

“The Academic Roots and Evolution of Real Estate Appraisal”

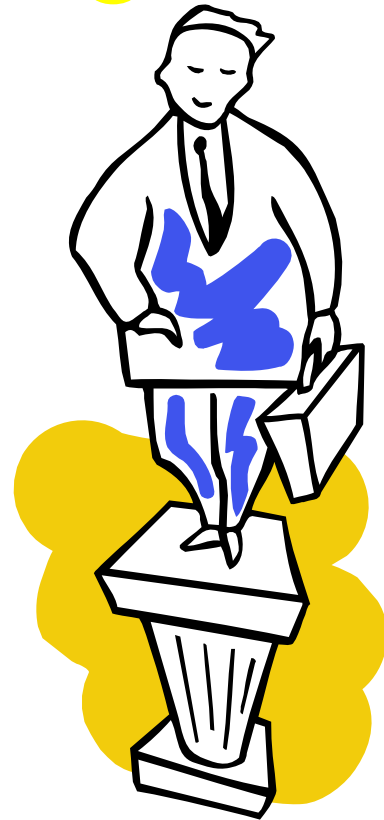
Valuation is an Important Subject



Valuation is a balancing act



Here we will focus mostly on the people that established the field of real estate and developed the theories and methodologies we use today.



- We will see that all advancements in appraisal are linked by people.
- We will also see the major influences of academics who have now spread out to over 50 major schools in the U.S. and several abroad.

Before “Real Estate” was an Industry
we needed some basic tools

Before “Real Estate” was an Industry
we needed some basic tools continued

The Beginning of Real Estate as an Academic Field in the USA

Richard Ely

The Beginning of Real Estate as an Academic Field in the USA

Richard Hurd Ernest Fisher &
Fred Babcock

The Beginning of Real Estate as an Academic Field in the USA

Homer Hoyt, Art Weimer
Richard Ratcliff

Appraisal History Time Line

1893
Richard Ely
Later
Founded 1st
RE Program

1949
Ratliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up as
think tank
in Fl. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1981
Unified
Theory of
Valuation
by P.
Colwell

1982 Personal Computer growth...>

1992->>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1903
Richard Hurd wrote Principles of City Land Values

1949
Ratcliff wrote Urban Land Economics

1965
Graaskamp joined U of Wisconsin-stayed until 1988

1968
Homer Hoyt Institute Established, 1979 set up as think tank in Fl. by Maury Seldin

1893
Richard Ely Founded 1st RE Program

1958
Ellwood Cap Tables

1970
Ellwood w/o Algebra by Atkerson

1977
Ellwood After Tax by J Fisher

1979
Ellwood J factors by J Fisher

1982 Personal Computer growth...>

1981
Unified Theory of Valuation by P. Colwell

1992->>>>>>>> present
Internet connectivity and real time data becomes reality

Appraisal History Time Line

1893
Richard Ely
Founded 1st
RE Program

1932
Babcock
Wrote
Valuation
of RE

1933
Homer
Hoyt

1949
Ratcliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Establish
ed, 1979
set up as
think tank
in Fl. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1982 Personal Computer growth...>

1981
Unified
Theory of
Valuation
by P.
Colwell

1992->>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

Before 1960
Simple
calculators
and slide
rules

Definitions
of value and
three
methods
evolve

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1981
Unified
Theory of
Valuation
by P.
Colwell

1949
Ratliff
wrote
Urban Land
Economics

1951
Appraisal
Institute starts
writing the
“Appraisal of
RE” as
collaboration”
aka “The
Bible”.

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1982 Personal Computer growth...>

1992->>>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

1968
Homer
Hoyt
Institute
Established,
1979 set up as
think tank
in Fl. by
Maury
Seldin

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949

Ratcliff
wrote
Urban Land
Economics

1954 E.
Fisher

Wrote

Urban
RE

1965

Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968

Homer
Hoyt
Institute
Established,
1979 set up as
think tank in
Fl. by Maury
Seldin

1958

Ellwood
Cap
Tables

1970

Ellwood w/o
Algebra by
Atkerson

1977

Ellwood
After Tax
by J
Fisher

1979

Ellwood J
factors by
J Fisher

1981

Unified
Theory of
Valuation
by P.
Colwell

1982 Personal Computer growth...>

1992->>>>>>>> present

**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up as
think tank in
Fl. by Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1981
Unified
Theory of
Valuation
by P.
Colwell

1982 Personal Computer growth...>

1992->>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratcliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up as
think tank in
Fl. by Maury
Seldin

1968 ...Electronic Calculators Available

1982 Personal Computer growth...>

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1981
Unified
Theory of
Valuation
by P.
Colwell

1992->>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratcliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up
as think tank
in FL. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1982 Personal Computer growth...>

1981
Unified
Theory of
Valuation
by P.
Colwell

1992->>>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Warnings
about using
3 approaches
in all cases
by Babcock

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratcliff
wrote
Urban Land
Economics

1974

Wendt

Wrote RE
Appraisal

1965

Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968

Homer
Hoyt
Institute
Established,
1979 set up as
think tank in
Fl. by Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

DCF as
Valuation
Tech.

1982 Personal Computer growth...>

1981
Unified
Theory of
Valuation
by P.
Colwell

1992->>>>>>>> present

**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratcliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up as
think tank
in Fl. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1982 Personal Computer growth...>

1981
Unified
Theory of
Valuation
by P.
Colwell

1992->>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up
as think tank
in FL. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1982 Personal Computer growth...>

1981
Unified
Theory of
Valuation
by P.
Colwell

Capitalization
theory refined

1992->>>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up as
think tank
in Fl. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1981
Unified
Theory of
Valuation
by P.
Colwell

1982 Personal Computer growth...>

1992->>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratliff
wrote
Urban Land
Economics

1965

Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up as
think tank
in Fl. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1982 Personal Computer growth...>

1981
Unified
Theory of
Valuation
by P.
Colwell

1992->>>>>>>>> present

**Internet connectivity and
real time data becomes
reality**

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratcliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up
as think tank
in FL. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1981
Unified
Theory of
Valuation
by P.
Colwell

1982 Personal Computer growth...>

1992->>>>>>> present
**Internet connectivity and
real time data becomes
reality**

AVMs
promoted
by Freddie
Mac

Appraisal History Time Line

1893

Richard Ely
Founded 1st
RE Program

1949
Ratliff
wrote
Urban Land
Economics

1965
Graaskamp
joined U of
Wisconsin-
stayed until
1988

1968
Homer
Hoyt
Institute
Established,
1979 set up
as think tank
in FL. by
Maury
Seldin

1958
Ellwood
Cap
Tables

1970
Ellwood w/o
Algebra by
Atkerson

1977
Ellwood
After Tax
by J
Fisher

1979
Ellwood J
factors by
J Fisher

1981
Unified
Theory of
Valuation
by P.
Colwell

1982 Personal Computer growth...>

1992->>>>>>>>> present
**Internet connectivity and
real time data becomes
reality**

Richard T. Ely, 1854-1943



Richard M. Hurd, 1865-1941
One of our three main fathers

Frederick M. Babcock, 1897-1983

Frederick M. Babcock, 1897-1983

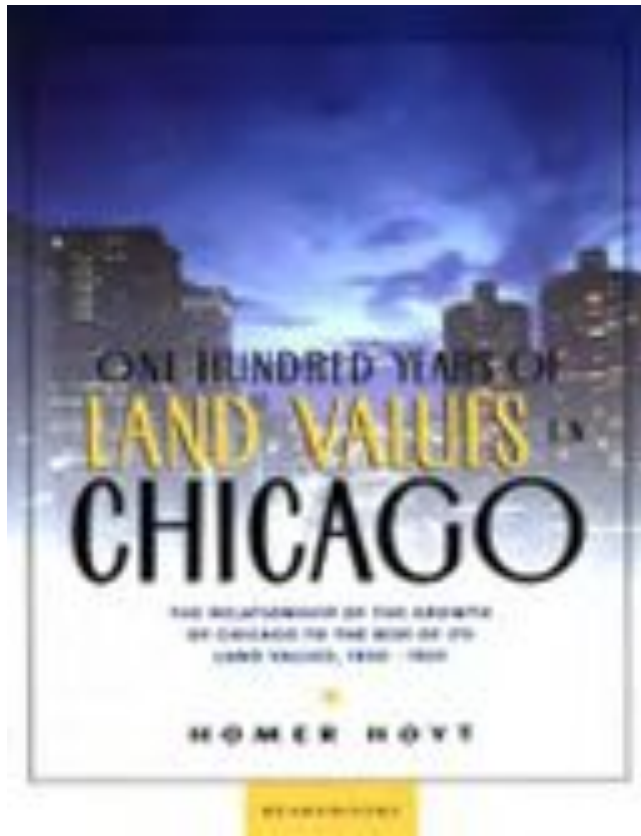
seven

Ernest Fisher, 1893-

Homer Hoyt (1895 – 1984)



Homer Hoyt (1895 – 1984)



Arthur M. Weimer (1909-1987)

vt

r

Art Weimer, 1909-1987, and Fred Case, 1918-2000



Fred Case

Richard U. Ratcliff, 1906-
A 3rd Generation Father of Appraisal

Richard U. Ratcliff, 1906-

Richard U. Ratcliff, 1906-

Leon “Pete” Ellwood, 1896-1974
A man way ahead of his time

Paul F. Wendt, 1908-2000



Paul F. Wendt, 1908-2000

Paul F. Wendt at the Homer Hoyt Institute Meetings



James Graaskamp, 1933-1988

James Graaskamp, 1933-1988

Charles B. Akerson, 1922-

Made Ellwood easier to understand and compute.



Jeffrey D. Fisher, 1947-



Jeffrey D. Fisher, 1947 -



Jeffrey D. Fisher, 1947 -



Peter Colwell and Roger Cannaday, circa 1981



Peter Colwell in 2002



Peter Colwell and Roger Cannaday

Wayne Kelly, Don Epley, Phillip Mitchell



Kerry Vandell, 1948- and Hugh Nourse, 1933-
Both Homer Hoyt Faculty Members



Ron Racster, Maury Seldin and Hal Smith





Ron Racster, Maury Seldin and Hal Smith Again About 1987



There are countless other contributors to the literature who have considered lender perspectives, inflation and advanced multiple regression methods of valuation and more. These include:

What have we learned from all this?

And note most thought leaders lived a long time... i.e. Ely 89, Babcock 86, Wendt, 92, Hoyt 89, and Marshall 100.

What else have we learned by looking back so far?

Babcock, Ratcliff and Graaskamp were critical of becoming too static. Ratcliff said

“Don’t be put in a methodological straight jacket.....don’t be too pre-conditioned not to use a little common sense.”

It is exceptional situations or new problems that require and invoke new methods of valuation. This is how the field progresses.

Yet, there remains a lag from the time new theory and methods are developed until we see full industry implementation – so it is our responsibility to shorten that lag by continuing our own education and development.

We have seen that appraisal methodology is not static and never has been.

- We have never done it the same way for 25 years and we won't do it the same way 25 years from now.

And note how the field has
grown.

Appraisal was spin off from the Real Estate
Boards in the late 1920's.

In 1933 the Appraisal Journal had 256
subscribers. Today they have thousands.

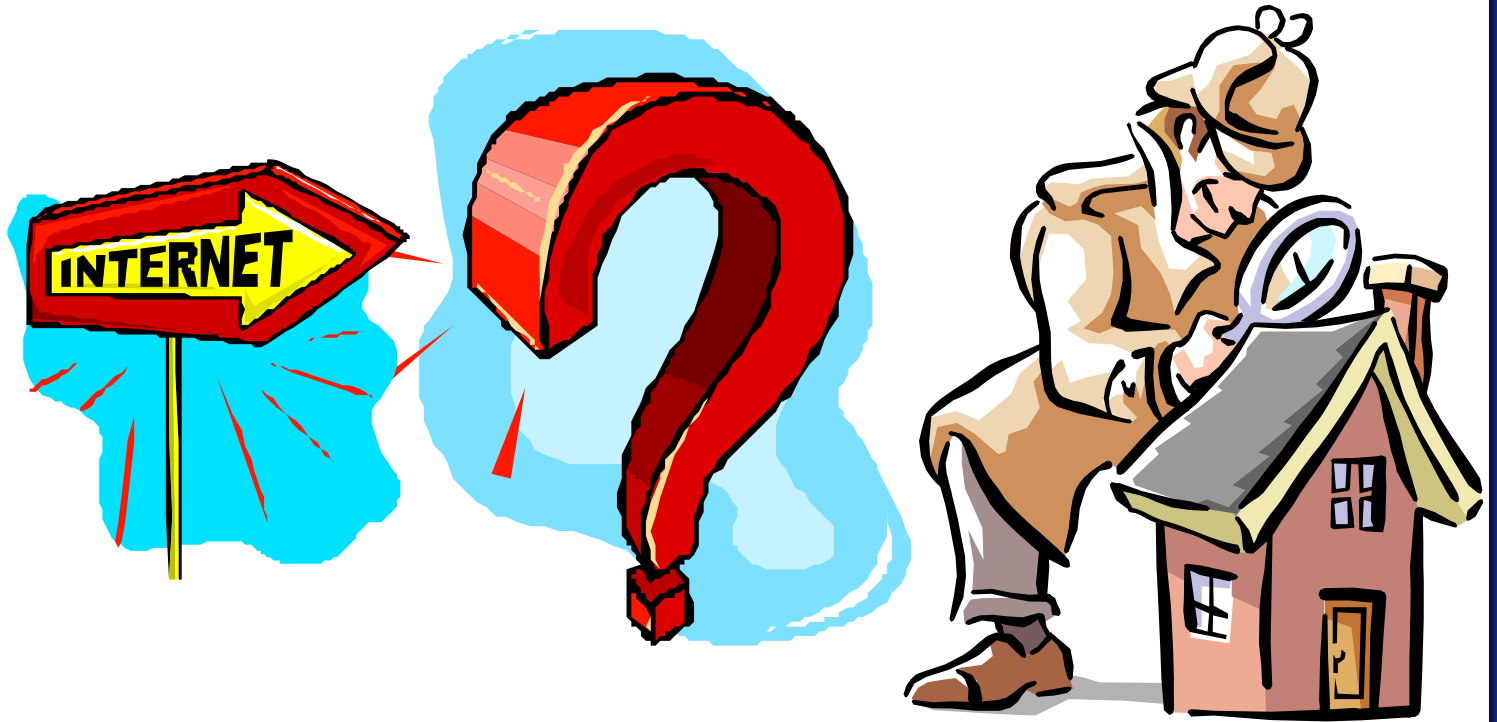
Trivial Pursuit: Who was the first MAI?

The first MAI was:
Philip Kniskern.

Note the influence of our “top” real estate programs

- 1900-1970
 - University of Chicago, U. of Michigan, Wisconsin, and Columbia
- 1970-2000
 - Wisconsin, Indiana, Ohio State, MIT, Wharton, Berkeley, University of Georgia, University of Cincinnati, UNC, LSU, Georgia State and University of Connecticut and many others.
- 2000 – 2025? – more international?
 - Wisconsin, MIT, Wharton, University of Cincinnati, NUS (Singapore), Berkeley, Columbia, Connecticut, USC, University of San Diego, UBC, Georgia, VCU, DePaul and hundreds of others.

Where are headed over the next 25 years?



Residential Appraisal Trends

Some More Prognostications

ranges of values

For example:

- Based upon the following assumptions we have a 72% probability that the property value exceeds \$1,250,000.

Appraisers will continue to compete on **speed** producing reports **faster** and with little change in fees – this will force appraisers to continue to automate wherever possible.

DCF and direct overall cap rate approaches will continue to dominate income valuation with more emphasis on assumption support.



Using my photo from about 25 years ago....
Here's to the next 100 Years!



“The Academic Roots and Evolution of Real Estate Appraisal”