238

CORRESPONDENCE Dec. 1-11, 1957

Professor Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Massachusetts

This from the man who may well be our next president.

Education Fault Up to Parents, Nixon Asserts

NEW YORK, Dec. 15—Vice-President Richard M. Nixon asserted tonight that the basic responsibility for education rests with the American parent, not with the Federal government.

Speaking at the 29th annual scholarship dinner of Yeshiva University at the Waldorf-Astoria, at which he received an honorary doctor of laws degree, Nixon said the major problem is "quality, not quantity of education."

He condemned the automatic promotion of children as being out of step with the realities of life, and called for judging pupils on the basis of achievement rather than effort.

Declaring that the most fundamental challenge to the United States posed by Soviet satellite launchings lies in the field of education.

Nixon said:

"American education will be no better and no worse than the individual American parent wants it to be.

"Whether it takes more classrooms, better teaching salaries, fewer frills, more algebra and less square dancing, this responsibility cannot be passed by the people to Washington.

"As President Eisenhower said in Oklahoma City, this job must be undertaken in the school room, in meetings of the Parent Teachers Assn., and the local school boards.

"What is needed is a national awakening not only to what the needs are in education but also where the primary responsibility lies."

Nixon said the administration will submit to the next session of Congress an extensive educational program designed primarily to train scientists and engineers. This program, he said, along with similar state programs, while necessary for immediate national security objectives, will not remove the major weaknesses in our educational system.

"United action by an informed, aroused citizenry is essential."

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Reg. U.

BOSTON, MONDAY MORN

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They will print it if you say it. So will others. You can say better than anyone around here. Please Do.

The Boston Daily Globe

(Established March 4, 1872. Evening edition first issued March 7, 1878. Sunday edition first issued Oct. 14, 1877.)
Published by GLOBE NEWSPAPER COMPANY 242 Washington St., Boston 7, Mass.

MONDAY, DECEMBER 16, 1957

Globe Man's Daily Story

Sports Editor Fred Russell of the Nashville Banner tells in his book, "Bury Me in an Old Press Box," of playing golf with his boyhood pal, now comedian Phil Harris.

Harris belted his tee shot right down the middle, then remarked walking toward the ball: "You know, since I cured my slice I'm meeting an entirely different class of people out here on the fairway."

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Entered as second class mail matter at Boston, Mass. under the Act of Mar. 3, 1879—242 Washington st.

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"The Ph.D. Octopus"

"A lawyer is a lawyer, a doctor is a doctor, an engineer is an engineer, but what is a Ph.D.?" And how do you know? Thus Mr. Jacques Barzun, dean of Columbia University's Graduate Faculties, in his annual report released today. It is quite a blast.

William James in 1903 prophesied it, in 1904 John Burnet saw it coming, and Mr. Barzun has seen it arrive, our Awkward Age. What we should learn in grade school is taught in high school, what we should have learned in high school is offered in college, what should have been mastered in college is studied in graduate school. A cultural lag, this, like the Hollow Road of Ohain at Waterloo, is our first great loss in the battle. Is it assumed that a graduate student can study without supervision, translate from foreign languages, and write and speak his own clearly? The mortality-rate of candidatures in graduate schools stamps this as a trifle over-sanguine.

*
* *

William James published his long-since-famous "The Ph.D. Octopus" in 1903. It still sizzles. With his scalpel as eminent psychologist, he dissects it. Education is the ability to recognize merit without the label. "Human nature," he says, "is once for all so childish that every reality becomes a sham somewhere, and in the minds of Presidents and Trustees the Ph.D. degree is in point of fact already looked upon as a mere advertising resource, a manner of throwing dust in the Public's eyes. Will anyone pretend for a moment that the ... degree is a guarantee that its ... will be successful as a te...?" ...xt year, 1904, at St. A... John Burnet s... with ... free fo... into...

most about it, he says, are not those who have done any. "No research worthy of the name has ever been done except by men who could not help doing it, and for its own sake. In its lower forms it requires little knowledge and makes few calls upon the higher powers of the mind. That is why we hear most talk of it in the newer American and colonial universities, where there is not yet any great tradition of scholarship." President Conant admitted that a good many professors (not naming names) are "stamp-collectors." John Burnet remarks that a man can count prepositions by the fireside. "Of course it is dry work, but there are universities" (still not naming names) "which will give you a doctor's degree for it." The great scholars of the past never talked about research at all; they did it,

"I don't suppose" (says Burnet) "that any of the great discoveries have ever been paid for at all, and I am sure that they have all been made by men who had no thought of being paid for them."

He might have added, "or can be paid for them." How do you pay a Darwin, an Einstein, or a Gilbert Murray?

*
* *

William James with his American manliness and his Irish wit calls this "Degree Monopoly" in teaching "academic snobbery," like the institution of knighthood in England, which, "aping, as it does, an aristocratic title, enables one's wife as well as one's self so easily to dazzle the servants at the house of one's friends." His remedy is homespun.

"Every man of native powers ... might take a higher degree and ... to do so because ...

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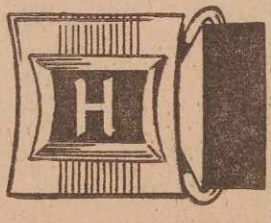

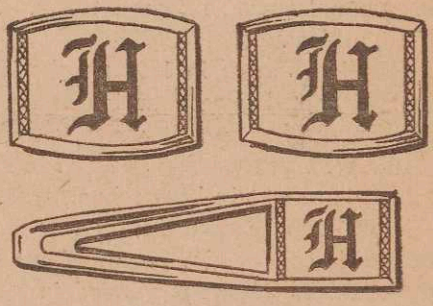

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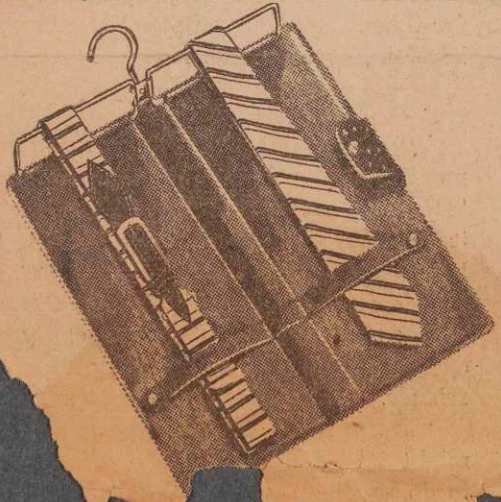

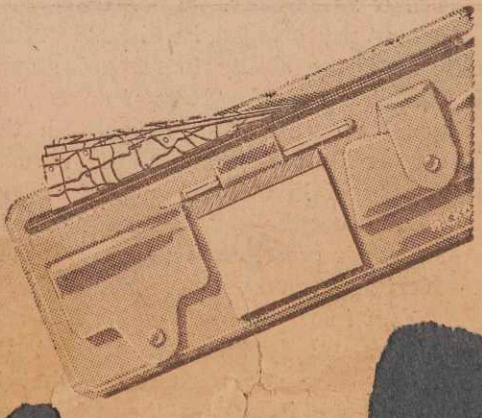

2 December 1957

2690 Huron St.

St. Paul 13, Minn.

Dear Professor Wiener,

I am working on my PhD thesis for Professor Paul C. Rosenbloom. The basis of my thesis is an extension of your and W. T. Martins paper "Taylor's Series of Functions of Smooth Growth in the Unit Circle". This extension is to be applied to distribution functions and the distribution of the eigenvalues of the partion function from Statistical Mechanics. We are attempting to tie together your paper and Hayman's paper " A Generalization of Stirling's Formula" ,Journal die riene und angewandte Mathematik, 1956.

I was wondering if you have done any additional work along the lines of the above mentioned paper. If you have would it be possible to obtain copies of the above work and any recent developments? If you could advise me of work that others have done along these lines it would be greatly appreciated.

Sincerely yours,

Robert D. Brandsberg

Robert D. Brandsberg.

[ans 12/9/57]

Dec. 2, 1957

Dear Sir,

I know you are very busy, but I would like you to help me with a school report. I am a student at Brooklyn Technical High School and in an honor Physics class there. My Physics teacher has asked us to make an analogue between the guidance of missles and the migration of birds. My teacher told us that it has a connection with sibernetics, and since you are an authority on this topic and I thought you might be able to help me. Any information on the migration of birds & the migration of birds as an analogue to the guidance of missles will be greatly appreciated. If you can give me any other sources of information on my topic it will also be appreciated.

Sincerely yours,
Roger Challop

[ans 12/6/57]

230 Forest Street
Oberlin, Ohio
December 2, 1957

Massachusetts Institute of Technology
Cambridge 38, Massachusetts

Dear Sirs:

Recently we have become interested in the relatively new field of cybernetics. We have heard that this science originated in your institution. Thus we have assumed that you are our best source of imformation.

If possible, please send us any pamphlets of bulletins that you have on this subject.

Thank you.

Yours truly,
Konrad Owens
Wasyl Myroslav Hoca

Konrad owens
Wasyl Myroslav Hoca

[ans 12/6/57]

December 2, 1957

Dr. Berndt
Berlin Schoneberg
Kufsteiner Strasse 69
Berlin, Germany

Dear Dr. Berndt:

This is to inform you that I have received your letter of November 25th and shall forward the article in a few days.

Sincerely yours,

Norbert Wiener

NW:AD

December 2, 1957

Professor Kurt O. Friedrichs
New York University
Department of Mathematics
New York City, N. Y.

Dear Professor Friedrichs:

Many thanks for your very interesting series of notes on integration in function space. I am much flattered by the recognition you have given my early work, but I am not fully convinced that you have quite understood the relation between my work in differential space and your work on integration in Hilbert space.

You have pointed out quite correctly that the cylinder space which I use as a basis for differential space is only an infinitesimal part of it. The fact is that with a proper interpretation the whole of Hilbert space may be regarded as an infinitesimal part of differential space. Here my function $x(t,q)$ can be regarded as a space which contains as a part of 0 measure the functions ~~integral~~ $\int f(t)dt$ where $f(t)$ belongs to Hilbert space. In this way operators on Hilbert space can be regarded as generating operators on differential space. This is in particular true of your polynomial operators. As these form a complete basis both for your theory of integration on Hilbert space and for my theory of integration on differential space, and as in both spaces the Riez-Fischer theorem holds, my theory of integrable functions on differential space and your theory of integrable functions on Hilbert space are identical. The only apparent difference is that your theory of integration does not introduce points, and mine does. It is, however, quite possible to give a procedure on your theory which will introduce points as Einschachtelungen of measurable sets and these Einschachtelungen can be made unique except for what we may call sets of 0 measure. From your point of view a measurable set is merely another way of describing an integrable function which is a limit in the mean of simple elementary functions defined over Hilbert space and assuming only the valuation 1 and 0.

I do not wish in any way to detract from the ingenuity of your approach to integration in Hilbert space. All that I mean to say is that it represents a new description of what is essentially an already existing theory, and not a recent theory.

Sincerely yours,

[ans 12/20/57]

NW:AD

Norbert Wiener

P.S. I find that you have sent me two copies of Chapter Three and that Chapter Two is missing.

December 2, 1957

Mr. Robert L. Larsen
TV Program Manager
Lowell Institute
Cooperative Broadcasting Council
84 Massachusetts Avenue
Cambridge 39, Massachusetts

Dear Mr. Larsen:

In reply to your letter of November 21st, as far as I know now I shall be around M.I.T. on December 18th at about the time mentioned and will be glad to participate in your program by speaking extemporaneously for a short time.

Sincerely yours,

Norbert Wiener

NW:AD

12/3 Prof Wiener personally spoke to Dalrymple and said he preferred not to speak on the program. Mr. Larsen phoned & says it will be all right & cancel.

1236 Union Street
Brooklyn 25, New York
December 3,1957

Dear Doctor Wiener,

I am a physics student at Brooklyn Technical High School in New York.

Recently I have been given a term project from my physics teacher that involves the guidance systems of rockets and missiles. Since this is connected with cybernetics I wonder if you will be able to give me some information regarding such guidance systems as the inertial guidance system, the heat - seeking guidance system and other such systems.

I would appreciate this very much.

Respectfully yours,

Lawrence Maltz

[ans 12/6/57]

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December 3, 1957

Dr. Norbert Weiner, Faculty
Mass. Institute Technology
Cambridge, Massachusetts

Dear Doctor Weiner:

I am pleased to enclose a copy of our brochure announcing your speaking engagement for the M.H.S. on Tuesday, January 21 on the subject of "Cybernetics" which applies to scientific management, General Electric.

We plan to have our members bring in their boss, and show him how scientific processes can be utilized in the prognostic task of managing a business or industry.

I would appreciate it very much if you would forward to me a photograph and excerpts or an outline of your talk for the Trade Journals and newspapers well before the meeting.

Thank you for your help and interest in this matter.

Very truly yours,

BRODIE INDUSTRIAL TRUCKS, INC.

WALT GEISENHAINER
PRESIDENT

WG:BAC

Enclosure

[ans 12/6/57]

Sec. Norbert Wiener
To M.I.T.

New England Chapter

AMERICAN MATERIAL HANDLING SOCIETY

INCORPORATED

MHS

1957-1958 YEARBOOK

The American Material Handling Society, Inc.

3737 Upton Street, Toledo 13, Ohio

ARTHUR E. FRYER, *Administrative Secretary*

A National organization dedicated to the advancement of the theory and practice of efficient Material Handling in Manufacturing, Distribution, Warehousing, Transportation and Military operations.

Founded in 1949, AMHS has over 5300 members, with chapters in 44 cities of the United States and Canada, and is affiliated with Material Handling organizations in France, Great Britain, Japan, South Africa, and West Germany.

Albany District * Atlanta * British Columbia * Central Pennsylvania * Chicago * Denver * Detroit * Falls Cities Flint, Mich. * Hamilton, Ont. * Houston * Indianapolis Los Angeles * Memphis * Miami, Florida * Miami Valley (Ohio) Middle Tennessee * Minnesota * Montreal * Narragansett New England * New Jersey * New Orleans * New York City Niagara Frontier * Northern California * North Florida North Texas * Northwestern Pennsylvania * Ohio Valley Philadelphia * Pittsburgh * Puget Sount * Quad City * Rochester St. Louis * San Diego * Syracuse * Toledo * Toronto West Michigan * Windsor, Ont. * Wisconsin

The President's Message

WILLIAM E. KAPPLER
North American Aviation, Inc.
Los Angeles, California

What has caused the tremendous growth of the American Material Handling Society?- Why have we developed into the fastest growing and one of the largest technical organizations? What factors contributed to our success?

There has been good reason for our outstanding record of accomplishment. From the beginning, we have known that Material Handling is one of the most important functions of industrial management. All of us had a basic desire to add to our knowledge of this field of activity, and we recognized the need for a controlled exchange of information on theory and practice. We demonstrated initiative and aggressiveness in our fundamental plans and in our operations. We offered guidance to our educational institutions and to our chapters. In all possible directions, we promoted the theory and practice of good Material Handling.

The record of accomplishments to date indicates that we have made great strides in furthering our basic aims and purposes. However, we cannot become complacent. Each of us must continue to help our chapters and the National Society to build a solid structure upon a firm foundation. We must make sure that all possible efforts are being expended to further what is rapidly becoming industry's most dynamic science.

Teamwork has been the backbone of AMHS. We have had the will to work together and to accept our individual responsibilities. Each AMHS member has a part to play in improving chapter operations and regional functions, thereby strengthening the activities of the national group so that it can better represent the Society.

It is indeed difficult to improve upon the many excellent activities of AMHS in the past. In fact, it is difficult just to grow. However, we can benefit from the guidance of the officers and directors who devoted so much time and effort during our formative years and who still are serving our Society. This sound guidance, coupled with the aggressive thinking of our new men, will enable us to move still further toward our primary goal of advancing the theory and practice of efficient Material Handling.

The Year In Review

Under the able leadership of President Herbert S. Jones and his staff of officers, directors and committee chairmen, the American Material Handling Society enjoyed its most successful year in 1956-57. During the 12 months ending on June 30, 1957, four new chapters received charters, bringing the total to 44, and the membership roster increased from 4319 to 5364.

The year was notable for AMHS emphasis on the dissemination of technical and engineering data on all phases of Material Handling. Through the media of expositions, conferences, clinics, publications, and courses at college and university level, the Society promoted a better understanding and a wider application of the principles of Material Handling.

Expositions

AMHS chapters have been aware that well-organized expositions afford an unparalleled opportunity for equipment manufacturers to bring together, in one central location, all that is new in Material Handling equipment and techniques. Many successful expositions have been held by chapters on a local and regional basis, and a highlight of 1956-57 was the New England Chapter's Expo-Clinic in Boston, which attracted 2200 visitors.

During the 1957-58 year, expositions sponsored by AMHS chapters will include: the Canadian National Material Handling Show at Montreal, September 30 through October 4; the Southern Material Handling and Packaging Show at Houston on October 29-31; and the Western Material Handling Equipment Show in Los Angeles on May 8-10.

Conferences

Twenty chapters now hold annual forums, clinics and conferences, with the majority being presented in collaboration with local colleges and universities.

Among those presented during 1956-57 were: one-day conferences held by the Montreal, St. Louis and West Michigan chapters; MHI clinics at Buffalo (sponsored by the Niagara Frontier Chapter and the University of Buffalo) and at Chicago (sponsored by the local chapter); a two-day conference at the Brooklyn Polytechnic Institute, sponsored by the New York Chapter; a three-day short course at Georgia Institute of Technology, sponsored by Region VIII AMHS chapters; the annual Purdue University Conference, sponsored by the Indianapolis Chapter; the three-day clinic of the New England Chapter in Boston, and the annual Industrial Material Handling Conference of the New Jersey Chapter at Stevens Institute of Technology. Attendance ranged from 100 to the high of 438 registrants at the New England Chapter Clinic.

On a National basis, AMHS and the Philadelphia Chapter produced the Technical Sessions which were held in conjunction with the 7th National Material Handling Exposition in Philadelphia, with 800 material handling men in attendance.

Demonstration of a Computor Solving a Fork Truck Scheduling Program at Industrial Material Handling Conference sponsored by AMHS New Jersey Chapter at Stevens Institute of Technology on April 17, 1957.

Educational Services

The AMHS Educational Services Committee has the basic function of providing a continuous supply of materials, aids, opportunities and guidance that will contribute to the personal and professional advancement of every AMHS member. It further works to keep AMHS abreast of the latest developments in theory, research and practical technology in Material Handling.

During 1956-57, the committees assisted several colleges and universities in establishing courses in Material Handling. In addition, it distributed to every AMHS member reprints of published articles and professional papers.

In the coming year, it will complete a film strip, titled *Fundamentals of Material Handling*, for release in the spring of 1958. Also, it will assist several AMHS chapters in the organization and promotion of one-day clinics.

Among the colleges, universities and technical institutes, with which AMHS is cooperating in conducting classes or courses in Material Handling, are the following:

Alabama Polytechnic Institute
Cornell University
Fenn College
Georgia Institute of Technology
Illinois Institute of Technology
Lamar State College of Technology
McGill University
Milwaukee School of Engineering
New York University
Northeastern University
Northwestern University
Ohio State University
Pennsylvania State University
Purdue University
Rochester Institute of Technology
Rutgers University
Ryerson Institute
Stevens Institute of Technology
Temple University
Texas A and M College
Toledo University
Tulane University
Washington University
Wayne State University
University of Akron
University of Buffalo
Univ. of Calif. at Los Angeles
University of Houston
University of Louisville
University of Montreal
University of Texas
University of Toronto
University of Washington
University of Wisconsin

Material Handling Handbook

Climaxing several years of intensive preparation, the long-awaited Material Handling Handbook is now scheduled for publication in January 1958. A joint effort of the American Material Handling Society and the American Society of Mechanical Engineers, in collaboration with the Ronald Press Company, the handbook will cover all areas of Material Handling, including the descriptive and analytical phases, and will have special sections on bulk handling, unit handling, packaging, warehousing, and carrier handling.

Fork Truck Rodeo

The Second Annual Western Championship Fork Truck Rodeo, sponsored jointly by the Los Angeles chapters of AMHS and the American Society of Safety Engineers, was held in Los Angeles on May 18, 1957, and attracted 89 entrants from Southern California industrial firms and Armed Forces bases. The success of this event in teaching safe and economical operation at the operator's level, and in gaining the support of safety engineering societies and casualty insurance organizations, has prompted plans for a National Rodeo in 1958, with regional winners competing for a National Fork Truck Operator Championship.

Material Handling Standards

The AMHS National Standards Committee, which serves as a clearing house for information on Material Handling Standards, has as its primary objectives:

- Elimination of duplication, overlapping and variations in standards used by the many trade associations, technical societies and other interested groups.
- Fusing of conflicting standards into a single, generally-accepted American Standard.
- Promotion of the knowledge and use of such single standards.

During 1956-57, the first two standards projects were designated and subsequently assigned to AMHS chapters for development. The initial project, covering Truck Docks and assigned to the Detroit Chapter, is now in its final stages. The second project covers Railroad Docks and was assigned to the New Jersey Chapter. This project is well under way and should be completed by the end of 1957.

Eight Hundred Material Handling Men Attended the Technical Sessions Sponsored by AMHS at the 7th National Material Handling Exposition.

Growth of The New England Chapter

MEMBERSHIP MEMO:

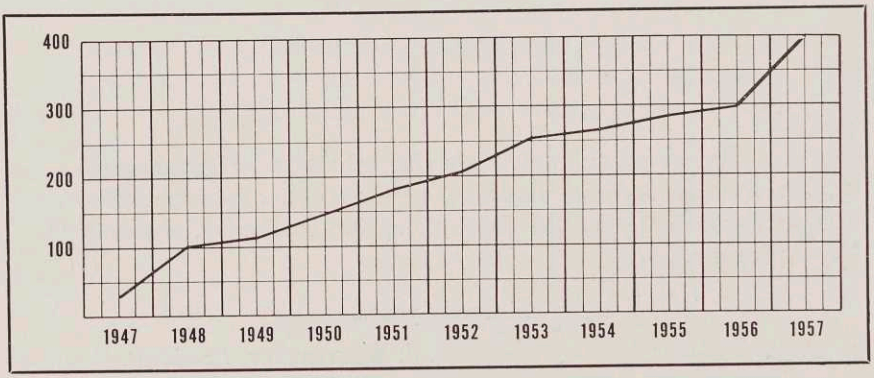
September 19, 1957 marked the 10th anniversary of our New England Chapter — 10 years of steady growth and increased activities. We are now 400 strong and, this year, have developed a program encompassing every phase of materials handling for the enrichment of technical knowledge and understanding of each member.

Our vitality is manifested by our receipt this year of the National AMHS award for the greatest percentage increase in membership. With your continued lively interest and support, we will retain this honor in 1958.

We have planned a program of plant visitations, speakers, and dinner meetings that makes membership in our New England Chapter a rewarding experience in every way.

JOHN CUNNIFF,
Membership Chairman.

MEMBERSHIP GROWTH



Message from Our President

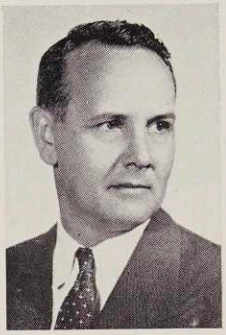
The adoption of modern materials handling techniques in New England has been paralleled by the vigorous growth in membership and activity of our New England Chapter of the American Materials Handling Society. As a charter member, I am inclined to believe that our society has played more than a small part in the increased use of cost-cutting materials handling methods.

Our stimulating program of plant tours and discussions for this year is directed not only at furthering this trend but also at providing a common meeting ground for the discussion and, we trust, solution of current, difficult problems in this area. And, certainly, engendering good fellowship has been, and will continue to be, a prime result of our gatherings.

In our young, rapidly growing field, this Society, through active, open-minded pursuit of new and better techniques has and will serve as the focal point for continuing, dynamic progress.

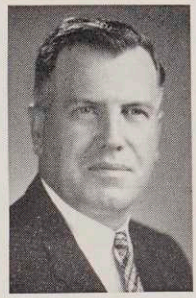
Sincerely yours,

E. S. WESTERVELT, *President*,
New England Chapter, A.M.H.S.



STEPHEN C. TRAUDT
National Director

R. V. SCHNEIDER
Vice President



J. P. CUNNIFF
Vice President

J. FORD MCGOWAN
Vice President

Chapter Officers

BARNEY SINGER
Vice President

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Secretary

HORACE H. BEAUDET
Treasurer

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ALL CHAPTER OFFICERS AND

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NATIONAL COMMITTEES

Conferences . . . . . MILES P. ROWAN

Executive Secretary
Miss Margaret Healey, STadium 2-8100

NEW ENGLAND CHAPTER

	DATE	OCCASION	TIME
1	TUESDAY OCTOBER 15	EDSEL NITE	2:00 P.M. Visit 5:30 Cocktails and Dinner 8:00 Speaker
2	TUESDAY NOVEMBER 19	WORCESTER NITE	3:00 Visit 5:30 Cocktails and Dinner 8:00 Speaker
3	WEDNESDAY DECEMBER 18	XMAS PARTY	5:30 Cocktails and Dinner 8:00 Entertainment
4	TUESDAY JANUARY 21	MANAGEMENT NITE	5:30 Cocktails and Dinner 8:00 Speaker
5	TUESDAY FEBRUARY 18	PACKAGING NITE	5:30 Cocktails and Dinner 8:00 Program
6	TUESDAY MARCH 18	WESTERN ELECTRIC	3:00 Visit 5:30 Cocktails and Dinner 8:00 Speaker
7	TUESDAY APRIL 22	BRAIN STORMING IN MATERIALS HANDLING	2:30 Round Table 5:30 Cocktails and Dinner 8:00 Speaker
8	TUESDAY MAY 20	ALLIED CONTAINER NITE	3:00 Visit 5:30 Cocktails and Dinner 8:00 Speaker
9	TUESDAY JUNE 17	LADIES NITE	6:30

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Field Machinery, Inc.

PROGRAM FOR 1957-1958 SEASON

PROGRAM AND PLACE FOR VISITATION	DINNER MEETING PLACE
First National Stores, Somerville, Mass. Speaker: Mr. Laird Anderson, Manager Production Engineering, Edsel Division, Ford Motor Company, Detroit, Michigan.	University Club Boston, Mass.
Plant visitation — Norton Co., Worcester. Bob Schneider in charge. Guest speaker: Dr. Walter H. Carpenter, Chairman, Dept. of Industrial Relations, Babson Institute. "The Human Side of Automation."	Wachusett County Club
Entertainment — Barney Singer in charge.	University Club Boston, Mass.
Bring your boss! Speaker: Prof. Norbert Weiner. Subject: "Cybernetics" (as applies to scientific management).	University Club Boston, Mass.
Short talks and displays of latest in "Unit Loads". Local S.I.M.P.H.E. Chapter in charge.	University Club Boston, Mass.
See Western Electric's new plant at North Andover in operation. Bill Willitts in charge.	Andover Country Club Andover, Mass.
Round table exchange of ideas in small groups. Mr. Robert Farrington, Chairman, Problem Solving Institute, also with Batten, Barton, Durstine & Osborne.	University Club Boston, Mass.
Visit to Allied's new plant. Bill Kerr in charge. Guest speaker to be announced.	University Club Boston, Mass.
Summer Supper Dance (please invite the little woman or best girl).	University Club Boston, Mass. Club Orchestra

Gilbert Equipment Corp.
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Application for Membership

in the

NEW ENGLAND CHAPTER, INC.

of the

AMERICAN MATERIAL HANDLING SOCIETY, INC.

Date.....

John P. Cunniff, Chairman
Membership Committee
American Material Handling Society
100 Ashford St.
Boston 34, Mass.

Dear Sir:

I hereby apply for membership in the New England Chapter of the American Material Handling Society, Inc., and upon becoming a member agree to be governed by its Constitution and By-Laws.

NAME OF APPLICANT.....

MAILING ADDRESS.....
(*Street*) (*City*) (*Zone*) (*State*)

Representing..... Title.....
(*Name of Company*)

Address.....
(*Street*) (*City*) (*Zone*) (*State*)

☐ User ☐ Vendor ☐ Instructor ☐ Consultant

Please list products or services of your company: .....

.....

.....

Attached is $10.00 check payable to New England Chapter, AMHS, Inc. in full payment of 1958 membership.

Signed.....

Approved by the Membership Committee

Date..... Signed.....

Secy. and Treas. Notified

Date..... Signed.....

Cliff Haddrell, Chairman of the exposition, standing beside symbol of 1957's Materials Handling EXPO-CLINIC.

NEW ENGLAND CHAPTER

A.M.H.S.

EXPO-CLINIC

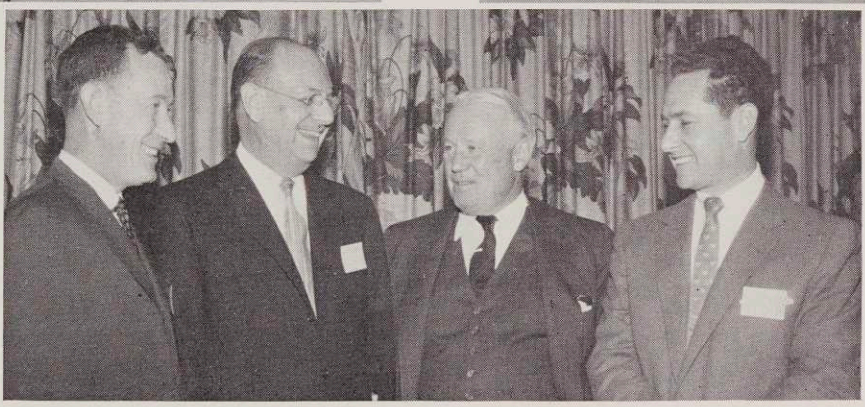
MARCH · 1957

The Spring of 1957 saw the Nation's first Materials Handling EXPO-CLINIC — a dynamic display of modern materials handling equipment and methods.

All available space of Boston's Commonwealth Armory was devoted to this 3 day exhibition. Dynamic demonstrations evinced the versatility and economy of modern materials handling equipment.

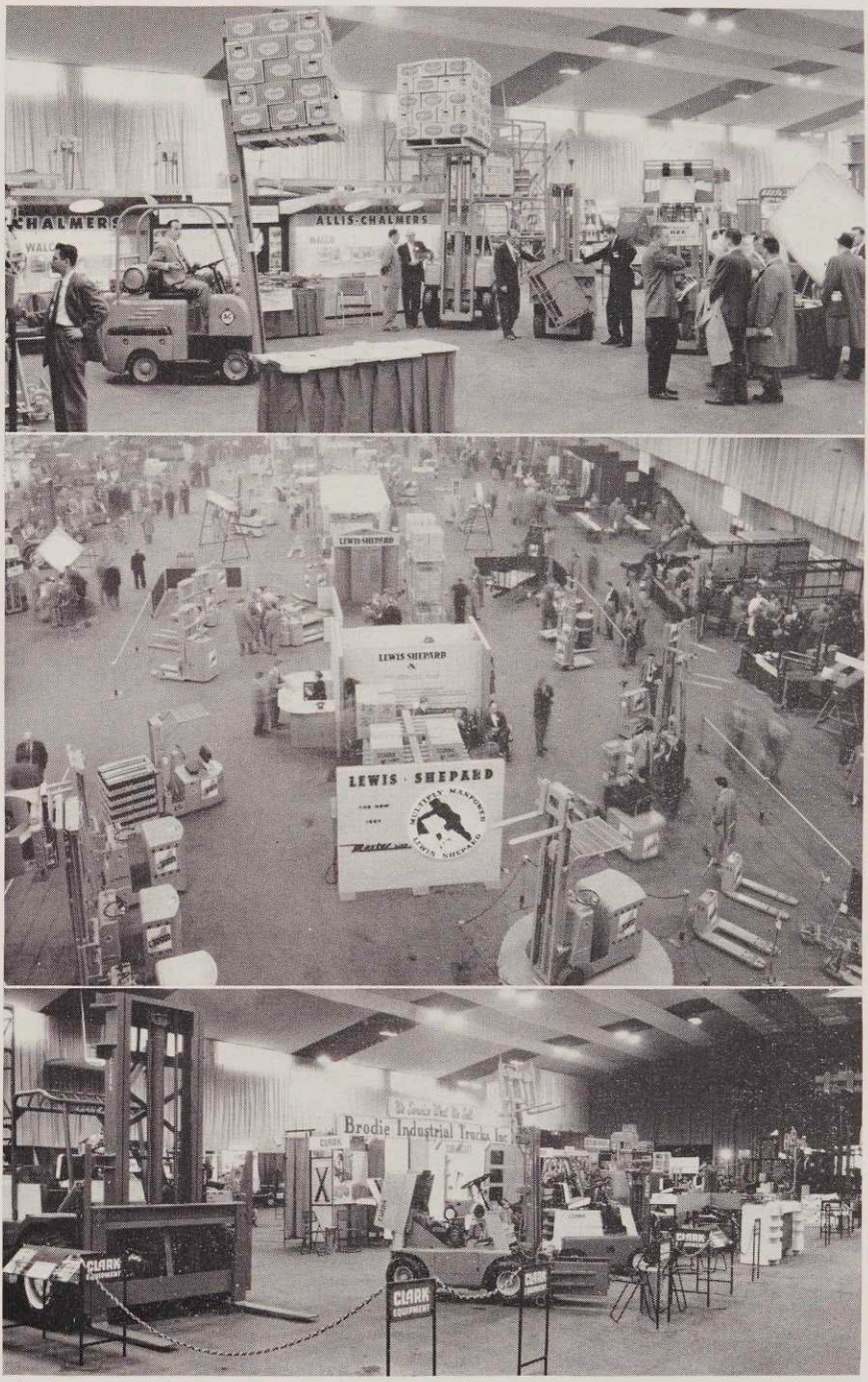
Concurrently, top notch speakers in the field inspired stimulating clinic sessions that drew capacity audiences. Condensations of these discussions are presented herein.

Exhibitors, clinic participants and viewers of equipment displays concur that the EXPO-CLINIC served a long-felt need in providing New England industry with a comprehensive view of the latest developments in the materials handling field. Our Chapter's EXPO-CLINIC will be a bi-annual event that will enhance our Society's contribution towards more profitable New England industry.



Ernest G. Swigert, President of National Association of Manufacturers, principal speaker at EXPO-CLINIC luncheon with Sidney Rabb, Chairman of the Board of STOP & SHOP, INC.

Governor Furcolo signing proclamation in recognition of Materials Handling Week.



General views of main exhibition floor at Commonwealth Armory.

SUMMARIES OF TALKS
PRESENTED AT THE EXPO-CLINIC

MARCH 19-20-21

COMMONWEALTH ARMORY, BOSTON

Contents

Forks Powered By What?

R. F. Brackin

Varying duty cycle demanded and conditions of operation are the reasons for the existence of various truck types. All types of trucks have their place. The place of the gas truck is determined by its performance characteristics. Perhaps its most obvious superiority is in outside operation. Its reserve power which can be sustained for indefinite periods make it ideal for grade work, while its speed and flexibility of operation permit maximum equipment utilization.

Not so apparent but still of vital importance is gas truck maneuverability. Its smaller dimensions permit smaller aisles and greater space utilization. Add to these advantages its higher drive, hoist and tilt speeds, its quick adaptability to auxiliary or manipulating devices, and its flexibility of operation, and you find that gas trucks compete for top honors inside as well as outside.

In other areas of application and under certain conditions, gas trucks come out second best or equal to battery-powered forks. This is particularly true where a fire or explosion hazard exists or where noxious fumes are a problem due to low ceilings and poor ventilation. In an explosive atmosphere such as is encountered in many chemical plants, battery power is obviously superior. However, diesel-powered forks are making rapid inroads into areas which have proved too hazardous for gasoline trucks. Even where fume-free operation is required, a catayltic exhaust will permit the use of a gas truck.

Another advantage which is generally conceded to electrics is lower maintenance costs. There is much difference of opinion but the majority agree that gas maintenance is usually higher. However, initial cost may reverse the overall cost picture.

There is still another factor to consider in choice of power-economics. Proper evaluation of this factor requires proper choice of units. The only one which reflects a true picture of costs is the cost per ton-mile. As a rule of thumb, use gas trucks for usage under eight hours; electric trucks for usage over twelve hours; and either for usage between eight and twelve hours.

Condensation of a talk by R. F. Brackin, Chief Engineer Gas Trucks, Yale and Towne Manufacturing Company.

Forks Powered By What?

POWER TRANSMISSION

R. HASTINGS

Today you will find five principal types of transmissions in fork trucks:

1. MANUAL GEAR SHIFT WITH FRICTION CLUTCH.

Advantages are simplicity and minimum cost.

2. FLUID COUPLING.

A fluid coupling consists of two fan-like circular rotors — a driving impeller and a driven turbine — encased in a container filled with oil. A rotary motion of the impeller causes the oil to be forced towards the turbine, causing it to turn also. In this manner, it couples the engine to the transmission. A clutch is still required to permit gear shifting. Principal advantages are (1) cushioning of drive line shocks, and (2) permitting sufficient engine rpm to gradually accelerate truck without danger of stalling.

3. TORQUE CONVERTER.

A torque converter is basically a fluid coupling with an additional "reactor member" or stator which functions during acceleration and when driving on ramps to multiply the torque delivered to the rest of the transmission, thus automatically providing the effect of an additional gear reduction. In some trucks the torque converter is merely used in conjunction with a conventional transmission having manual gear shift. In other trucks, the torque converter is used in combination with power shifting as described below.

4. POWER SHIFTED FORWARD-REVERSE, WITH TORQUE CONVERTER.

In this type of transmission, the gears are in constant mesh. However, the forward or reverse set can be engaged by hydraulically actuated multiple disc couplings, controlled by a small directional lever on steering column, thus eliminating the need for a clutch pedal, and permitting the driver to shift from forward to reverse with a finger tip motion without removing his hand from the steering handwheel. In this way his other hand remains free to operate lift and tilt controls.

5. POWER SHIFTED GEAR RANGES AS WELL AS FORWARD-REVERSE.

This combination is required only on the larger trucks. The advantage of power shifted gear ranges is the ability to make a shift while the truck is operating on a grade without danger to the shifting mechanism and without any momentary loss of traction during the shifting operation.

Condensation of a talk by Russell Hastings, Engineering Manager, Central Engineering, Clark Equipment Company.

Forks Powered By What?

ELECTRIC POWER

L. B. Nilsen

The electric truck is a fundamental, simple piece of equipment, utilizing direct current electricity for power. It has three basic electrical components: one or more batteries, motors, and operating controls.

Batteries for electric trucks are of two types — lead acid type and the nickel alkaline. They are designed for complete cycling each day and have an average useful life of from five to ten years.

Power for transporting and elevating loads is obtained from two types of motors. Traction motors generally used are series wound or compound wound. In the series motor all of the current which passes through the armature also passes through the field. This type of motor gives high torque at low speeds and is excellent for traction. The compound motor which has a series field and armature plus a shunt field is becoming increasingly popular. The shunt field carries a constant amount of current at all times and tends to regulate the speed of the motor. Motor drives for hydraulic pumps used in the elevating system are usually compound motors because the speed must be more uniform than the traction or series motor speed. Motors are generally rated on the basis of torque rather than horsepower. Peak torque for surges is ten times that required to move the truck fully loaded on the level.

To maintain proper voltages and operating speeds, operating controls are used. One of the most popular systems consists of remote switches that determine the proper circuit by activating magnetic contactors. This control permits automatic or semi-automatic operation, such as controlled acceleration, controlled plugging and dynamic braking. With proper controls, 2 to 5 traction speeds are available in each direction.

Two types of battery chargers are available. One is the motor generator in which a motor drives a generator which supplies the proper DC voltage and another is the selenium rectifier. Here alternating current is converted to DC of the proper voltage to charge the battery. Both types offer low cost and automatic operation, with these advantages:

1. Operator fatigue is minimized because electric trucks are quiet running, fume-free, vibration-less, and do not require gear shifting.
2. Safety is improved due to minimum fire and explosion hazard and the absence of dangerous fumes.
3. Downtime is substantially less than for other types of power.
4. Power cost is low. The cost of electric power in most areas is 1¢ to 2¢ per kilowatt hour and the cost per shift of operation can be readily determined by use of this formula:

Battery KWH $\times$ 2 $\times$ Power Cost/KWH = Cost/Shift of Operation

In the case of a battery of 15 kilowatt hour capacity and assuming an electric power cost of 1.2¢ per kilowatt hour, the cost per shift would be only 36 cents.

5. Electric trucks have long life. Average battery life exceeds 5 years; generator life is over 15 years; truck life exceeds 12 years.

In round-the-clock operation maintenance and power savings, and other advantages of the electric truck become aggregately greater. An electric truck compares favorably with other types in both operation and cost.

Condensation of a talk by L. B. Nilsen, Chief Engineer, Lewis-Shepard Products Company.

Forks Powered By What?

LP GAS

E. C. Curtis

LP gas is a combination of propane and butane gases, chiefly. They are stored and handled under sufficient presure to assure a liquid state.

Storage of the fuel in the vehicle is accomplished by means of pressure tanks of either the I.C.C. detachable type or A.S.M.E. permanently mounted type. Most of the present-day installations draw liquid fuel from the tank, vaporize it and reduce its pressure before it is introduced to the carburetor.

Special engine provisions for burning LP gas include high compression heads, cold manifolding, stellite faced valves and rotators and stellite valve seat inserts. They are designed to improve engine efficiency and lengthen valve life.

Because of lower B.T.U. content of LP gas, fuel consumption generally will be slightly more with LP gas than with gasoline. However, in some applications, consumption will be equal or slightly better. This is possible because combustion is clean and complete, and also because of greater available power and higher thermal efficiency of LP gas engines. Along with clean combustion come other benefits — increased engine life, no oil dilution, and reduced carbon monoxide.

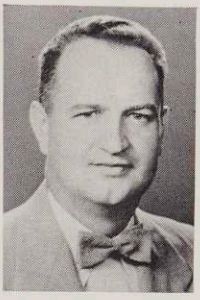
LP gas is safe to use. Many state and local government requirements have been established, and the National Board of Fire Underwriters' and NFPA have published standards for storage and handling.

With all its advantages, LP gas is reasonably priced in many areas. Also, availability is good. If possible, bulk purchase should be made to take advantage of lower prices.

Much can be gained from the use of LP gas in many applications, but each application must be considered as an individual case because of the many factors that are involved.

Condensation of a talk by E. C. Curtis, Assistant Chief Engineer Development, Towmotor Corporation.

Power Through Presentation



J. Gilbert Dresser

Five factors which affect your chances of selling a materials handling idea to management

There is nothing more frustrating than to have a good idea or a good plan and be unable to sell it to management. It is, perhaps, the greatest obstacle to overcome in our jobs. In approaching the problem, it helps if we consider some of the factors with which we are confronted.

Let us consider five such factors. The first of these is money available for all improvements. We must keep in mind that this available money includes funds for production, maintenance, safety, increased sales, and everything else that management has to take into consideration.

In connection with this, it must also be remembered that there will be a lot of competition for this available money. If production volume is crowding the plant exceedingly hard, the chances of getting money for materials handling work *not directly related* to increased production is nil.

It can well be that a materials handling project can contribute more to increasing output than a new piece of machinery. There are many valid cases where materials handling projects have done more to increase volume, clear up floor conditions, than an investment in production equipment. It is up to you to present your case in such a manner that all of these points are perfectly clear to the people who will have to make the decisions.

The second factor is the general trend of business. This is a matter of timing. If you have a program that is competitive for money, and you are attempting to sell it in a high production period, rather than management asking for it, perhaps it would be better to postpone it until such time as *cost reduction* becomes the paramount thing rather than additional production. If your program can't be sold under either one of these two conditions, then perhaps it's not a *valid* program and shouldn't be sold.

Now, I'm not saying that we shouldn't recognize that there are many worthwhile projects promoted under the heading of safety, better working

conditions, and things like that, but I think you'll find that the primary push comes from either increased production or decreased cost.

The third factor to be considered is the preparation or preconditioning of management. It's far easier to sell a program to management once you have discussed it with them in enough detail to whet their curiosity. Then, when your program is submitted, you have a chance of a good hearing, that is all you are really entitled to get.

There are several ways to condition management to be receptive to your report. I'll cite a couple of examples that have been particularly successful for us. There are dozens more which can be used. It is mostly a matter of common sense and seeing which one applies to the particular situation in which you find yourself.

In the case of a large machine tool manufacturer, we were studying the general materials handling problem as it affected interdepartmental transportation. It involved the expenditure of a considerable sum of money in a field which had been somewhat of an orphan in that particular company.

You, who have started materials handling programs, are fully aware of what an orphan materials handling can be. In this case the plant had a photographic department, and we borrowed those fellows to take a few pictures for us. Later we presented these pictures to the second echelon of management. We asked them for some money to buy additional film. We did this so that when it came time to present our program to top management, we'd have something to back us up.

We got the "go ahead", bought some film and went to work. Now, the authorization was for the film, not for the manpower to do the job. You are all familiar, I am sure, with the technique of borrowing the manpower from some other, duly authorized, project.

In this case we took "before and after" photographs. They were not especially elaborate. You can always stage your improvement by asking for help from local materials handling suppliers. They will be right there to help you, and photographs certainly get your point across.

Of course an important element here, and it happens to be our fourth point, is the confidence that management has in you as an individual. This is a matter of personal integrity, and something that you as an individual are responsible for over a period of time.

You must have facts; and if they know that you're going to present facts in an unbiased fashion, you will get, and deserve, far more respect than if you try high-pressure techniques.

Confidence and respect have to be earned. You not only earn them by your conduct in the plant, but by your conducts outside the plant as you take

part in community and civic activities, and as you conduct your activities in your own home.

Fifth is the organizational structure under which you operate. In the smaller companies you can probably go direct to the man who can say "yes" or "no" and get a hearing.

In a larger company, this isn't the case. Thus, you've got to prepare far more detail from the standpoint of cost and specifications. The manner in which you present your report requires more care, too. It's going to be second or even thirdhand by the time it reaches the decision-making level.

I can recall quite vividly a project that I was promoting when I was in the steel mills. I heard nothing for six or eight months, and when it came back it was difficult to recognize as anything that I had wanted in the first place. It had been re-interpreted by someone who really didn't know the problem.

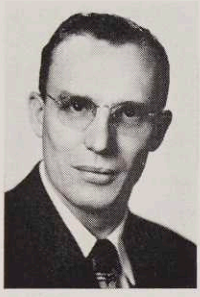
I think that we have gotten away from that; the larger organizations are streamlining, and have provided means of keeping current and expediting their projects.

We found that one of the best ways to circumvent a personality problem is to actually take your foreman, supervisors, and management people out to see the particular thing that you are trying to sell. Show it to them working in somebody else's place. Maybe you won't see exactly what you want to see, but you'll see certain principles displayed. This will stimulate thinking to a point where everyone can see what you are talking about. When you do that, these people may see things that they believe are their own ideas. Let them have them. You should not care whether you have a single idea in the project. The important thing is that it gets done. If you get the job done, and it's completely somebody else's idea, you're still a good engineer and a good materials handling man.

Finally, after you submit your report, have a little patience. Management people are busy people. Give them time to think it over. Give them time to have it checked, and don't feel hurt when they check it. It's just good business to have it checked and it certainly is not a reflection on you.

Furthermore, if you have done the job right, if you have all the facts, the check will confirm your judgment. You'll be in a much stronger position than you were before. So have a little patience, present your report at the time when it will do the most good, and have confidence that sound thinking, in the long run, will prevail.

Condensed from a talk by J. Gilbert Dresser, President, Dresser Engineering, Incorporated.



Power Through Presentation

WALTER R. GREEN

Seven basic rules for selling and the four important parts of a good presentation

I'll talk to you as salesmen because whether you like it as engineers or not, the job of getting ideas accepted by management is a selling job. So many engineers regard the terms "selling" and "salesmen" as dirty words. Yet, I can't describe the process of getting your ideas accepted in any other words but "selling".

What I would like to do this morning is to discuss some of the general rules of selling industrial goods as any good industrial salesman would. You will find that as materials handling engineers you have to know those fundamentals of selling in order to do your complete job.

Selling today is not a one-man or a one-department operation. You sell from the president down to the janitor, and that includes all the engineers. In a nutshell, industrial selling is getting ideas and presenting them in such a manner that they are accepted and put into use.

Remember, you might get the best ideas on overcoming materials handling problems, but unless you can get those ideas accepted by your management, they aren't doing you, nor your management any good.

I'm inclined to believe that many engineers suffer from an illness — an illness of the closed mind. In almost every industrial plant in this country there are many jobs that are being done the way they are because of past experience, not because it is the right way — the obvious way to do the job. The proper place to start looking for ideas is not in this area of automation, not in this area of hard-to-find proverbs, but at what you are now doing. Unless we change the jobs we are now doing and do them better, we'll never see automation in most of the plants in this country.

You in selling ideas to management and the industrial salesman are in the same boat. If you are a good salesman you will follow a few common sense rules that can be applied to both.

First, recognize that there is no fundamental difference in selling a product and in selling an idea. Just as the automobile salesman gets you to sit

behind the wheel of his new car, give your boss a chance to be a part of making your sale. In some cases, it may be necessary for you to take a back seat, and let the boss think that it's his idea. In any case, you've got to give him a chance to contribute.

Secondly, you can't sell a product that you are not familiar with. This may seem like an obvious statement, yet you have to know not only the product, but the problem as well. You have to know it so thoroughly that no one can back you into a corner with a lot of questions.

The third point to bear in mind is that you cannot sell over people's heads. Don't take it for granted that your boss knows a certain problem exists, or that it is as serious as you make it out to be. Make certain management knows exactly what you are talking about.

Another fault in making a sales presentation is one common to all men who ordinarily communicate by word of mouth, and suddenly are called to put their ideas on paper. Their normal conversation is in two or three-syllable words. For some reason, when they take up pen and paper they suddenly decide that they have mastered all of the four, five, six and ten-syllable words. The result is a jumble.

When making your presentation, remember that it should reflect you. You'll find, surprisingly enough, that your boss, intelligent as he may be, still appreciates a report written in language that is easy to understand.

If you have any idea of trying to determine the average intelligence level of the people you are trying to sell to, just think of the stuff that people have to watch on television. A lot of people in this business of selling have gone to the use of cartoons. Now, I don't think that you'll have to develop comic strips to put on a presentation, but it does give you an idea of where you have to aim your presentation.

The fourth rule, and possibly one of the most important is timing. Neither good nor bad ideas can be sold if the time is not right. Your presentation must be made when management is receptive. The boss has got to give it his full attention, which means that you can't walk in to him at any time of the day with his phone ringing and three or four people running in and out of the office and say, "Look, I want to spend $5,000 on this piece of equipment. Sign right here, and we'll go out and get it." That's not the way to do it.

The fifth rule of selling is to be enthusiastic. Enthusiasm is contagious, and you can't be enthusiastic about your program unless you have sold it to yourself. All this reflects the fact that you are sold and it makes it that much easier to sell others.

The sixth rule of selling is probably the most important of the lot. It says that selling is a very personal science. No salesman ever made a sale to a company; no company ever signs its name on the bottom of a contract. A man signs that name, so you must sell that man.

Try to determine what makes your boss buy. You'll find that there are

different reasons for buying. If you keep aware that you are dealing with a person, and remember that your presentation must be accepted by that person, it will help a great deal.

The seventh and final rule is that you can't sell without proper presentation. It is in this area that the industrial engineer is better qualified than the industrial salesman. This is because he has been taught how to make a detailed analysis of a problem. First break down the problem into its smallest components and study each as a problem in itself. Second, determine the best way to overcome each of these problems. Third, determine the most happy combination of equipment that will solve your problem. Fourth, determine the total benefits from acceptance of the program. Fifth, put your findings on paper clearly and concisely.

All five of these factors are inherently a part of the makeup of a good engineer. In most cases they have to be taught to salesmen. Your presentation must contain these four sections.

First is the analysis and isolation of the problem. It is in this area that you tell your story. The second part of the presentation should include the recommended solution and it should spell out your idea in rather broad and general terms. Third, you should list the specific equipment that you think are needed, and in this section you'd include details of design, operating characteristics and, of course, work out the total cost. Fourth, anticipated benefits.

Now, up to this time you have been saying, "Look, here's a problem. Here's what I'd like to do about it. Here is the equipment I think will do the job." Now you are going to tell him what he gets back if he goes along with you. It is in this area that your knowledge of buying habits will pay off.

There are a number of techniques you may want to use to make your presentation easier on management. We mentioned the use of slides and photographs — sketches, of course, are used frequently too. Try newspaper clippings. I think a good industrial engineer should have a terrific file of newspaper and magazine clippings, not to use this week or next, but for ready reference when he wants to prove a point.

On a long presentation, you may want to boil down 20 or 30 pages and make a one page summary in which you repeat the idea and the other four steps. Be certain to give the top man a place to affix his signature at the bottom.

So far throughout this talk, I've taken the assumption that getting ideas is a one-way street. This is not true. It is not a one-way street. It is management's responsibility to encourage further flow of ideas by accepting all of the good ones they possibly can. I read somewhere that a business, like an automobile, has to be driven in order to go places, and ideas are the things that make the pistons go up and down. If you're in a position not only to submit ideas, but to accept them, you are doing your best job by acting as a lubricant for those pistons.

Condensed from a talk by Walter R. Green, Product Sales Manager, Rapids-Standard Company.

"Pay As You Go"

WITH MATERIALS HANDLING EQUIPMENT

FRANK K. GRIESINGER*

Three important principles which may aid the materials handling engineer in securing needed equipment; a discussion of the advantages and disadvantages of commonly used financing plans.

The subject of finance is often dry and dusty. I'm going to try to give you a simple explanation of some interesting, current facts which concern the financing of equipment acquisitions.

Three Acquisition Principles

Let's assume that you know you need more material handling equipment. But you may have an acquisition problem, because you have to acquire that equipment in a way which will agree with your company's policies governing fixed assets.

Perhaps it's easy to buy equipment at your plant. You have money in the bank; you know the equipment will save money; you prove your savings and issue a purchase order, paying for the equipment in thirty days. But if you really stop and think about the problem, perhaps it might be more profitable to use that money for something else, like more raw materials, additional units of labor, or the financing of research to extend your markets. If you need money for such purposes, or if you are short of cash, you should consider *using the other fellow's money for equipment acquisitions.* That's the first of my three major points.

The second point is to urge you to study the difference between *owning* and *using* a piece of material handling equipment. Again, if you stop to think about it, your savings come from *use.* You don't have to *own* the equipment to save that money. The pride of ownership is traditional in our country, but owning does not necessarily save money — it may cost *more* under certain circumstances. You wouldn't think of buying a telephone or your secretary — because you're accustomed to *renting* them by the month. Yet both are *used,* and life would be much more difficult without them. Why shouldn't you apply the same principle to the use of material handling equipment?

Let's look at my third major point, which can be simply stated: "Acquire It Now!" Regardless of whether you own or lease equipment, it will cost you less *today* than it will cost a year, or five years from today. The demands of labor and our long term inflationary trend are taking their toll of price reductions in the machinery industry. There are three elements of saving which may assist you when you acquire your equipment *now:*

1. Your equipment will cost less today, whether you lease or purchase.
2. Your savings from that equipment start reducing costs *today,* thus improving your profit position.
3. You keep your plant up to date — getting a jump on that eager competitor.

Financing Plans

That idea of using the other fellow's money may require some "digging" on your part. If you purchase on a net thirty day basis, you have the use of his money for that long. But there is a trend toward longer terms. If you talk to your vendor of material handling equipment, he may be able to suggest a choice of plans which will permit you to pay for your equipment from savings. Perhaps he sponsors his plan himself; he may use a bank, finance company, or professional lessor. You know your own company's problem — take the vendor into your confidence and see what both of you can work out. Here are a few comments on the advantages and disadvantages of plans commonly used by vendors and users of industrial equipment.

Vendor-Financed Long Term Purchase Plans

Perhaps your vendor prides himself on giving his customers a real "break" on their installment purchases. At Lincoln Electric, for instance, our industrial customers pay only 3¼% "add-on" interest when they buy equipment on time. Down payments are reasonable, too. Be sure to ask your vendor about the details of his own plan before you seek outside financing.

Rental-Purchase Plans

Most rental purchase plans commonly used in industry have featured a "nominal" purchase option. If you pay an extra dollar, or perhaps an extra 6% conversion charge, your rental payments are applied on the purchase price. In actuality, the courts have always interpreted such plans as conditional sales. Internal Revenue Service examiners dis-allow expensed rental payments made on such plans, if they find them. Thus, most manufacturers now recognize that traditional rental-purchase plans are not sound marketing devices. *Beware* of such plans.

Borrowing From Your Bank

Finance companies and professional lessors must often go to the banks to get the money they need to finance their business. In order to make a reasonable profit, they charge you more interest than they pay the bank. Thus, if you can borrow from the bank directly, you may save the extra mark-up. Your treasurer may prefer to save his bank credit for use in short-term financing of material purchases, or to help when the money coming in just doesn't match the money going out. But take a good look at any plans your banker may offer you.

Finance Company Long Term Purchase Plans

These plans may provide a maximum of ten years for payment. A substantial downpayment, usually 25%, is required. Interest is added at a typical rate of 4¼% for each year, figured in advance. Example: for a 10 year term, 42½% is added to the purchase price; this total is then divided into staggered, declining installment payments. When you translate that "add-on" rate to "simple" interest, you may find you are paying a very substantial sum for financing. But that financing will be freeing your own capital — and if you can put that capital to work, perhaps you'll be making far more profit than you are paying out in finance charges. There's one other detail to watch — some of the finance companies point out that you can meet the installment payments by using the cash freed through use of the new depreciation options. If you are buying a long-lived unit of equipment which you'd normally depreciate in 15 or 20 years, don't expect the government to allow depreciation in 10 years just because you want to match the terms of your special installment plan. Also, you may find that some manufacturers or professional lessors may offer you a lower down payment.

Leasing

Let's get back to that principle about *using* equipment. If you can reduce material handling expense by using a fork truck, it really doesn't matter whether you *own* it or not. Realizing this, many manufacturers and professional lessors have provided leasing plans for the acquisition of material handling equipment. In a true lease, title never passes to you. Your lessor hopes to get the equipment back at the end of the lease. He will recondition it and sell it as used equipment, thus picking up a secondary profit. But meantime, you have acquired a cost-reducing machine, and you're happy to pay the rental from your realized savings.

Did you think that there is some "tax advantage" in leasing? In actuality, there isn't, unless you can outguess Congress and decide whether taxes are going up or down. Payments made on a true lease contract are deductible as rental expense. Thus, they reduce profit, and you pay less taxes. This means you have more "cash flow" — more money to use for other profitable investment projects. But most leases provide for renewal periods at greatly reduced rates. Rental expense during those years is less; taxes go up. Over the total time, you may pay as much in taxes as you would have paid under a purchase-and-depreciate transaction. But the important thing is the capital-freeing which leasing may make possible. A good conditional-sale plan may free capital, too. You'll have to contrast the plans available, figure out which one benefits you the most, and act accordingly.

Not so long ago, the government issued Revenue Rulings 55-540, 55-541 and 55-542. These rulings were supposed to guide lessors and lessees in prospective transactions. The rulings are very restrictive. Before engaging in any substantial leasing transaction you should read them, or ask your public accountant and lawyer to comment on their applicability to your prospective deal. In general, if you lease a unit of equipment for three years, paying an amount of rental in the 3 year period which is equivalent to its quoted sale price, the government will declare the transaction a sale if it believes the normal depreciation period would have been much longer. The government looks on leasing as a tax-postponement device, and tax revenue is badly needed. Be sure that your vendor or professional lessor has presented you with a sound, workable leasing plan, preferably without a purchase option.

Leasing offers some subsidiary advantages to many users of material handling equipment. Some lessors require down payments of as little as 10%, compared to higher down payments required on purchase plans. Leasing plans may be fitted to the terms of certain contract work in your plant. Perhaps it is easier to get executive approval to rent equipment than to buy it. Some treasurers like to hold investment in fixed assets to a minimum; leased assets do not appear on the balance sheet. Similarly, even though long-term lease contracts are "firm", they do not appear as current liabilities on financial statements, as the public accountant usually "footnotes" the contract. Such considerations may affect the treasurer's preference for leasing if his stockholders are sensitive to fixed-asset spending, or to the "notes payable" account. Are you interested in learning more about leasing as a financing and marketing device? You might look up my article "The Pros and Cons of Leasing Equipment", Harvard Business Review, March-April, 1955.

Summary

As a researcher in the financing of equipment acquisitions, I believe that long-term financing has a definite place in marketing. If the "other fellow" is willing to let you use his funds to help acquire his equipment, take a look at his offer! And remember those other two principles — you make money from *using* material handling equipment, not *owning* it — and it will cost you *more* tomorrow!

Mr. Griesinger is assistant treasurer of The Lincoln Electric Company, Cleveland 17, Ohio.

Do You Really Need a New Plant?

IRVING FOOTLIK

A number of long-accepted ideas were thrown in the wastebasket as Mr. Irving Footlik discussed the question, "Do You Really Need a New Plant?"

His answer, in the examples he presented, was "no" as often as "yes". He began with the story of the time that he surveyed a steel warehouse in Minneapolis, decided it was not worth keeping and advised the head of the firm to abandon it. It was then that he learned that the man's wife owned the building. The firm kept the building and made it work.

This introduced his point that, before even considering a new building, you should completely exhaust the possibilities of the old one, ". . . because, in most instances, you have to make some money with the old plant before you can buy the new one." Also, he felt that it would take a year to engineer and build the new building. During this time, operations would have to continue in the old.

His next point was that any man can design a material handling system for a nice, new one-story warehouse with no posts. All he has to do is bring in the fork trucks and pallets and go to work. But the real challenge lies in "making do" with what you have. He gave examples of jobs he had done for Amour & Company and other meat packers in their crowded, split-level, multi-story buildings in Chicago. An advantage that he learned to exploit there, he said, was the help that gravity can give you in a multi-story building.

Mr. Footlik then said that, ". . . the pendulum has swung too far" towards one-story buildings. This is important to New England material handling people who must work with existing multi-story plants. Mr. Footlik said that he has found that the multi-story building is more economical to operate than the single story one. His preference is for a two-story building. He cited a case in the retail grocery business. Here, a company abandoned a four-story operation in favor of a long, narrow one-story building. Their costs in the new building were 1½ times those of the old. The reason was that the distance between shipping and receiving was too great. In the old building, they were near the elevator and the dock in every part of the building.

He went on to say that one great help to the material handling man is

that equipment has improved vastly within the last one or two years. They know this in the Mid-West and are capitalizing on it. In New England, however, material handling people are still thinking in terms of the old equipment and ideas. They are three years behind the Mid-West and had better get going before the competition from other parts of the country gets too stiff.

Mr. Footlik also feels that floor load figures are deceptive. A floor load figure is usually taken on the basis of the weakest point on the floor. Actually, with a 125-lb. floor load, you should be able to get 250 to 275 lbs. near the posts. Aisles and storage areas should be laid out with this in mind.

He also recommended that truck traffic follow the length of floor planking, rather than cross the grain, to prevent breaking of tongues and grooves. Steel or other sheeting can also protect them.

Mr. Footlik cautioned against putting material handling equipment into a building without checking its strength thoroughly. You should look for beams that have pulled away from the wall, cracks and checks in columns. Collars or bands around checked columns can increase their load-bearing capacity.

Where buildings are on the side of a hill, as so many in New England are, upper floors can often be made into ground floors by building earth ramps to the same level on the hillside. And where basement floors are only a few feet below ground level, ramps can give access to trucks and you have excellent floor load capacity available. Mr. Footlik also urged the use of bridges to join the upper floors of two or more buildings.

Another technique is removing upper floors that have low floor loads. This lowers taxes, straightens the building and takes some of the load off the lower floors. And, in the case of elevators of the cable type, capacity and speed can be altered by changing the gear trains. You can sacrifice speed for capacity and vice versa.

To take advantage of gravity in multi-story buildings, he recommends slides, chutes, drops and similar devices to exploit this low-cost motive force.

On the subject of the variety of equipment which has been designed for the multi-story building user, Mr. Footlik had high praise for the outrigger type of truck. This truck makes it possible to work on floors with lower capacities. He also mentioned the trucks with hinged forks which can go easily into elevators and other closed spaces.

As for newer developments in the equipment field, he described driverless trucks that follow white lines through plants, into elevators, to certain floors and back again with an operator. The scissors truck came in for comment too. Its value is that its scissors attachment makes it possible to load and unload at various levels. You can even service a second floor from the street level with such a truck.

Next, he emphasized the value of storing on wheels, of automatic dispatch systems, and of monorail systems that can tie buildings together as well as floor levels. Spiral chutes and conveyors were recommended for their low

space utilization and ease of use. Light-weight aluminum conveyors were described as giving greater capacity per unit weight.

Borrowing from the military, Mr. Footlik described the Navy's use of gravity loading for the lower holds. They drop materials through canvas chutes with sewn-in baffles to slow the descent of materials thorugh the hatchways.

Conveyors, he said, have become quite versatile. You can bend them around corners and make them go into all kinds of places and positions that were not possible only a short time ago.

Next, he showed the danger of having layout and material handling men working at cross purposes. One makes added problems for another. Often this produces ingenious solutions to problems that should not have arisen in the first place. One such example is J. Wellington Hall's method of getting rid of scrap in his Westinghouse punch press operation. He conveys it to a window and dumps it into containers waiting below.

Operator-less vertical lifts are ideal in multi-story buildings. You put on a load on one floor and it is kicked off automatically on another.

Another Footlik idea is that docks are nuisances. Buildings should be built without them. Costs can be cut when you find ways to eliminate them.

The remainder of Mr. Footlik's talk was a slide presentation. He showed a 1200-lb. truck that can stack 2000-lb. loads 12 feet high, and equipment designed for narrow aisle work, stressing the fact that much new equipment is available and that the material handling man must seek it out. He also showed hand pallet trucks which work directly from storage to the inside of a truck or boxcar without transferring the load.

One slide showed clamp trucks gentle enough to pick up an egg, trucks which load and unload without stopping, rubber bulk handling containers and special device freight cars.

He then showed the advantages of a one-story building, warning that masonry should be used only to a height of 4½ feet because masons use scaffolds above that height and costs double. He also warned against having an architect plan a low-cost building. Architects are paid on the basis of building cost.

Other slides showed the value of: bringing highway trucks into buildings, using flat-bed highway trucks instead of closed vans, four-way valves on fork trucks for more attachments, use of cantilever beams for larger bays, buildings with large bases, gaining clear height by running piping through beams, putting downspouts into columns, using rubber doors, keeping overhead obstructions over main aisles where they won't interfere with stacking, keeping truck beds level while loading, making proper use of levelers, and using second floors for office space.

Report on a talk by Irving Footlik, Irving M. Footlik and Associates.

Keep Your Equipment Running Profitably

FRANK C. WIER

Mr. Wier's approach to good maintenance is best summed up in his statement: ". . . some of the most important things are the human things." To get people to want to do a good job, you have to recognize them as human beings and also recognize that you can't always be kicking the tar out of them and have them do a good job for you. Specifically, you should resolve the human differences between operating and maintenance people.

To illustrate the importance of the human approach, Mr. Wier pointed out that his operation consists of running a fleet of 14 straddle carriers and 14 lift trucks to service Timken's steel plant. This fleet moves up to 1600 loads of steel per day in peak periods. To keep this going, he needs the full cooperation of every man. A pat on the back and a little understanding goes a long way towards a smooth operation.

And to keep this fleet in good running order, he needs a maintenance crew that *wants* to do a good piece of work. As he said, "We have no grease monkeys, we have *men* who deserve credit for a job well done."

One of his first slides shown dealt with maintenance of company roads. Some trips made by straddle carriers are as long as 3½ miles. It is vital, he said, to keep them from bouncing apart on poor roadbeds.

A question came from the floor on the subject of snow removal. Mr. Wier said that he did the same thing in his storage areas and roadways that a man would do in his own driveway, ". . . bestir yourself a little more than on the day it didn't snow." However, when the snow starts during working hours, it does not stop the straddle carriers. You can't put chains on them, but rock salt gives as good a grip as anything. Starting the salt when it starts to snow is the important thing in this case.

Mr. Wier stressed the fact that The Timken Company stores all in-process steel outdoors. Rusting is not a problem because there are more operations to come and being alloy steel it does not rust so fast. It is placed at an angle so that trucks would not have to turn perpendicular to the pile to pick up loads. This allows narrower aisles.

In answer to a question from the floor, Mr. Wier said his first concern was not about full utilization of storage space. Outside storage, he said, costs

only 1/125th that of building storage space. The important thing is flexibility. "We want room to move," he said.

Mr. Wier went on to describe his policy as to parts storage for maintenance, bringing out another aspect of his belief that men must be treated as human beings. There are no stock clerks in his stockroom. There is no door on it. "It is not locked . . . It would cost us about $22,000 a year to dole out these parts. We may have $40,000 or $50,000 worth on hand, $1000 of which is pilferable. We can afford to lose a few spark plugs rather than have the other system set up which would have to be manned by four men around the clock, seven days a week."

Mr. Wier pointed out that this makes the men, who pick up parts, feel trusted. ". . . we got them thinking that we think they are honest. They like it." Records of stock parts are kept by tagging each part. When a mechanic needs a part, he goes and gets it, tears off the tag, writes on it what the part is to be used for and then puts it into a box.

Such an honor system makes the mechanic feel, "That he is a part of this thing. He's for us, not against us." Thus, according to Mr. Wier, ". . . you'll get a lot more done than you will under the compulsion system, the suspicion system or the penal system."

From a practical viewpoint, he pointed out that he can stand a good deal of thievery to keep from putting on $22,000 worth of stock clerks per year.

When it comes to tire replacement, Mr. Wier said that he maintains inflated and mounted tires for all his equipment. He does his own tire replacing, but does not do any recapping.

During his own experiments with the recapping of tires, he found that costs were high. The high cost was traced to the recapping operation, particularly where repairs were needed to make the tire fit to recap. His policy regarding tire replacement is fundamentally this: "Cost per hour of the tire in use is the criteria, not how long the tire lasts."

The question was asked from the floor, "Do you keep a ton-mile record of the loads your fleet carries?" He said he did not, that the purpose of his department was flexible service to the Operating Department. The efficiency of his own department was not considered important except where it complemented that of the Operating Department. He considers his department a butler, or valet, the perfect servant.

In answer to another question, he said that his maintenance department is directly related to material handling and, as such, is his responsibility. Since he cuts back service as the work indicates management does not need to do so. He sees it as a matter of balance, ". . . to keep the right number of people . . ." on the job.

As for engine maintenance, "The main thing," he said, "is to keep the truck moving." His men take the engine out of the truck, put another in,

and send the vehicle on its way. "It's no good to tie up a $20,000 vehicle to do a ten cent tinkering job."

On the subject of torque converters, Mr. Wier said, "We don't want to trade a man's brains for a bushel of nuts and bolts. That's about what a torque converter amounts to." He feels that a man who can properly use a clutch is a better driver than the one who has to have a torque converter because he is a bad driver.

In his plant, Mr. Wier once put his views, on the human approach, to the test by taking a truck apart and showing the men how it worked. Once they knew what damage certain driving habits caused, they became more careful.

To further prove his point, that maintenance people should subordinate their interests to those of the departments they serve, he said, "People who are concerned only with maintenance want to fix an item so they will never have to repair it again. There's nothing wrong with having to maintain things in an orderly fashion. When you find maintenance people trying to fix it so well that they never have to look at it again, you find one of the common ailments of the normal, centralized maintenance department."

For each truck in his fleet, Mr. Wier keeps a blackboard on which the operator notes anything wrong with the truck. Such remarks stay on the board until it is fixed, ending contests between drivers and mechanics.

Each lift truck in the fleet is assigned to a category for maintenance and dispatching control. A central board keeps track of all trucks in the five categories: working where assigned, being repaired, away from home, awaiting repairs, and awaiting assignment. It is everyone's responsibility to keep the board up to date. Whoever changes a category, call it in to the board.

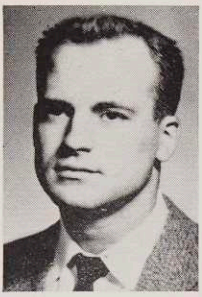
To keep the straddle trucks operating, each man examines his truck completely when he starts work. If something is wrong, he reports it. If he misses something it becomes his responsibility.

Eack truck is equipped with a service recorder. At the end of the month, Mr. Wier has a published record of wheel turning time, authorized down-time, mechanical down-time and unauthorized down-time. This record is used, according to the human approach, only to compliment the good men.

Replying to a question, Mr. Wier said that he has no replacement program. "We do not rebuild these vehicles. We do not overhaul them. But we do try to keep them in repair."

A final questioner suggested that Mr. Wier had unusual skill in selling management. He said not. "Why should I have to convince them? Let them convince themselves. I will certainly try to answer their questions, but I'll be damned if I'm going to try to sell them something. If you have to work that hard, you are working in the wrong place. It's a cooperative venture."

Condensation of a talk by Frank C. Wier, Superintendent Materials Handling, Timken Roller Bearing Company.



Seven Steps to Lower Handling Costs

J. R. Arwood

What are the techniques for cutting materials handling costs? First of all, common sense and imagination are prime requisites. And it's fundamental that the cheapest way to handle materials is not to handle them at all. Yet we seldom can eliminate handling entirely. So some means must be used to minimize the costs involved.

Probably the most successful cost-cutting techniques for general application are these:

1. Evaluate all areas where costs are attributable to materials handling.
2. Analyze the flow of materials.
3. Analyze the layout of your plant.
4. Integrate the materials handling function into the organization.
5. Analyze materials handling and packaging methods.
6. Train materials handling and packaging personnel.
7. Evaluate, select, and utilize equipment properly.

Only these seven have been identified for discussion. These can be subdivided or combined to suit particular circumstances. Basically, however, they cover the major areas for cost reduction in materials handling.

1. Evaluate all areas where costs are attributable to materials handling.

Step number one is to know what your complete materials handling requirements are and what the specific cost for performing these functions is. Nearly every company, whether a manufacturing or a service business, has its production rates on a standard in terms of units per man hour. Whether these standards are used for wage incentives or merely as direct or indirect checks on production rates, they are known. Standard data and motion and time studies help to determine what these production rates actually are.

Yet, how many companies have standard rates for handling? Do you know the number of man and lift truck hours it takes to unload a truckload of raw materials? Unless the existing rate of performance on a job is known, we cannot hope to show any real improvements. If we did, we wouldn't have a check point to evaluate the end results of our labors.

Agreed, handling functions are more variable than production functions. But where any repetitive operation is performed, a standard rate of performance can, and should be developed. Most companies — even job-lot shops — do not have so varied a workload that standards cannot be set.

For example, if you're printing newspapers, your newsprint probably arrives in the same manner. If you're making toys out of plastic materials, your raw materials probably arrive in a uniform manner. All of these functions, for which standards can be developed, will help to "pin point" your costs and will therefore make control and improvements easier. Once a stand-

ard rate of performance has been determined, it is quite easy to determine the cost of the operation by dividing it into a known cost per man hour.

"In-process" handling costs often are hidden in production costs. This area can best be controlled by production departments. Since production operations are generally under continuing study, these costs are therefore kept to reasonable minimum. But good production methods, including the inherent handlings, can more than be offset by failure of service departments to keep these operations efficient.

If operators have to wait for materials, or worse yet, to go get their own materials, production costs soon show a big increase. These costs are due to faulty materials handling, and only the best designed accounting systems will place them againt the materials handling account. Maintenance departments will also utilize a lot of man hours in handling materials.

Until all areas of handling are defined and the proper costs applied, it is impossible to know just what handling actually costs in your operation.

II. Analyze the flow of materials.

This analysis is best accomplished with process flow charts. This approach is excellent for products that follow similar paths. The chart most commonly used today employs symbols developed by the Methods Engineering Council, Fig. 1. Regardless of form, however, the chart should describe the subject being charted and give the beginning and ending points of the operation. It should show the total number of occurences of each element and the total man usage time.

The chart also should provide for graphing the various elements of the operation. It should contain symbols for the following elements: operation, transportation, inspection, delay, storage, and possibly, temporary storage. A summary comparison between the existing and proposed methods should also be included. A quick comparison between the cost of the present method and the total distance traveled, and the cost of the proposed method and the total distance traveled, will show that no direct relation exists between cost of materials handling and distance traveled.

Proper analysis of the flow chart and careful planning of proposed methods will often allow improved efficiencies — often at no capital expenditure.

III. Analyze the layout of your plant.

Those products not following similar paths can best be analyzed through layout analysis. Minor re-arrangements often are fairly inexpensive and afford tremendous savings. In one plant a saving of 55 percent in packaging and shipping labor costs was obtained through analysis of flow, methods, and layout. The only expense involved was the installation of a belt conveyor section and the minor rearrangement of the department.

The techniques of travel charting are a big asset in the analysis of layout of departmental area. Briefly, travel charting gives a ready answer to the efficiency of your layout for diverse product flows. The yardstick of layout effectiveness is the sum of the products of the mass of each part (or product) multiplied by the distance moved. The foot-pounds of work are then plotted against an efficiency curve. Rearrangements are made in the layout until the maximum efficiency is obtained. Travel charting allows a large quantity of data to be condensed for critical analysis and facilitates measuring plant layout and materials handling efficiency quantitatively.

IV. Integrate the materials handling function into the organization.

There are varying opinions regarding the proper place of the materials handling function in an organization. It is a staff function, and yet it also

gets directly involved in operation. As a staff function it is, in some companies, a part of industrial engineering. Regardless of the exact functional breakdown, however, materials handling should be delegated to a staff member of top management. Actual control over handling operations, however, will lie in the first line of supervision.

Often packaging and materials handling are combined. It's easy to see how these functions are inter-related. Today, however, it is seldom that any major change in one specific area does not affect several other areas of the business. Maximum efficiency can be gained only when all areas affected are modified according to one over-all economic evaluation. It is vital, therefore, that the organization structure provide for this broad evaluation of proposed changes.

V. Analyze materials handling and packaging methods.

This analysis should be a *continuing* function rather than a one-time affair. Plant transportation requirements change continually, and new handling equipment is developed from time to time. The most economical methods of handling should be used at all times — if the old methods are no longer effective, they should be discarded. New cost comparisons should be made frequently, and new procedures adopted whenever they will save money.

Any comparison analysis should include *all* items of cost and savings. If damage is reduced, the savings should be included. If existing equipment becomes obsolete, the loss must be included as a cost item. Loss or gain of aisle space should be calculated on the rated value of storage space. No change should be considered without first determining that the methods being used are efficient. Remember, however, that no method, no matter how good on paper, effects an economy until it works.

VI. Train materials handling and packaging personnel.

Any methods change creates a need for training or retraining of the employees involved. Efficiency results only when all employees are properly trained. This is obvious. But what *is* proper training?

Training is not: just telling people what to do, or showing them how to do something, or assigning people to work with other employees who possess greater skills.

Training is: passing along the "know-how" through carefully selected methods, according to a well conceived plan, by competent and well prepared people, in a suitable learning climate to shorten learning time and experience; telling, plus showing, and supervising practice, until the desired change is achieved in the learner's skill, attitude, or behavior.

For a training program to be effective, management must recognize the need for it, the trainer must have an understanding of how people learn; and the trainees must have a desire to improve their skills. It is important to remember that "to build an efficient business, you must first build efficient men." Training is a good investment.

VII. Evaluate, select, and utilize equipment properly.

It is not always easy to come to a decision as to whether expensive changes should be made because cost figures are not usually set up to provide the necessary data. The problem is much like selecting new machines to replace old ones. In both cases it is necessary to remember that the most important thing is the *cost per unit of product*, not the initial investment. We should exhaust all possibilities for improvements without capital expenditure prior to purchasing expensive equipment.

Condensation of a talk by J. R. Arwood, Project Engineer, Bakelite Company.

Honors and Awards

Recognition for outstanding services and contribution to the Material Handling Profession is provided by two AMHS awards.

- CERTIFICATE OF MERIT—Awarded annually to members who have been of outstanding service to their chapters or to the National Society, or who have made meritorious technical or educational contributions in the field of Material Handling. Since the inception of the Society in 1949, this certificate has been awarded to 35 members.

- GOLD LIFE MEMBERSHIP CARD—Awarded annually to National AMHS Presidents after one year of service in office.

1949-50 Allen K. Strong	1954-55 Douglas A. Gillespie
1950-53 Donald W. Pennock	1955-56 J. Wellington Hall
1953-54 George A. Smith	1956-57 Herbert S. Jones

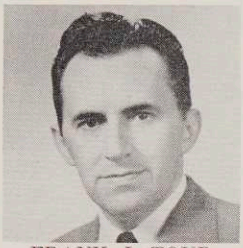
The Society also sponsors two regular competitions for technical papers as a means to encourage, stimulate and reward creative effort in the field of Material Handling.

- CLARK AWARD—An annual competition for papers dealing with a designated problem or subject. Awards are based upon competent presentation, originality, and best analysis of the specified Material Handling Study.

- WUNSCH FOUNDATION AWARD—A regular competition for papers on the professional aspects of Material Handling and dealing with topics in the area of mobile equipment and analogous methods.

Since 1952, authors of 30 technical papers have participated in approximately $10,000 in prize awards.

Winners of 1957 CLARK AWARDS Show Their Checks (left to right): M. E. Richardson, Chairman, AMHS Honors & Awards Committee; H. H. Hall, Aluminum Company of America, Fifth; Samuel Boaze, Jr., Creole Petroleum Corp., First; Mrs. Margaret Greene, Trans-Lift Handling Equip. Co., Third; Leonard J. Churches, Ford Motor Co., Second; W. G. Goninan, Receiving for W. D. Roch, Equipment Engineering Services, Fourth; and Glen Johnson, Clark Equipment Co., representing the sponsor.



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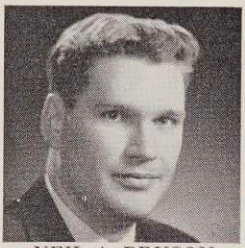

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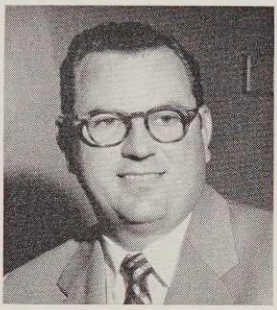

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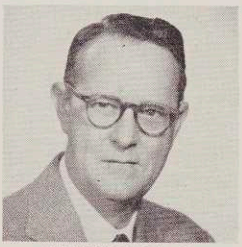

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Membership and Chapter Development

Fulfilling its position as the fastest growing technical society in America, AMHS closed its fiscal year on June 30, 1957 with 5364 members, an increase of 1045 over the previous year's total. Membership in the New England Chapter showed the largest gain, with an increase from 284 to 355 members. Montreal, with 444 members, maintained its position as the largest AMHS chapter. During the year, the Los Angeles and Pittsburgh chapters reached the level of 200 members for the first time. Other chapters with 200 or more members were Chicago, Detroit, Houston, New Jersey, New York and Philadelphia.

Region I Vice President Stephen Traudt, left, presents AMHS Charter to Narragansett Chapter President George G. Carothers.

During the year, new charters were granted to the Flint (Michigan), Middle Tennessee (Nashville), Narragansett (Providence, R. I.), and Windsor (Ontario) chapters, bringing the total to 44 AMHS chapters in the United States and Canada.

In addition to the members who are affiliated with local chapters, AMHS has 124 members-at-large in areas of the United States and Canada not served by chapters and in Australia, Austria, Brazil, China, Cuba, England, Finland, France, India, Italy, Mexico, the Netherlands, New Zealand, Norway, Philippines, Saudi Arabia, South Africa, Sweden, Switzerland and Venezuela.

How an AMHS Membership Benefits You

As an AMHS MEMBER, you receive:

- The opportunity to attend regular meetings of the AMHS Chapter in or near your city where, through carefully planned programs, you will learn from the experience of panel members and featured speakers who are recognized experts in the field of Material Handling.
- The chance to take part in the free exchange of information on Material Handling with the local group of men most prominent and active in your profession.
- The prestige of membership in a young, vigorous, rapidly-growing society which is dedicated to the advancement of the theory and practice of Material Handling.
- Advice and guidance in the selection of educational courses in Material Handling and related fields at accredited colleges and universities, extension schools, and special conferences.
- Reports on the latest developments in material handling methods and equipment as provided by free subscriptions to MODERN MATERIAL HANDLING, in which is incorporated THE AMHS JOURNAL, and FLOW magazines.
- Reprints for your personal files of significant articles which have been selected by an AMHS Committee that reviews all current published information on Material Handling.
- Up-to-date listings of authoritative technical books, bibliographies and films dealing with material handling techniques and equipment. Most listed publications can be purchased through AMHS at a discount, and many books and films may be borrowed from the Society's Material Handling Library.
- Regular reports from the AMHS Employment Committee which list desirable vacant positions as well as available personnel.
- A chance to win national recognition and valuable cash awards in AMHS-sponsored competitions for technical papers on various phases of Material Handling.

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WESTERN UNION

TELEGRAM

W. P. MARSHALL, PRESIDENT

1201

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International Letter Telegram

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BA195 DEA278

DE BLA033 NL PD=BLOOMINGTON IND 3 = 1957 DEC 3 PM 12 36

NORBERT WIENER MASSCHUSETTS INSTITUTE OF TECHNOLOGY=

CAMBRIDGE MASS=

MAY WE QUOTE FROM THE HUMAN USE OF HUMAN BEINGS IN THE WINTER BUSINESS HORIZON, QUOTE ANY MACHINE CONSTRUCTED.. ..SEATED ON THE WHIRLWIND. UNQUOTE NEED ANSWER IMMEDIATELY FORPRESS TIME WIRE COLLECT=

ELIZABETH WOLTER BUSINESS HORIZONS INDIANA UNIVERSITY=.

Answer - sent collect
Cannot locate Passage
Without Further Reference

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

December 3, 1957

Dr. Eugene Mittelmann,
549 West Washington Boulevard
Chicago 6, Illinois

Dear Dr. Mittelmann:

I have your letter of November 25th and am very sorry to have to tell you that I am unable to accept your invitation to participate in a panel discussion on March 25th.

I am also sorry that I was not in my office on the two occasions when you called. However, I believe my secretary has explained the situation to you, in which I find it impossible to take on any further assignments than those to which I am already committed.

Thank you for your kindness in asking me, and please believe it is with deep regret that I must decline.

Sincerely yours,

Norbert Wiener

NW:AD

[ca 12-4-57]

Geoffrey Herbert Kalish

1770 East 9th Street, Brooklyn, N. Y.

Dr. Weiner
M.I.T.
Cambridge, Mass.

Dear Sir,

I am an engineering student at Brooklyn Technical High School, majoring in physics. For my term paper I am writing on "The Guidance of Missiles as an Analogue to the Migration of Birds." I would greatly appreciate any information that you could send to me concerning this topic.

Sincerely yours,

Geoffrey Kalish

Geoffrey Kalish

[ans 12/9/57]

184-19 - 89 Avenue
Hollis 23, New York
December 4, 1957

Dear Sir,

I am writing a report on the topic "The Guidance of Missles (ICBM) as an Analogue to the Migration of Birds" and I would appreciate any information dealing with the guidance of missles. (ICBM).

Thank you very much for you cooperation.

Yours truly,
Mr. Peter Poutouves

[ans 12/6/57]

Herbert Ringel [ca 12-4-57]
130 E. 2nd St
N.Y.C. 9, N.Y.

Dr. Norbert Wiener
C/o M.I.T.
Cambridge 39, Mass.

Dear Sir:

My Physics instructor has spoken of your work in the field of Cybernetics and that is why I am contacting you.

I am a student at Brooklyn Technical High School. My class has been given the assignment of writing a technical report on the subject of:

"The Guidance of Missles as an Analogue to the Migration of Birds." By missles, I mean self-guiding projectiles.

Since Cybernetics is involved to some degree, I would appreciate any aid which could be given.

I would also like to know if any research is progressing along this line.

Thank you for your time and I hope I have not inconvenienced you.

Yours sincerely
Herbert Ringel

[ans 12/6/57]

853 Empire Blvd.

Brooklyn I3, N.Y.

December 4, I957

Dr. Norbert Wiener

Department of Mathematics

M.I.T.

Cambridge 39, Mass.

Dear Dr. Wiener:

For my Physics class at Brooklyn Technical High School I have been asked to write a technical report on "The guidance of missiles as an analogue to the migration of birds." I would appreciate very much your sending me any literature or matter on the above topic.

Very truly yours,

Stephen Rosen

Stephen Rosen

[ans 12/6/57]

December 4, 1957

Dr. Berndt
Berlin Schoneberg
Kufsteiner Strasse 69
Berlin, Germany

REGRET INABILITY TO DELIVER PAPER IN TIME FOR BROADCAST IN DECEMBER FOR REASONS OF HEALTH LETTER FOLLOWS

Norbert Wiener

December 4, 1957

Mr. John G. Kelly
Assistant Dean of Instruction
East Contra Costa Junior College
Golf Links Road
Concord, California

Dear Mr. Kelly:

In reply to your letter of November 27th, I would like to submit the name of Gregory Bateson of Palo Alto, California, as the person in my opinion most likely to be of assistance to you in your lecture-discussions.

I trust this is the information you desire.

Sincerely yours,

Norbert Wiener

NW:AD

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From Norbert Wiener

Mass. Inst. of Tech. 77 Mass Ave Cam. (Address)

Addressed to John Kobler Sat. Eve Post

Curtis Publishing Co. Philadelphia 5 Pa.

(Address) (Accepting employee)

88.

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(Signature or name of addressee)

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(Signature of addressee's agent—Agent should enter addressee's name on line ONE above)

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HELP SAVE A LIFE
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RETURN TO →

NAME OF SENDER
Norbert Wiener

STREET AND NO. OR P.O. BOX
Mass. Inst. of Technology

POST OFFICE
77 Mass. Ave

STATE
Cambridge, Mass.

POD Form 3811
Apr. 1955

December 4, 1957

Mr. John Kobler
The Saturday Evening Post
The Curtis Publishing Company
Philadelphia 5, Pennsylvania

Dear Mr. Kobler:

I am submitting herewith the article which you requested for the Saturday Evening Post. Of course I should expect to pass on any editing which you may see fit to do. If you accept the article, and the editing meets with my approval, then I understand our agreement to be that you are to send me a check for Twenty-five Hundred Dollars. Please do not send me this check until I have seen and approved of whatever editing you may do.

I shall accept this check, if you see fit to send it, with the understanding that no editing shall take place after that which you have submitted to me and of which I have approved. This is important as I am putting a considerable amount of new work into the article, and my scientific good name depends on the precise form in which it is stated.

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

December 4, 1957

Mr. John Kobler
The Saturday Evening Post
The Curtis Publishing Company
Philadelphia 5, Pennsylvania

Dear Mr. Kobler:

I am submitting herewith the article which you requested for the Saturday Evening Post. Of course I should expect to pass on any editing which you may see fit to do. If you accept the article, and the editing meets with my approval, then I understand our agreement to be that you are to send me a check for Twenty-five Hundred Dollars. Please do not send me this check until I have seen and approved of whatever editing you may do.

I shall accept this check, if you see fit to send it, with the understanding that no editing shall take place after that which you have submitted to me and of which I have approved. This is important as I am putting a considerable amount of new work into the article, and my scientific good name depends on the precise form in which it is stated.

Sincerely yours,

Norbert Wiener

NW:AD
Enc.

[ans. 1-6-58]

December 5, 1957

Dr. Menard M. Gertler
Chairman, Committee on Symposium on
Congestive Heart Failure
The New York Academy of Sciences
2 East Sixty-Third Street
New York 21, New York

Dear Dr. Gertler:

I have received your letter of November 26th. The temptation to accept your kind invitation to speak at the conference on March 18 is indeed great, but I find that it is impossible for me to take on any engagements other than those to which I am already committed. So much of my time is now devoted to scientific work that I am very much limited in outside activities.

Thank you again for inviting me.

Sincerely yours,

Norbert Wiener

NW:AD

December 6, 1957

Dr. Walter Appleman
1245 So. La Jolla Avenue,
Los Angeles 35, California

Dear Dr. Appleman:

I am sorry your letter of November 8th has remained so long unanswered, but due to pressure of work I have been unable to reply sooner.

I find that I do not have Mr. Robert J. Lee's address and so cannot comply with your request.

With kind regards,

Sincerely yours,

Norbert Wiener

NW:AD

December 6, 1957

Mr. Lawrence M. Altz
1236 Union Street
Brooklyn 25, New York

Dear Mr. Altz:

Professor Wiener has received your letter of December 3rd requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 6, 1957

Mr. Roger Challop
390 East 8th Street
New York 9, New York

Dear Mr. Challop:

Professor Norbert Wiener has received your letter of December 2nd requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 6, 1957

Mr. Walt Geisenhainer, President
Brodie Industrial Trucks, Inc.
50 Commercial Street
Malden 48, Massachusetts

Dear Sir:

In accordance with the request contained in your letter of December 3rd, enclosed please find a photograph of Professor Norbert Wiener, which it is hoped will suit your purposes. As his talk will not be in written form, it is not possible to send you excerpts or an outline for the Trade Journals and newspapers.

Very truly yours,

Secretary to
Professor Norbert Wiener

[ans 12/16/57]

December 6, 1957

Mr. Konrad Owens
Wasyl Myroslav Hoca
230 Forest Street
Oberlin, Ohio

Dear Sir:

Your letter of December 2nd to the Massachusetts Institute of Technology regarding the field of cybernetics has been referred to me. I suggest that information on this subject can be found in "Thinking By Machine" which was recently written by Pierre de Latil, and in my own book on "The Human Use of Human Beings".

Sincerely yours,

Norbert Wiener

NW:AD

December 6, 1957

Mr. Peter Poutouves
184 - 19 - 89 Avenue
Hollis 23, New York

Dear Mr. Poutouves:

Professor Wiener has received your letter of December 4th requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 6, 1957

Mr. Stephen Rosen
853 Empire Boulevard
Brooklyn 13, New York

Dear Mr. Rosen:

Professor Wiener has received your letter of December 4th requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 6, 1957

Mr. Herbert Ringel
130 East 2nd Street
New York City 9, New York

Dear Mr. Ringel:

Professor Wiener has received your letter requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 6, 1957

Dr. Joseph S. Roucek
395 Lakeside Drive
Bridgeport 6, Connecticut

Dear Dr. Roucek:

I have your letter of November 29th. Due to pressure of work I find it will be impossible for me to contribute a chapter to AUTOMATION and SOCIETY, although I do appreciate your having asked me to do so. I do not know of anyone at the moment to suggest to you, and am sorry I cannot be of any assistance.

With kind regards,

Sincerely yours,

Norbert Wiener

NW:AD

December 6, 1957

Dr. Joseph W. Still
1940 Biltmore Street, Northwest
Washington 9, D. C.

Dear Dr. Still:

In answer to your letter of November 15th, I feel that it would be unwise for you to send me your presentation as I am unable to spare the time necessary to read it. I regret that this is so, but due to pressure of work my time is completely taken up.

Sincerely yours,

Norbert Wiener

NW:AD

[ans. 11/15/57]

December 6, 1957

Department of Physics
Brooklyn Technical High School
Brooklyn, New York

Gentlemen:

Professor Wiener has received several letters within the past few days from students in your school requesting information that will assist them in writing a report on the guidance of missiles as an analogue to the migration of birds. It appears that his name has been given to these students as he is an authority on cybernetics.

He has asked me to write and explain that while he does not wish to be unobliging, he does not feel that it is within his province to supply material to students, and would be grateful if this practice of suggesting that the students write him for material be discontinued.

Very truly yours,

Secretary to
Professor Norbert Wiener

ANIMAL BEHAVIOR ENTERPRISES
TELEPHONE NA 4-1801 • ROUTE 6
HOT SPRINGS, ARKANSAS

fcb

December 7, 1957

Dr. Norbert Wiener
Department of Mathematics
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dr. Wiener:

We are taking the liberty of mailing you a copy of a privately published theoretical monograph. This theory developed out of some rather unique experiences, and it seemed to us so startling that before attempting a more formal treatment, we thought it would be wise to send copies to a number of people who would be in a position to criticize and evaluate it. In this fashion we hope to get some reaction before proceeding further with the theory and its many offshoots.

We would be extremely grateful if you would be kind enough to read this paper and give us the benefit of your thinking on it.

Sincerely,

Keller Breland

Keller Breland

December 7, 1957

76 West 85 St Apt 3W
New York 24, New York

Mr. Norbert Wiener
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Mr. Wiener,

I have recently read what TIME printed of your talk at Wabash College and I must admit that it sang to me - a little off key, but it sang nonetheless. The theme that carried the song to me was how poetically microcosmic your message was and how clearly it corresponded to the macrocosmic madness of a society in which man is the instrumentality of his own civilization rather than the master of it.

What seems to be at the root of the madness is the order of precedence of ends and means. An idea - and it is ideas with which you are most occupied - is a technical means. Like any technical means it ultimately subserves a need for organic-psychic gratification. It does this by the process of adaptation, or by the modification of environment to make it yield more, or to make it more secure. The ultimate aim of means is the end of living.

Now all this would seem elementary enough and hardly worth mentioning if the actual relationship between ends and means was this simple, but it is not. The social order of things is quite at variance with natural processes and original orders. Civilization is an insidious specialization which has created an endemic inversion between means and ends. The more civilized we become the more preoccupied we are with means rather than ends and the more emphasis we put on things rather than on the functions things effect. Words become more important than the things they represent; the quality of sound more important than the quality of music; more attention is given to the wedding than to the marriage; the gold sanctifieth the altar; form exceeds content, ceremony substance, and technique fulfillment. Generations of skeptics, who know the cost of everything and the value of nothing, drive a busily pointless world before them, and all civilized men embrace means for ends (literally the end of them) and pursue the idea, like art, for its own sake, to be resolved only for the sake of resolving it.

Allow me to recapitulate historically. The fundamental human problem is organic, to get enough to eat and drink and to secure protection and shelter. As a complex of transmissions, such as lungs, blood stream and digestive tract, etc., the individual must adequately master his medium of survival; or, to put it another way, he must master the relationships between himself and his environment. Logistically, then, organic survival is a combination of two problems, that of confluence (bringing these transmissions into conjunction with the flow of power), and mobility (finding shelter and protection).

In man the means for accomplishing these ends are numerous and of extraordinary quality. They consist of qualitative functions such as sight, thought, the opposable thumb, constant blood temperature, and love. But the supremest tool of all, because it mobilizes all the others with such thorough effectiveness, is civilization. Civilization is the master instrumentality of mankind. By directing and combining man's remarkable functions, especially libido and intelligence, it adds speech and tradition, the division of labor and the increment of invention (qualitative solutions of its own) to everything else in an overwhelming tour de force.

Logistically CIVILIZATION offered the point of convergence as the solution to the problems of confluence and mobility. Now, rather than having to roam the countryside at his hazard for his needs, the individual could find food, shelter, sexual partners, and the protection of numbers in and around the market place. Now, rather than having to struggle with nature he must deal with other men. The prerequisites were to accept the astringent conditions of the market place and to possess some form of social currency.

But if civilization is the means of our means it is also the end of our ends. With the advent of the market place men were no longer "in a position to work freely on their own" because the tasks were "divided up by the (unconscious social) administration into small pieces and (human beings) were employed for very specific purposes." Men no longer dealt with essences, much less with whole things, and as a consequence their curiosity ebbed and they became discouraged. As interest in his original activities waned, interest in the activities and rewards of the market place waxed: what was lost originally in one form was sought elsewhere in another. Life was eclipsed by busyness, the fulfillment of confluence by the technique of convergence, ends by means. The "growing attitude of worship for the gadget" was not simply an addition to new occupations, but a compensation or substitution for old ones that had been lost - and busyness itself was the master gadget of the new order.

In the market place the first task was getting ahead of one's competitots and human relationships could wait, forever if necessary. Finally, as the center of interest and involvement changed from a physical struggle for survival against nature to a psychological struggle in the market place, the social inversion took place.

The inversion occurred between the individual, as he represented his own limited interests, and the group, whose paramount interest he was also forced to represent. It occurred because of the fundamental dependence relationship between the group and the individual; the fact that we need the group more than it needs us. The concommitant to this dependence is the all but absolute authority of the group which caused it to assume more importance than the individuals on whose behalf it was instituted. As a consequence, rather than the individual using this aggregate of means to the end of achievement, he became subservient to the very instrumentality he had (unconsciously) instituted to protect and conserve himself. The group, dominating and authoritarian, mobilized its members as the means of its own existence, of and for itself; means became ends and ends became means.

This inversion, as it applies specifically to the market place, is expertly expressed by Veblen in his "Theory of the Leisure Class:"

> "Industry is carried on for the sake of business, and not conversely; the vital point in business practice is vendability of output, its convertability into money values, not the serviceability for the needs of mankind."

As a man with problems to solve you lament chiefly that the manipulation of machines is assuming more importance than the ideas fed into them. But have you reflected that your problem - the idea - has a specious autonomy? that ultimately it subserves life but that life was eclipsed by the idea just as the idea is now being eclipsed by the technical means used to solve it? that finally science, particularly basic research, is simply the data processing machine of life?

It seems to me that the first remove, which obscures natural processes and original activities is ludicrous, savage and pitiful enough; but that the second remove, at which point the means themselves become obscured, is the reductio ad absurdam.

We are no closer to essentials than the cave painters of Lascaux and Altimira, who were consumate masters of vital and essential objects of their environment; they painted animals of all sorts with a skill that will probably never be surpassed because there will undoubtedly never again be artists with such a need to master objects with images, nor any with more meaningful objects than these to master.

But these same artists could not draw man as anything but a crude stick figure. The inference that individual men were an almost casual object to the painters is inescapable. This tradition of the mastery of environment and of the techniques of modifying it - for the painting was an animistic technique - and the ignorance of man as an object of that environment, has come down to us almost unchanged. The world around us is vivid and full of life while man remains a stick figure at the bottom of an obscure passage in the depths of a dark cave.

Richard Miller

12/8/57

My Dear Dr. Wiener,

I am a student in Brooklyn Technical High School in New York City. I am in the 5th term and am currently taking Physics. We have to do a term paper on "The Guidance of Missles & Migration of Birds. We have to show some connection between the two. I have an idea on the connection, but I would rather gain information and draw conclusions at the end. Any correspondence, idea, or leads will be very gratefully accepted.

Yours very sincerely,
Clark Burdman
317 Albany Ave.
Brooklyn 13, New York

[ans 12/12/57]

DEC. 8, 1957

2124 31 Street

Astoria 5, L. I.

N. Y.

Gentlemen:

I am an honor student of Brooklyn Technical High School in quest of information for my physic's term report. My topic is "The Guidance of Missiles as an Analogue to the Migration of Birds." Available literature or data regarding my report will be greatly appreciated.

Yours very truly,

Vincent Grillo

P. S. - Information pertaining to the field of Cybernetics will also be of tremendous importance to my report.

[ans 12/12/57]

GAMMA CHAPTER OF NEW YORK
OF
PHI BETA KAPPA

THE COLLEGE OF THE CITY OF NEW YORK
139TH STREET AND CONVENT AVENUE
NEW YORK 31, NEW YORK

December 8, 1957

Professor Norbert Weiner
Massachussets Instiute of Technology
Cambridge, Mass.

Dear Professor Weiner:

We should consider ourselves honored if you would be good enough to consent to address our chapter on a topic of your choice. We are one of the oldest chapters in New York State (the chapter of Felix Frankfurter, Morris R. Cohen) and you would have a most intelligent and interested audience. Our next meeting will beat the Biltmore Hotel, some evening late in February or early in March, depending on your wishes.

We can offer you $100. to cover your expenses.

I thank you in advance for your gracious consideration of our invitation.

Very sincerely yours,
Louis F. Sas
Louis F. Sas
President

[ans 12/11/57]

441 West 21st Street
New York 11, N.Y.
December 9, 1957

Dear Sir

The educational idea I take the liberty of enclosing is designed to suggest a possible way in which existing agencies and institutions could check bureaucratic expansion.

It is being sent to newspaper editors and United States senators, and also, before the meetings of learned societies, to a few university professors.

Yours very truly

W. D. Lippmann

Professor Norbert Wiener
Massachusetts Institute
of Technology
Cambridge, Mass.

RCA VICTOR COMPANY, LTD.

RENFREW, ONTARIO
CANADA

Dec. 9, 57

PLEASE REFER REPLY TO.

Dr. ing. Eduard Luedicke

675 Coleraine
Renfrew / Ontario
Canada

Herrn Prof. Dr. Wiener
M. I. T.
Cambridge

Sehr geehrter Herr Professor!

Ich würde es ausserordentlich begrüßen, wenn Sie mir die Möglichkeit geben würden Ihren akademischen Rat in Anspruch zu nehmen.

Vor dem Kriege habe ich bei Telefunken unter Herrn Prof. Schröter an der Fernsehentwicklung gearbeitet, dann 1950 das Dipl. Examen an der Techn. Universität Berlin absolviert und 1955 mit einer Arbeit aus der Fernsehimpulstechnik bei Herrn Prof. Hasslsa, Karlsruhe und Siemens und Halske promoviert. April 1955 kam ich nach Canada zu RCA wo ich 1956 Chefingenieur der RCA Komponentsplant in Renfrew wurde.

Ich glaube fühlen zu können, daß die rein wissenschaftliche Seite an meiner gegenwärtigen Arbeit doch relativ so ausgeprägt

ist, wie ich erst annehmen glaubte und würde es sehr schätzen einige Hinweise zu erhalten, in welcher Richtung ich meine privaten Studien ausdehnen sollte.

Sollten Sie die Zeit finden, verehrter Herr Professor mir eine kurze Unterredung zu gewähren, würde ich mich sehr freuen.

Mit vorzüglicher Hochachtung

Ihr

Edward Lucie-Smith

[and 1/13/57]

R. R. # 2, Box 48
Edwardsburg, Michigan
December 9, 1957

Massachusetts Institute of Technology
Cambridge 39
Massachusetts

Gentlemen:

I was informed by the Cryogenic Laboratory of the National Bureau of Standards that you have a formal course in cryogenic ~~eg~~ engineering. I am a senior in high school and plan to become a cryogenic engineer. I would appreciate very much any information you can give me on your course in cryogenic engineering.

Yours truly,
Ray Radebaugh

No course

[ans 1-2-58]

Ray Radebaugh
R. R. #2, Box 48
Edwardsburg, Mich.

EDWARDSBURG
DEC 10
5 30PM
1957
MICH.

UNITED STATES POSTAGE
THREE 3 CENTS

L-276

Massachusetts Institute of Technology
Cambridge 39
Massachusetts

December 9, 1957

Mr. Robert D. Brandsberg
2690 Huron Street
St. Paul 13, Minnesota

Dear Mr. Brandsberg:

I think you are working in an interesting field. At present P. Masani and I are working together on the sort of functions which Nevanhinna calls berchraenktartig. The paper we have coming out in the Acta Mathematica is not precisely on the subject but is closely related to it, and may be interesting to you.

Sincerely yours,

Norbert Wiener

NW:AD

December 12, 1957

Mr. Clark Burdman
317 Albany Avenue
Brooklyn 13, New York

Dear Mr. Burdman:

Professor Wiener has received your letter of December 8th requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 9, 1957

Dr. Frederick Eby
The University of Texas
Austin, Texas

Dear Dr. Eby:

I am sorry your letter of November 16th has had to remain so long unanswered, but I have been extremely busy.

You may use the sentences you wish from my address given at Wabash College, and I thank you for your interest in it. As far as I know the address was printed only in the newspapers at the time it was given and in Times Magazine under date of October 21, 1957. I hope this information and approval have reached you in time to be useful for your purposes.

Sincerely yours,

Norbert Wiener

NW:AD

December 12, 1957

Mr. Vincent Grillo
2124 31st Street
Astoria 5, Long Island
New York

Dear Mr. Grillo:

Professor Wiener has received your letter of December 8th requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 9, 1957

Miss L. Marion Jones
16, Comely Bank Grove
Edinburgh 4,
ENGLAND

My dear Miss Jones:

Many thanks for your interest in my work. It is very agreeable to receive a letter from a centenarian, particularly as next Sunday my mother will pass her 90th birthday.

As to the work I am doing on cibernetics, together with its human applications, while various general meetings are being held on the subject I am not enthusiastic over the prospect of a mass attack. The real work to be done will be performed by individual scholars in their offices and laboratories, and in my opinion the role of great meetings and big cooperative effort has been much overdone in the last few years. I continue to work in related fields, and in particular concerning organization problems in the human brain.

Thanking you again for your kind letter, I remain,

Respectfully yours,

Norbert Wiener

NW:AD

December 9, 1957

Mr. Geoffrey Kalish
1770 East 9th Street
Brooklyn, New York

Dear Mr. Kalish:

Professor Wiener has received your letter requesting material for a report you are to write on an analogue between the guidance of missiles and the migration of birds. While he does not wish to appear unobliging, he does not feel that there is any material at his disposal to suggest.

Very truly yours,

Secretary to
Professor Norbert Wiener

December 9, 1957

Dr. Hans Strauss
315 Central Park West
New York 25, New York

Dear Dr. Strauss:

Please excuse my delay in acknowledging your valuable monograph on electroencephalography. It is most useful for me to have at my hand so comprehensive an atlas of the forms of waves observable in the field. I assure you the book you so kindly sent me will be a main tool in my further work.

With pleasant memories of the Virchow meeting, my wife and I remain,

Sincerely yours,

Norbert Wiener

NW:AD

Please send away

The Rudolf Virchow Medical Society

cordially invites you to attend its Annual

Rudolf Virchow Lecture

at the

New York Academy of Medicine

Hosack Hall

2 East 103rd Street, New York City

on

Monday, November 4th, 1957

at 8:30 p. m.

Rudolf Virchow Medical Society
in the City of New York
Founded 1860

PROGRAM

•

President's Address

RUDOLF VIRCHOW LECTURE

Rythms in Physiology with Particular Reference to Encephalography

Professor Norbert Wiener
M. I. T.
Cambridge, Massachusetts

Presentation of Virchow Medal

Nomination of Officers

Collation

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1040 Park Ave
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TEMPLETON 8-8875

10.Dezember 1957

Professor Dr.Norbert Wiener,
Ca mbridge 39,Mass.

Hochverehrter,lieber Herr Professor Wiener:

Ich hoffe,dass Sie sich nicht"verfolgt" und gelangweilt fuehlen,wenn ich Ihnen heute den beigefuegten Auszug schicke.Ich bin der in meinem frueheren Brief erwaehnten Notiz eigentlich nachgegangen,um eine etwaige Verwandtschaft mit Akiba Eger klarzustellen.Das ist mir nun zwar nicht gelungen;aber das,was herausgekommen ist,ist doch auch interssant,besonders die hervorragende mathematische Begabung. Zwei der in dem Nachruf genannten Rabbiner habe ich noch persoenlich gekannt:Dr Cohn aus Kattowitz und Dr.Kopfstein aus Beuthen. Der letztere wurde auch von der nicht-juedischen Bevölkerung wie ein Heiliger verehrt.Als er starb, legte die ganze Stadt Trauer an und die "bewaffnete Macht" der Republik paradierte bei der Beerdigung.

Der Auszug stammt aus "Juedische Presse"1892, S.306;und zwar hat der Schwiegervater meines Sohnes,Rabbiner Dr.Hahn,das Original in der Bibliothek des juedisch-theologischen Seminars ausfindig gemacht und mir den Auszug geschickt,den Sie hiermit erhalten.

In der Hoffnung,dass es Ihnen gut geht,bin ich mit den besten Wuenschen fuer die Feiertage und das neue Jahr und herzlichen Grüssen fuer Sie und Ihre Gattin von uns beiden,

Ihr
Ihnen sehr ergebener

Hans Biberstein

Juedische Presse

Beuthen, Oberschlesien

24.Juni 1892 , S. 306

Am vergangenen Dienstag ist wieder ein Mann von uns geschieden, der in des Wortes vollster Bedeutung als ein Grosser in Israel bezeichnet werden muss: R.Manachem Wiener hat das Zeitliche gesegnet. In Krotoschin (Prov.Posen) im Jahre 1810 geboren, gehoerte der Verblichene einer hochangesehenen Gelehrten-Familie an. Sein Vater bekleidete "honoris causa" das Amt eines Dagan, daselbst und fuehrte den Sohn, der in fruehester Jugend schon ganz ungewoehmliche Begabung zeigte, in das Studium unseres heutigen Lehre ein. Kaum in das Juenglingsalter eingetreten, besass der Verstorbene schon eine solche Fuelle talmudischen Wissens, dass er nicht nur in seiner Vaterstadt, die damals eine "Mutter in Israel" genannt wurde, Aufsehen erregte, sondern weit ueber dieselbe hinaus sich einen klangvollen Ruf erwarb. Dabei vernachlaessigte er auch nicht die Aneignung profanen Wissens, besondere Neigung zeigte er fuer Mathematik, Astronomie und die philosophischen Schriften und so weit ein Autodiktat auf diesem Gebiet es nur bringen kann, hat der teure Dahingeschiedene durch Fleiss und bewundernswerten Scharfsinn es gebracht. Bei alldem mangelt es ihm nicht an Verstaendnis und Kenntnis fuer das praktische Leben. Im Haus des Vaters wurde ein Ledergeschaeft betrieben, und in diesem war er bereits in jungen Jahren der jugendliche Leiter. Er verheiratete sich mit der einzigen Tochter des seiner Zeit angesehenen und wegen seiner Froemmigkeit und Wohltaetigkeit weit geschaetzten R.ARON BERLINER aus Ostrowo, wohin er nach der Hochzeit seinen Wohnsitz verlegte, um daselbst ein Geschaeft zu begruenden. Diese Gemeinde hatte das Glueck ihn ueber ein halbes Jahrhundert den ihren zu nennen. Dort wirkte er als Vorsteher der Gemeinde, als der Mittelpunkt des

gesamten religioesen Lebens. Was daselbst an Werken von Thora, Aboda und Gemiluth-Chassadim geschah, hat der Verstorbene mit seiner tiefinnigen Froemmigkeit, seiner erstaunlichen Gelehrsamkeit, seinen durchdringenden Verstand und seiner hingebenden Opferwilligkeit, welche seine Kraefte ueberstieg hervorgerufen,gefoerdert und unterstuetzt. Mit diesen Tugenden verband der herrliche Mann unbeschreibliche Sanftmut, ruehrende Bescheidenheit, unbeugsame Wahrheitsliebe, Strenge gegen sich selbst und gegen Andere: kurz- in Allem das Ideal eines Jehudi und Menschen. Wie er seine Kinder (8 Soehne und 6 Toechter) zu gottesfuerchtigen, glaubens-und pflichttreuen Jehudim erzog, so waehlte er auch Schwiegersoehne und Schwiegertoechter, welche allesamt in seinem Geist handeln und leben, als Muster tiefsinniger Froemmigkeit. Vor etwa 4½ Jahren uebersiedelte er hierher um im Kreise seiner Kinder und Enkelkinder anderen Verwandte und Freunde, in der Naehe des von ihm verehrten, ihm dreifach verschwaegerten R.Moses Guttmann, der ihm leider vor 1½ Jahren im Tode vorangegangen, den Abend seines Lebens zuzubringen. Von koerperlichen Leiden und Gebrechen heimgesucht, starb er im 82.Lebensjahr, tief beklagt und betrauert von der ganzen Gemeinde. Am 25.Siwan wurde er auf dem hiesigen Friedhof zu Grabe getragen. An seiner Bahre sprachen der Ortsrabbiner Dr.Kopfstein, der als Gast bei seinen Verwandten hier weilende Bezirksrabbiner Dr.Cohn- (Burgkunnstadt, Bayern) und Rabbiner Dr.Cohn- (Kattowitz) die Bedeutung des Verstorbenen, wuerdigende, ergreifende Worte. Der Allmaechtige gebe der Familie Trost, dem Judentum baldigst Ersatz fuer diesen heimgegangenen Fuersten in Israel.

December 10, 1957

Dr. Berndt
Berlin Schoneberg
Kufsteiner Strasse 69
Berlin, Germany

Dear Dr. Berndt:

It was with regret that I found it necessary to wire you that I am unable to complete the article I had promised for the broadcast in December. While I do not consider my health to be in a critical condition at the present time, the doctors here have enforced an immediate period of rest which limits all my activities for some time.

I am unable to participate in any speaking engagements or to do any writing which will interfere with these periods of complete rest. It is quite possible, however, that should you still desire it I will be able to prepare an article I am now working on in time to have it in your hands by the middle of January. May I hear from you as to whether or not this is your desire.

In the meantime, please accept my sincerest regrets that I had to disappoint you at this time, particularly in view of the fact that your program was printed.

Sincerely yours,

Norbert Wiener

NW:AD

[ans 12/20/57]

BRAMPTON, ONTARIO
CANADA
28 Meadowland Drive

December 11,1957.

Dear Professor Wiener :

I have completed a book

"The Statistical Appraisal Of Chess -
How To Break the Russian Hegemony."

The problem of an early prediction of the outcome of any chess game has been solved with a probability of over 80 % of theory. The methods described for the first time have been verified on over 1000 master games of all times, including the Russian world champions.

Before submitting my work for publication I ask you whether you would do me the honour to read the MS and give me your comments. I know that you are a great chess player yourself,and the mathematical approach for the solution of the ageold problem might interest you from both angles.

Kindly drop me a line and I shall send you the MS by return mail.

Yours sincerely

H.R.Frisch

H.R.Frisch

[ans 12/16/57]

Newsday Garden City, Long Island, New York, *Telephone*, PIoneer 1-1234

Alicia Patterson, *Editor and Publisher*

Richard M. Clurman, *Editorial Director*

December 11, 1957

Dr. Norbert Wiener
Mass. Institute of Technology
Cambridge, Mass.

Dear Dr. Wiener:

I am writing to you at the suggestion of Mr. Max Sherover of the Linguaphone Institute here in New York. Mr. Sherover thought you would be an excellent source for some research I am doing.

I am collecting material for Mr. Aldous Huxley who has been retained by Newsday to write a series of articles on such subjects as subliminal perception, sleep teaching and the new drugs that have been developed in recent years, like the tranquilizers and energizers. The articles will later be published in book form by Harper's.

The purpose of the articles is: first, to survey what has been done in each of these fields up to the present time; second, to explore what might be the future developments in each field; third, to examine what has been the social impact of these various techniques and agents up to the future and to predict, as well as is possible, what their future social impact might be expected to be.

Mr. Sherover has told me that you have done a great deal of work in the field of sleep teaching, or learning without awareness, and I would very much appreciate it if you could send me any available material you might have on the subject. I would also be most grateful for any other sources you might suggest to me, either in this field or any of the other fields I have mentioned.

Could you please send whatever material you have to my home address. Thank you very much for your kind assistance.

Sincerely yours,

Eileen Hughes

Eileen Hughes
(Mrs. Emmet J. Hughes)

Mrs. Emmet J. Hughes
1 West 72nd St.
New.York, N.Y.

[ans 12/13/57]

December 11, 1957

Mr. Louis F. Sas, President
Gamma Chapter of New York
of Phi Beta Kappa
139th Street and Convent Avenue
New York 31, New York

Dear Mr. Sas:

I regret very much that in view of the fullness of my schedule and my present condition of fatigue, I cannot undertake to give the lecture that you request before the Gamma Chapter of Phi Beta Kappa of the College of the City of New York.

Sincerely yours,

Norbert Wiener

NW:AD