate schedule of visits

New York - Ithaca - Buffalo	15-20 February 1978
Detroit - Toronto	21-26 February
Lawrence	27 February - 2 March
Berkeley	3-7 March
Los Angeles	8-10 March
Louisiana	11-19 March

La scopo della mia visita negli S. U. è 10

- 1) far conoscere le ricerche compiute dal gruppo dei psicologi dell'Univ. di P. e acquisire informazioni più recenti, soprattutto quelle che fin'ora sono state fatte con l'ausilio di alcuni giudici
- 2) discutere i miei punti di vista con gli specialisti americani
- 3) ottenere informazioni importanti sulle ricerche in corso e vedere e possibilmente usare gli strumenti che non sono in uso in Italia

Perciò ~~devo~~ ~~essere~~ ~~considerato~~ come una certa possibilità di permanenza nelle diverse città. Può darsi che mi converga prolungare il periodo di permanenza in un centro di studio dove i contatti risultano particolarmente proficui ed eventualmente abbreviare la mia visita dove non trovo utili formarmi a lungo. Se poi la visita dovesse prolungarsi oltre i limiti opportuni prolungare la visita oltre i limiti previsti, sarei disposto a parlare a viva voce.

Addendum to the Application Form

The purposes of my visit to some Psychology Departments in the U. S. are:

1. <sup>to provide information</sup> ~~to provide information~~ <sup>very done</sup> ~~to provide information~~ <sup>of visual perception</sup> ~~to provide information~~ <sup>research done in this field at the laboratory of</sup> ~~to provide information~~ <sup>by the group of psychologists of</sup> ~~to provide information~~ <sup>Yadava University</sup> ~~to provide information~~
2. <sup>to discuss</sup> ~~to discuss~~ <sup>my points of view with U.S. papers</sup> ~~to discuss~~ <sup>lists in Visual Perception</sup> ~~to discuss~~
3. <sup>to obtain</sup> ~~to obtain~~ <sup>information about research done in this</sup> ~~to obtain~~ <sup>field and seeing (at if possible to use)</sup> ~~to obtain~~ <sup>instruments</sup> ~~to obtain~~ <sup>not available in Italy</sup> ~~to obtain~~

/

Therefore it would be suitable to consider the schedule as flexible, in order to be able to prolong my period of permanence where contacts are particularly fruitful and shorten it where my presence does not seem to be very useful.

1. Professor Fabio Metelli  
 Università di Padova  
 Istituto di Psicologia  
 Piazza Capovani 5 Padova

2

tel. 32979 049 (Padova)  
 (661745) Laboratory of Visual Perception  
 684297 (home) ext. 049 (Padova)

2. See added list of Professors (among them some heads of Department) requesting Lecturing, Seminars, ~~Scientific~~ ~~the~~ discussions

Addendum to the Application Form

B. General areas to be visited: New York (New York University, Thaca, Buffalo), ~~Massachusetts~~ (Detroit) <sup>and Canada (Toronto)</sup> California (Berkeley and Los Angeles); Kansas (Lawrence); Louisiana (New Orleans and Baton Rouge)

~~15 October - 30 October New York (Thaca, Buffalo)~~  
~~31 October - 15 Nov. Detroit (Toronto) Michigan (and Toronto)~~  
~~15 Nov. - 22 December Kansas Lawrence Kansas~~  
~~23 Nov - 15 Dec. Berkeley and Los Angeles California~~  
~~16 December - 20 Dec. New Orleans, or Baton Rouge Louisiana~~

~~15.1 - 15.2 Louisiana~~  
~~15.2 - 15.3 Berkeley and Los Angeles~~  
~~15.3 - 31.3 Detroit (Toronto)~~  
~~2.4 - 15.4 Kansas~~  
~~16.4 - 30.4 New York - Thaca - Buffalo~~

Approximate schedule of visits

<del>6</del> New York - Thaca - Buffalo	approx. 15 February	20 - 15-20 February
<del>8</del> Detroit & Toronto	21	- 26 February
<del>4</del> Lawrence	27 February	2 March
<del>3</del> Berkeley	3	- 7 March
<del>3</del> Los Angeles	8	- 10 March
<del>2</del> Louisiana	11	- 19 March

Felix Wurtz

Il dottor Wurtz, professore fuori ruolo di Psicologia  
presso l'Università di Padova chiede in conferenza di massima e  
partecipare alle 1. 11. 78, ai sensi della legge  
78 marzo 1958 n° 311

Durante l'anno di conferenza il dottor Wurtz si  
propone di visitare la 2<sup>a</sup> Università Europea  
e gli studenti, <sup>Cornell, Yague (Detroit) New York</sup> ~~a New York~~ per scambiare

~~Il dottor Wurtz è stato invitato~~  
per vedere alcune recenti attrezzature menefiche in  
uso nello studio della funzione visiva, per discutere  
di alcuni problemi di comune interesse e per riprendere  
in alcune ricerche in corso nel vostro laboratorio,  
presso l'istituto di Psicologia dell'Università di Padova

Copenaghen  
Leyda  
Copenaghen  
Leyda  
Stoccolma

New York

Los Angeles

Kansas

Thaca

Buffalo

New Orleans

Rockefeller University  
New York



Dear Mr Bayraktar,  
Thank you for your letter of June 29<sup>th</sup> 1977 enclosing an application form for a Nato visiting lecture on this grant.

I am enclosing

1. The completed form with some additions

2. ~~The original letters of invitation~~

3. A curriculum vitae

4. Abstracts of lectures I shall give according to the <sup>wishes</sup> requests of the scientific professors <sup>requesting</sup> for ~~my~~ visit, ~~of mine~~.

As a matter of fact I think that free meetings or seminars to discuss special topics would be more suitable, at least in some departments. However, as the programme foresees a series of lectures, I am ~~ready to follow it.~~ I leave it to my host professors to decide.

Yours sincerely

(Professor F. Ueteli)

The original letters of invitation have been sent under separate cover. X

ppos 2 - copie 2

Mr ?

B.A. R. Bayraktar

Science Affairs Division

Nato

NATO 1110 Bruxelles

Belgio

35100 PADOVA 28 luglio 1977  
PIAZZA CAPITANIATO - TEL. 22.943

Mr. B.A. Bayraktar  
Scientific Affairs Division  
NATO 1110 Bruxelles

B E L G I O

Dear Mr. Bayraktar,

Thank you for your letter of June 29th 1977  
enclosing an application form for a Nato visiting Lecture  
ship grant.

I am enclosing

1. The completed form with some additions
2. A curriculum vitae
3. Abstracts of lectures I shall give according to the wishes  
of the professors requesting for my visit.

As a matter of fact I think that free meetings  
or seminars to discuss special topics would be more suitable,  
at least in some departments. However I'll leave it to my host  
professors to decide.

Yours Sincerely,

(prof. F. Metelli)

The original letters of invitation have been sent under sepa-  
rate cover.

Psychology in Italy: its beginnings and developments.

S U M M A R Y

Three periods have to be considered when tracing the History of Scientific Psychology in Italy.

1. The Pioneers and the foundation of the first Laboratories.

Around the beginning of the XX Century great interest was aroused by the new Science of Psychology. Physiologists, Philosophers, Psichiatrists and Anthropologists were the first to do research in this field.

About 1905 three chairs of Experimental Psychology were founded, at Turin, Rome and Naples. Some fifteen years later two other chairs were instituted, at Padova, and Milano ~~the~~ Catholic University which were covered by two leading personalities, Vittorio Benussi and Agostino Gemelli, who founded two flourishing schools.

2. The decay of Psychology in Italy during Fascism.

During Fascism (1925-1945) the development of Psychology was impeded owing to the hostility of the idealistic philosophy supported by Fascism. Only a small group of research workers pursued their work amidst great difficulties, and the chairs of Psychology at the Italian Universities were reduced to only two (The State University at Rome, and the Catholic University at Milan).

3. The revival of Psychological Research after the second world war.

Psychology resumed its development with great impetus: it is now taught in every University and its different specialities have been developed.

In two Universities (Rome and Padova) a special curriculum for Psychology, with a doctorate in Psychology has been instituted. The main directions of research in Italy are considered.

# Psychology in Italy: its ~~the~~ beginnings and developments. (Summary)

Three periods have to be considered when tracing the history of <sup>Scientific</sup> Psychology in Italy

1. The Pioneers and the ~~Foundation~~ <sup>Foundation</sup> of the first Laboratories.  
Around the beginning of the century a great interest ~~has~~ <sup>was</sup> aroused by the new science of Psychology. ~~At~~ Physiologists, Philosophers, Psychiatrists and Anthropologists were the first ~~to do~~ <sup>to do</sup> research in this field. About 1905 three chairs of Experimental Psychology were founded, at Turin, Rome and Naples. ~~After a~~ <sup>Some years later two</sup> other chairs were instituted, at Padova and Milano (Catholic University) which were covered by two leading personalities, ~~the~~ <sup>by</sup> Vittorio Benussi and Agostino Gemelli, ~~which~~ <sup>who</sup> founded two flourishing schools.

2. The decay of Psychology in Italy during Fascism.  
During Fascism (1925-1945) the development of Psychology ~~has been~~ <sup>was</sup> ~~hindered~~ <sup>impeded</sup> ~~due~~ <sup>owing</sup> to the hostility of the ~~the~~ idealistic philosophy supported by Fascism. ~~A~~ <sup>only</sup> ~~little~~ <sup>a small</sup> group of research workers ~~performed~~ <sup>continued</sup> their work amidst great difficulties, and the chairs devoted to Psychology at the ~~Italian~~ <sup>State</sup> universities were reduced to only two (~~Faculty of Medicine~~ <sup>at the State University</sup> at Rome, and the Catholic University at Milan).

3. After the end ~~the~~ <sup>the</sup> new flourishing of Psychological Research after the end of the second world war.

Psychology resumed its development with great impetus: ~~every~~ <sup>in</sup> ~~university~~ <sup>university</sup> Psychology, in its different specialities, ~~had~~ <sup>has</sup> been ~~collected~~ <sup>collected</sup> in every university, and ~~at~~ <sup>in</sup> ~~the~~ <sup>the</sup> two universities (Rome and Padova) a special curriculum for Psychology, ~~with~~ <sup>with</sup> a doctorate in Psychology, ~~has~~ <sup>has</sup> been ~~founded~~ <sup>instituted</sup>. ~~The~~ <sup>the</sup> main directions of research in Italy are considered.

\*\*\*\*\* UPON PRINTER  
\*\*\*\*\* UPON PRINTER  
\*\*\*\*\* UPON PRINTER  
\* UPON PRINTER  
\* UPON PRINTER  
\*\*\*\*\* UPON PRINTER  
\*\*\*\*\* UPON PRINTER



\*\*\*\*\* UPON PRINTER

Psychology resumed its development with great impetus.  
Psychology <sup>it is now</sup> has been taught in every University  
and its different specialities have been developed.

P-DEP MOVE 1 TO GAMMA

The phenomenon of "apparent rest" and its meaning for the theory of motion perception.

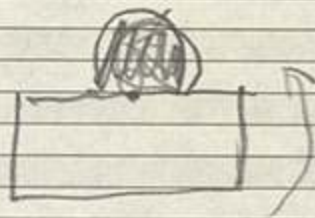
(Visual) (Summary)

Apparent rest is a phenomenon where a physically moving surface or object is perceived at rest, being successively covered and uncovered by another object.

Hypothetical explanations of the motion perception

The discussion of hypothetical explanations of motion perception, and analysis of the stimulation at the sense organ level <sup>the</sup> ~~allows~~ <sup>makes it possible</sup> to find an explanation for ~~of the phenomenon~~ <sup>some aspects of</sup> which shows that apparent rest ~~is~~ <sup>is</sup> a special case of a general law.

make it possible to find



The phenomenon of "apparent rest" and its meaning for the theory of visual motion perception.

#### S U M M A R Y

Apparent rest is a phenomenon where a physically moving surface or object is perceived at rest, being successively covered and uncovered by another object. The discussion of hypothetical explanation of motion perception, and the analysis of the stimulation at the sense organ level makes it possible to find an explanation for some aspects of visual motion perception, where apparent rest is included as a special case of a general law.

Experiments on localization and mode of appearance of achromatic colors (with demonstrations)

S U M M A R Y

Using a pierced screen, or what has been called a reduction screen, some interesting observations have been made which reserve discussion and interpretation.

1. The disappearance of a hole: if a pierced screen is situated in front of an homogeneous and homogeneously illuminated surface, the hole in the screen is not perceived, but instead the surface behind is perceived as a figure (in the form of the hole) pasted on the screen. Conditions giving rise to this illusions are discussed.

2. Different illumination of the pierced screen and to the surface behind seem to influence the above phenomenon in two cases only:

a) when the screen is illuminated and the surface behind is not illuminated and appears dark (black). In this case the hole becomes visible.

b) when the intensity <sup>of</sup> the light reflected by the pierced screen approaches the intensity of the light reflected by the surface behind. In this case, provided that a second pierced screen with a big hole is situated in front of the first, a "fog" is perceived, spreading behind the two screens.

This phenomenon is discussed with reference to the well known Ganzfeld phenomenon.



## Experiments on localization and mode of appearance of achromatic colors (with demonstrations)

Using a pierced <sup>summary</sup> screen, or what has been called a <sup>redu</sup> ~~reduction~~ screen, some interesting observations have been made which deserve discussion and interpretation.

1. The disappearance of a hole: if a pierced screen is situated in front of an homogeneous and homogeneously illuminated surface, the hole in the screen is not perceived, ~~but~~ instead the surface behind is perceived as a figure (having the form of the hole) pasted on the screen. Conditions giving rise to this illusion are sketched

2. Different illumination of the pierced screen and the surface behind <sup>seem to</sup> ~~do not~~ influence the above phenomenon only in two cases only

a) when the screen is ~~actually~~ <sup>actually</sup> illuminated and the surface behind is not illuminated and appears dark (black). <sup>In this case the hole becomes visible.</sup>

b) ~~if~~ when the light reflected by the pierced screen ~~approaches~~ <sup>approaches</sup> the intensity of the light reflected by the surface behind. In this case, provided that a second <sup>screen</sup> ~~screen~~ is situated <sup>in front of</sup> ~~before~~ the first ~~one~~ a "fog" is perceived, spreading behind the two screens.

This phenomenon is sketched with reference to the well known ~~to~~ Goussfeld phenomenon.

Theory of transparency and its further developments

SUMMARY (2 - 3 Lectures)

1. The algebraic theory of perceptual transparency is summarized and experimental inferences drawn from it are demonstrated.

2. Studies regarding the different forms of perceptual transparency (balanced, non-balanced partial) are illustrated. The theory is applied to the case of transparent shadows and typical properties of transparent shadows are inferred from the theory.

3. Generalizations of the theory with regard to the number of surfaces with different albedo and to special cases of "anomalous scission" are considered. The relations of the theory of perceptual transparency to photoreceptional theory and to the phenomenon of perceptual shrinkage of visual objects are examined.

Further ~~dev~~ (Summary of 2-3 lectures)

Theory of transparency, <sup>and</sup> its further developments

1. The algebraic theory of perceptual transparency is ~~summarized~~ summarized and demonstrated. ~~Experiments~~ experimental inferences drawn from it are demonstrated. 2. Studies regarding the different forms of perceptual transparency (balanced, non-balanced, partial) are illustrated. Application to the theory is applied to the case of transparent shadows, and typical properties of transparent shadows are inferred from the theory. 3. Generalizations of the theory ~~to~~ with regard to the number of ~~different~~ differently colored surfaces with different albedo and to special cases of "anomalous vision" are considered. The relations of the theory of ~~the~~ perceptual transparency ~~with~~ to the photoreception theory and ~~with~~ the phenomenon of perceptual shrinkage of visual objects are examined.

References

## Transparency w. th. colors

(Summary)

1. The algebraic theory of perceptual transparency has been derived for the simple case of achromatic colors, which are defined by one number, the coefficient of reflectance or albedo.

As a chromatic color ~~needs 3 numbers~~ is defined by 3 numbers, ~~the~~ (tristimulus coefficients), instead of 2 equations, 6 equations are needed, and research can be done only with the aid of a computer. Taking into account the limited number of color samples ~~at~~ measured color samples at disposition, some difficulties arise in trying to test the theory in this field, which are ~~present~~. There is however, a ~~good~~ agreement between ~~theoretical~~ <sup>predictions</sup> and ~~experimental~~ <sup>experimental</sup> results.

2. A paradox in transparency with colors, due to W. Meeus, ~~is~~ <sup>the results of some</sup> is remonstrated and discussed, and ~~some~~ <sup>experimental</sup> experiments are given, showing the effects of aspects of transparency in anomalous situations.

3. The opposite theories of additive or subtractive mixture of colors in transparency are discussed, and the results ~~are~~ <sup>at</sup> shown of an experiment supporting the ~~as~~ <sup>theory</sup> of additive mixture in transparency, ~~are~~ <sup>shown</sup> illustrated.

## Transparency with colors

### S U M M A R Y

1. The algebraic theory of perceptual transparency has been deduced for the simple case of achromatic colors, which are defined by one number, the coefficient of reflectance or albedo.

As a chromatic color is defined by 3 numbers, (tristimulus coefficients) instead of 2 equations, 6 equations are needed, and research can be done only with the aid of a computer. Taking into account the limited number of measured color samples at disposition, some difficulties are discussed, which arise in trying to test the theory in this field. There is however good agreement between predictions and experimental results.

2. A paradox in transparency with colors, due to W. Metzger is demonstrated and discussed, and the results of some experiments are given, showing the aspects of transparency in anomalous situations.

3. The opposites theories of additive or subtractive mixture of colors in transparency are discussed, and the results are illustrated of an experiment supporting the theory of additive mixture in transparency.