III
COURSES DELIVERED
IN THE ACADEMIC YEARS 1913-14 to 1917-18
INCLUSIVE

EDGAR ALTENBURG, PH.D. (Columbia),
Instructor in Biology

SOME CHARACTERISTICS OF LIVING BEINGS
ILLUSTRATED BY LANTERN SLIDES
FRIDAYS, SPRING 1918

I What test tube and microscope disclose
II The biological bond between parent and offspring
III The living “machine” in operation

STOCKTON AXSON, LITT.D. (Pittsburgh),
L.H.D. (Wesleyan), Professor of English Literature

SOME ASPECTS OF ENGLISH AND AMERICAN
LITERATURE IN THE NINETEENTH CENTURY
MONDAYS, SPRING 1914

I Victorian literature
II Carlyle and political leadership
III Ruskin’s ideas of art
IV Tennyson the representative poet of Victorian
   England
V Browning’s optimism
VI Rossetti and Pre-Raphaelitism
VII Matthew Arnold and the literature of culture

1 The lectures on Hawthorne, Poe, and Stevenson of this course appear in
University Extension Lectures

VIII The spirit and the art of Robert Louis Stevenson
IX American literature
X Emerson the individualist
XI Hawthorne the Puritan artist
XII The life and art of Edgar Allan Poe

STUDIES IN SHAKESPEARE
Mondays, Spring 1915
I The man Shakespeare
II Shakespeare and the English stage
III Shakespeare's conception of tragedy
IV Personal responsibility in Shakespeare's tragedy
V Fate in Shakespeare's tragedy
VI Shakespeare's idealism

BRITISH POETS AND THE FRENCH REVOLUTION
Mondays, Spring 1915
I Wordsworth and the "Lyrical Ballads"
II Wordsworth and Nature
III Coleridge the romanticist
IV Byron and revolutionary defiance
V Shelley the revolutionary idealist
VI Keats and the principle of beauty

STUDIES IN MODERN DRAMA
Mondays, Autumn 1915
I English drama from Shakespeare to Shaw
II The preliminary awakening
III Ibsen's point of departure
IV Social significance of the new drama
V The art of the new drama
VI Continental drama
STUDIES IN MODERN DRAMA  
Mondays, Spring 1916

I Bernard Shaw  
II John Galsworthy  
III British and American dramatists  
IV The romancers and idealists  
V The Irish playwrights  
VI The drama in England and America to-day and to come

POETRY AND SOME POETS  
Mondays, Spring 1916

I The nature and uses of poetry  
II Browning  
III Walt Whitman  
IV Omar Khayyam  
V Kipling  
VI Some moderns

LITERATURE IN AMERICA  
Mondays, Autumn 1916

I The American material for literature  
II The first American author, John Smith  
III Early New England and its historians  
IV Old Jamestown and its people  
V Early New England and its people  
VI Early colonial prose literature
STUDIES IN AMERICAN LITERATURE.
AND BIOGRAPHY
MONDAYS, SPRING 1917

1 Early colonial poetry
II Underlying philosophy of the American Revolution
III Benjamin Franklin and the Revolution
IV The human side of the Revolutionary War
V Thomas Paine and the Revolution
VI Literature as a fine art in America—Washington Irving
VII The New England renaissance
VIII Poetry and romance in the South
IX In the soil of the Middle West
X Humors and adventures of the Pacific Coast
XI Informal discussion of books advised for reading
XII Literature and democracy

THOMAS FREDERIC BLANCHARD, M.A. (Yale),
Assistant Professor of English

THE ART OF WRITING STORIES
MONDAYS, AUTUMN 1915

I Kipling as romance writer
   Reading: The Man who would be King
II Bret Harte and local color
   Reading: Tennessee's Partner
III Turgenev as portrait painter
   Reading: A Lear of the Steppes
IV Björnson and northern realism
   Reading: The Father
v Stevenson, psychologist
   Reading: Markheim
vi Browning and the short story
   Reading: Porphyria's Lover

TYPES OF FICTION
WEDNESDAYS, AUTUMN 1916

I Dickens and his predecessors
II Thackeray's handling of the comic-epic
III The Gothic element in Hawthorne

TYPES OF FICTION
MONDAYS, AUTUMN 1917

I Changing types of the English novel
II "Robinson Crusoe" and its author
III The novel of sentiment
IV The father of English fiction
V Meredith's "Comic Spirit"
VI An American epic novelist

THOMAS LINDSEY BLAYNEY, PH.D. (Heidelberg),
Professor of German

GREAT EPOCHS OF GERMAN IDEALISM
MONDAYS, AUTUMN 1913

I General aspects of German civilization
II The Germanic epic as reflection of elemental forces
III German ideals in the age of chivalry
IV Social backgrounds of the period of the Hansa
V Individualism in the art and literature of the sixteenth century
VI Rationalism—the rise of modern Prussia
VII Lessing and constructive idealism
University Extension Lectures

VIII Herder and the beginnings of modern collectivism
IX Goethe as representative of the cultural forces of the eighteenth century
X Schiller and German classic idealism
XI Richard Wagner and the consolidation of German unity
XII Modern Germany and practical idealism

THE ORIENT OF TO-DAY—ITS PROBLEMS, PEOPLES AND IDEALS

WEDNESDAYS, AUTUMN 1916

I America and the far East
II India in the twentieth century
III An introduction to the art of the East (illustrated)
IV China in transformation
V New and old Japan
VI The West and the East

Robert Granville Caldwell, Ph.D. (Princeton), Assistant Professor of History

INTERNATIONAL LAW IN THE LIGHT OF RECENT EVENTS

MONDAYS, AUTUMN 1914

I The modern State system: Its historical background
II The doctrine of the equality of States in law and practice
III The changing duties and rights of a neutral power
IV Non-combatants, prisoners, and private property
V Navigation of the air and sea in time of war
VI International law and the preservation of peace
THE PEACE CONGRESSES OF THE NINETEENTH CENTURY

Mondays, Autumn 1917

I The Congress of Vienna
II The Congress of Paris
III The Congress of Berlin

Percy John Daniell, M.A. (Cambridge),
Assistant Professor of Applied Mathematics

AVIATION, PAST AND PRESENT
ILLUSTRATED BY EXPERIMENTS
Wednesdays, Spring 1916

I The airship
II The model aéroplane
III Stability, motive power and success

Nicholas S. Diamant, M.Sc. (Union),
Instructor in Engineering

SOME ENGINEERING APPLICATIONS OF ELECTRICITY
ILLUSTRATED BY EXPERIMENTS AND LANTERN SLIDES
Wednesdays, Spring 1916

I Electric lighting and the art of illumination
II Communication and transportation—telephony and electric railways
III Electrical engineering—its influence upon modern civilization

1 These lectures will be published in the Rice Institute Pamphlet, Vol. V, No. 2, April, 1918.
University Extension Lectures

EDWIN THEODORE DUMBLE, B.Sc. (Washington and Lee),
Consulting Geologist of the Southern Pacific Company

THE GEOLOGY OF TEXAS

WEDNESDAYS, AUTUMN 1914

I The geology of Texas in the building of the continent
II The individuality of Texas geology
III The economic features of the geology of Texas

GRIFFITH CONRAD EVANS, Ph.D. (Harvard),
Professor of Pure Mathematics

SCIENTIFIC ASPECTS OF PHILOSOPHY

WEDNESDAYS, SPRING 1915

I Pragmatism
II Ästhetics
III Rationalism

LECTURES ON ELEMENTARY GEOMETRY

FRIDAYS, SPRING 1917

I Some provable propositions
II Principles of structure
III Similar structure in general science

CLYDE CHEW GLASCOCK, Ph.D. (Johns Hopkins),
Assistant Professor of Modern Languages

CHAPTERS IN GERMAN LITERATURE FROM
GOETHE TO HAUPTMANN

FRIDAYS, AUTUMN 1914

I Weimar and its circle: Wieland, Goethe, Herder, Schiller

1 This course was published in the Rice Institute Pamphlet, Vol. III, No. 2, April, 1916.
Academic Years 1913-14 to 1917-18

II Goethe in Weimar (1775-1785): recovery from “Storm and Stress”
III Goethe in Italy (1786-1788): classicism
IV Romanticism: Heinrich von Kleist
V Poetic realism: Friedrich Hebbel
VI Naturalism: Gerhart Hauptmann

TRADITIONAL FOLK TALES
Fridays, Autumn 1915

I The investigation of fairy tales
II The sources of fairy tales: dreams and visions
III The sources of fairy tales: primitive ideas, customs, religion
IV Folk tales among ancient civilized races
V The tales of India and Arabia and their diffusion
VI German fairy tales

THE GOLDEN AGE OF SPANISH LITERATURE
Wednesdays, Spring 1917

I Cervantes and his work: Don Quixote
II Lope de Vega and the Spanish drama
III Calderón and his dramatic school

WILLIAM CASPAR GRAUSTEIN, PH.D. (Bonn), Assistant Professor of Mathematics

THE FORM OF SPACE IN WHICH WE LIVE. IS IT THAT OF ORDINARY GEOMETRY?
Wednesdays, Spring 1916

I The question
II Geometry, ordinary and otherwise
III The answer
FRANCE IN THE NINETEENTH CENTURY
FIRST SERIES: MAIN ASPECTS OF FRENCH CIVILIZATION IN THE NINETEENTH CENTURY
FRIDAYS, AUTUMN 1913
I The study of foreign literatures and civilizations
II The foundations—\(a\) The country
III The foundations—\(b\) Ethnic elements
IV The foundations—\(c\) Races and racial psychology
V The traditions—ancient régime and revolution
VI French education in the nineteenth century
VII The social question before 1870
VIII The social question after 1870
IX The religious question before 1870
X The religious question after 1870
XI Paris in the nineteenth century
XII Greater France

FRANCE IN THE NINETEENTH CENTURY
SECOND SERIES: HISTORICAL SURVEY OF THE MAIN PERIODS OF THE NINETEENTH CENTURY
FRIDAYS, SPRING 1914
I Napoleon: administration and army
II Social conditions under the first empire
III Culture under the first empire
IV Constitutional monarchy: political evolution
V Social conditions under the constitutional monarchy
VI Culture under the constitutional monarchy
VII Second republic and second empire
VIII Society under Napoleon III
IX Culture under Napoleon
Academic Years 1913-14 to 1917-18

x The third republic
xi Society under the third republic
xii Culture under the third republic

PROBLEMS OF THE GREAT WAR
Mondays, Autumn 1914

I The Franco-German question: the aftermath of the Franco-Prussian War
II The Franco-German question: Alsace-Lorraine from the point of view of the annexed provinces
III The Anglo-German question: commercial and colonial rivalry—"The Great Illusion"
IV The Russo-German question: race conflicts—Pangermanism versus Panslavism
V The responsibilities: institutions, interests, doctrines, passions, and prejudices that have prepared the present conflict
VI The outcome: probable consequences—political, economic, social—of the Great War

VICTOR HUGO, SA VIE, SON ŒUVRE, SON INFLUENCE
Fridays, Spring 1915

I Avant l’exil
II Pendant l’exil
III Après l’exil

CONTEMPORARY FRENCH NOVELISTS
Fridays, Autumn 1915

I The historical background: French society from 1880 to 1915

¹ These lectures have been published in book form under the title "Five Masters of French Romance," pp. xii + 326. London: T. Fisher Unwin, Ltd., 1916.
University Extension Lectures

II Anatole France: before the Dreyfus case
III Anatole France: after the Dreyfus case
IV Pierre Loti
V Paul Bourget and Maurice Barrès
VI Romain Rolland

HONORE DE BALZAC ET LA COMEDIE HUMAINE
Wednesdays, Autumn 1916

I Formation de son génie—milieu et moment
II Le romantisme et le realisme de Balzac
III L’influence artistique et sociale de l’œuvre de Balzac

Claude William Heaps, Ph.D. (Princeton),
Instructor in Physics

THE ULTIMATE NATURE OF MATTER
AND ELECTRICITY
ILLUSTRATED BY EXPERIMENTS
Fridays, Spring 1917

I Invisible motions of matter. The kinetic theory
II The atom of electricity. The electron theory
III How matter and electricity have been explained. Theories of ether

ELECTRICAL OSCILLATIONS
ILLUSTRATED BY EXPERIMENTS
Fridays, Spring 1918

I Lightning and lightning guards
II Types of electrical oscillations
III High frequency phenomena
Academic Years 1913–14 to 1917–18

ARTHUR ROMAINE HITCH, Ph.D. (Cornell),
Instructor in Chemistry

APPLICATIONS OF CHEMISTRY TO INDUSTRY AND COMMERCE
ILLUSTRATED BY EXPERIMENTS
Wednesdays, Autumn 1914

I Some recent practical applications of chemistry  
II Opportunities for industrial chemistry in Texas  
III Chemical problems in process of resolution

ATMOSPHERIC NITROGEN AND ITS UTILIZATION
ILLUSTRATED BY EXPERIMENTS AND LANTERN SLIDES
Fridays, Autumn 1916

I The air-nitrate industry  
II Synthetic production of ammonia  
III Industrial uses of fixed nitrogen

ARTHUR LLEWELYN HUGHES, D.Sc. (Liverpool),  
Assistant Professor of Physics

LIGHT AND VISION
ILLUSTRATED BY EXPERIMENTS
Wednesdays, Spring 1915

I The nature of light—its physical and visual aspects  
II The formation of colors—principles underlying color photography  
III Peculiarities of vision—optical illusions—color blindness
MATTER IN MOTION
ILLUSTRATED BY EXPERIMENTS
Fridays, Autumn 1916

I Properties of rotating bodies. Tops and gyrostats
II Gyrostats and their applications
III The flight of a spinning ball

HERBERT KAY HUMPHREY, E.E. (Illinois),
Instructor in Electrical Engineering

THE PRODUCTION AND SALE OF ELECTRICAL ENERGY
ILLUSTRATED BY LANTERN SLIDES
Fridays, Autumn 1916

I The process
II The cost
III The price

THE PROBLEMS OF MILITARY ENGINEERING
ILLUSTRATED BY LANTERN SLIDES
Fridays, Spring 1918

I The problem of transportation
II The problem of communication
III The problem of construction
Academic Years 1913–14 to 1917–18

Julian Sorell Huxley, B.A. (Oxford),
Assistant Professor of Biology

BIOLOGY AND MAN
ILLUSTRATED BY EXPERIMENTS AND LANTERN SLIDES
WEDNESDAYS, AUTUMN 1915

I The evolutionary point of view
II Biology and mind
III Biology and sex
IV Biology and war
V Biology and the State
VI Biology and religion

Hermann Joseph Muller, Ph.D. (Columbia),
Instructor in Biology

THE NEWER BIOLOGY
ILLUSTRATED BY LANTERN SLIDES
FRIDAYS, AUTUMN 1916

I Present-day points of view and lines of research on living substance
II The recent findings in heredity
III Prospects and applications

THE MODERN CONCEPTION OF EVOLUTION
ILLUSTRATED BY LANTERN SLIDES AND SPECIMENS
FRIDAYS, AUTUMN 1917

I The records in nature
II Evolution at close range
III Evolution in man?
University Extension Lectures

JOSEPH HORACE POUND, B.Sc. (Missouri),
Instructor in Mechanical Engineering

MACHINERY IN MODERN WARFARE
ILLUSTRATED BY LANTERN SLIDES
FRIDAYS, SPRING 1917

I Submarines and torpedoes
II Quick-firing guns
III Munitions and their manufacture

EDWIN EUSTACE REINKE, Ph.D. (Princeton),
Instructor in Biology

HEREDITY AND EUGENICS
ILLUSTRATED BY LANTERN SLIDES
WEDNESDAYS, AUTUMN 1915

I Adaptation through evolution and the principle of natural selection
II Present views on heredity
III Heredity and the development of new characters

JOHN CLARK TIDDEN,
Instructor in Architectural Drawing and Painting

DISCOURSES ON PAINTING
WEDNESDAYS, SPRING 1917

I The portrait and figure painting
II The landscape
III Mural or decorative painting
Academic Years 1913-14 to 1917-18

Radoslav Andrea Tsanoff, Ph.D. (Cornell),
Assistant Professor of Philosophy

SOME ETHICAL ASPECTS OF RUSSIAN LITERATURE

Fridays, Autumn 1914

I The Russian soil and Nikolai Gogol
II The art of Ivan Turgenev
III From darkness into light: Dostoyevsky’s Crime and Punishment
IV Count Tolstoy the novelist
V The gospel of Tolstoy the apostle
VI A voice from the depths: Maxim Gorky

SOME ETHICAL PROPHETS OF MODERN EUROPE

Fridays, Spring 1915

I The ethical tendencies of the Renaissance: Giordano Bruno
II Spinoza’s passion for truth
III Immanuel Kant: the prophet of the moral law
IV Hegel’s philosophy of right
V The ethics of pessimism: Arthur Schopenhauer
VI Friedrich Nietzsche and the morals of the superman

PROBLEMS IN THE PHILOSOPHY OF RELIGION

Fridays, Spring 1916

I The essence of religion
II The origins of the idea of God
III The religion of primitive man
IV Life and death: the problem of immortality
V The growth of the monotheistic idea
VI Man’s relation to his God: religion and morality

1 The first five lectures of this course were published in the Rice Institute Pamphlet, Vol. IV, No. 2, April, 1917.
BRITISH MORALISTS
MONDAYS, AUTUMN 1916

I Thomas Hobbes and his Leviathan
II Moral sense philosophy: Shaftesbury and Hutcheson
III Bishop Butler's Analysis of Human Nature
IV Utilitarianism: Bentham and John Stuart Mill
V Herbert Spencer and the morals of evolution
VI The life of self-realization: Thomas Hill Green

LETTERS AND LIFE IN RUSSIA
MONDAYS, AUTUMN 1917

I Western currents in Russian thought
II Russia and Western Europe in Dostoyevsky
III Tolstoy's theory of art

WILLIAM JOHN VAN SICKLEN, M.A. (Stanford),
Instructor in Chemistry

TOPICS IN PRACTICAL CHEMISTRY
ILLUSTRATED BY EXPERIMENTS
WEDNESDAYS, SPRING 1915

I On some achievements in modern chemistry of direct value to mankind
II Products of synthetic chemistry in every-day domestic use
III Recent chemical productions of industrial and commercial importance
Academic Years 1913–14 to 1917–18

Charles Frederick Ward, Ph.D. (Chicago),
Instructor in French

SOME ASPECTS OF FRENCH LITERATURE AND LIFE
ILLUSTRATED BY LANTERN SLIDES
Wednesdays, Spring 1917

I The empire that might have been: French Canada
II Landscapes of France
III Glimpses of the social and literary life of Paris

William Ward Watkin, B.Sc. (Pennsylvania),
Assistant Professor of Architecture

HISTORY OF ANCIENT ARCHITECTURE
ILLUSTRATED BY LANTERN SLIDES
Wednesdays, Autumn 1913

I Egypt—the pyramid builders
II Egypt—the architecture of the later dynasties
III Western Asia—Babylonia, Assyria, Persia
IV Greece—the Mycenaean age. The Colonizing age
V Greece—Athens in the age of Pericles
VI Greece—the age of Alexander and its monuments
VII Italy—early cities of Italy and Dalmatia
VIII Rome—Roman temple building
IX Rome—public building among the Romans
X Rome—the early Christian basilicas
XI Architecture in the Roman colonies
XII Byzantium—the age of Justinian
THE GOTHIC FIELD IN ARCHITECTURE  
ILLUSTRATED BY LANTERN SLIDES  
FRIDAYS, SPRING 1915

I The church  
II The home  
III The school

SOME PHASES OF HISTORIC ARCHITECTURE  
EXPRESSED IN THE BUILDINGS OF  
THE RICE INSTITUTE  
ILLUSTRATED BY LANTERN SLIDES  
FRIDAYS, SPRING 1916

I Influences of the earlier Italian architecture  
II Influences of the Romanesque and Byzantine periods  
III The later Italian influences in color and detail

ROLF FELIX WEBER, PH.D. (*Berlin*),  
Instructor in German

THREE PRINCIPAL REPRESENTATIVES OF THE  
MODERN GERMAN NOVEL  
FRIDAYS, SPRING 1916

I Theodor Fontane  
II Wilhelm Raabe  
III Gottfried Keller

LITERARY LANDMARKS IN MODERN  
GERMAN THOUGHT  
WEDNESDAYS, SPRING 1917

I The political and sociological views of Goethe and his contemporaries
II Teutonism and Universalism in Richard Wagner's dramas
III Gerhart Hauptmann and the literary and socialistic currents of his day

HARRY BOYER WEISER, PH.D. (Cornell),
Instructor in Chemistry

THE PRODUCTION OF LIGHT
ILLUSTRATED BY EXPERIMENTS
WEDNESDAYS, SPRING 1916
I Flame—its history and use
II The chemical production of light
III The theory of cold light

SOME CHEMICAL APPLICATIONS OF ELECTRICITY
ILLUSTRATED BY EXPERIMENTS
FRIDAYS, AUTUMN 1917
I The storage battery
II The production of pigments and dyes
III The electric furnace and its use

GERALD LOUIS WENDT, PH.D. (Harvard),
Instructor in Chemistry

HUMANIST ASPECTS OF SCIENCE
FRIDAYS, SPRING 1917
I Science as history
II Science as religion
III Science as art
CHEMISTRY OF THE TEXTILE AND DYEING INDUSTRIES
ILLUSTRATED BY EXPERIMENTS
FRIDAYS, SPRING 1918

I Some common textiles and fabrics
II Artificial silk and the natural dyes
III Coal tar and the "aniline" dyes

SOUND, WITH SPECIAL REFERENCE TO MUSIC
ILLUSTRATED BY NUMEROUS EXPERIMENTS
WEDNESDAYS, SPRING 1914

I Inertia and elasticity—vibration of elastic bodies—wave motion—propagation and velocity of sound
II Reflection and refraction of sound—echoes—sound shadows
III Musical notes—tuning forks—pitch—frequency and wave length—trains of waves
IV Perception of direction of sound—musical intervals and scales
V Interference of sounds, beats, stationary vibrations
VI Resonance—quality of musical sounds
VII Vibration of stretched strings—violin and piano strings
VIII Organ pipes and similar musical instruments
IX Composition of vibrations—Lissajou's figures
Academic Years 1913–14 to 1917–18

x Vibration of elastic plates and membranes—vibration of water jets
xi The gramophone and phonograph
xii The telephone and microphone

ELECTRICITY
ILLUSTRATED BY NUMEROUS EXPERIMENTS
Wednesdays, Autumn 1914

i Fundamental properties of electric charges and currents
ii Electrical oscillations
iii Electric waves and wireless telegraphy
iv Kathode rays
v Roentgen rays
vi Electrical properties of flames and incandescent solids

PHYSICAL OPTICS
ILLUSTRATED BY NUMEROUS EXPERIMENTS
Wednesdays, Autumn 1915

i The undulatory theory of light. Velocity of light
ii Interference of light
iii Diffraction of light
iv Double refraction and polarization
v Optical properties of crystals
vi Dispersion and spectroscopy

LIQUID AIR
ILLUSTRATED BY EXPERIMENTS
Fridays, Autumn 1917

i The liquid and gaseous states of matter
ii The production of liquid air
iii Experiments with liquid air
CHAPTERS FROM THE HISTORY OF
NATURAL PHILOSOPHY
ILLUSTRATED BY EXPERIMENTS
FRIDAYS, AUTUMN 1917

I Sir Isaac Newton and Christiaan Huygens
II Thomas Young and Augustin Fresnel
III Michael Faraday and James Clerk Maxwell