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Reflections on Gilbert F. White: Scholar, Advocate, Friend

by Susan L. Cutter, Rutherford H. Platt, Ian Burton, James K. Mitchell, Martin Reuss, Claire B. Rubin, James L. Wescoat, Jr., and Barbara T. Richman

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Reflections on Gilbert F. White:

Scholar, Advocate, Friend

by Susan L. Cutter, Rutherford H. Platt,
Ian Burton, James K. Mitchell, Martin Reuss,
Claire B. Rubin, James L. Wescoat, Jr., and
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Gilbert F. White memorial along Boulder Creek in Boulder, Colorado.

Photo courtesy of Barb Richman

Gilbert F. White (1911–2006) is among the most distinguished and honored American geographers of the 20th century. Among his many contributions, he stimulated efforts by geographers and others to foster human adjustments to the risks of our endangered planet through better-informed policies and decisions at all levels of society. As executive editor (1983–1992) of *Environment*, Gilbert guided the publication into a position as the venue for high-quality, policy-relevant environmental research that was widely read by many officials in Washington, DC, who often displayed copies of *Environment* in their waiting rooms.

At the 2019 annual meeting of the American Association of Geographers (AAG)—of which Gilbert was president (1961–1962) and where he received the prestigious Lifetime Achievement Award in 2002—there was a special session devoted to Gilbert’s life, work, and impact on geographers and others who focused their research and practice on the environment as a means for improving the human condition.¹

Gilbert’s influence was broad and included a large academic multigenerational family tree of students, students of students, and so on; mentoring of other scholars and professionals; enduring scholarship that is still highly cited; and the countless number of people whose lives he enriched through personal contact. To commemorate his work and spirit, a monument designed by his daughter, the eco-artist Mary White, designates flood levels along Boulder Creek and stands as a visible reminder of the significant policy successes (and some failures) of the “father of floodplain management” in his lifelong journey to address the nation’s flood problems.

Numerous scholars have received awards named in Gilbert’s honor from professional and scholarly societies all over the world. Numerous academic structures (e.g., the G. F. White Science Library at Haverford College, the Gilbert F. White Reference Room at the Institute for Water Resources, U.S. Army Corps of Engineers in Fort Belvoir, Virginia) and endowed chairs (Gilbert F. White Chair at Arizona State University, currently held by Billie Lee Turner II) carry his name as well.

This article, coauthored by eight colleagues, provides our reflections on the man, his influence on our own careers, and his advocacy for a better world. We begin with a brief synopsis of Gilbert’s career and influences.²

White’s Career and Influences

Gilbert White’s worldview was shaped by at least two early sources of inspiration: his Quaker heritage and his University of Chicago education. As described by his biographer Robert Hinshaw, he and his first wife, Anne, shared strong Quaker convictions: “Apart from pacifism, those convictions included belief in the spiritual worth and brotherhood of all persons, the value of humanitarian service to those less fortunate, and the need for simplicity in lifestyle to reduce social inequities.”³

Gilbert’s University of Chicago education began in 1924 in the “Lab School” that was founded by John Dewey and ended with a doctorate in geography nearly two decades later. Although Dewey (1859–1952) was a half century older than White and had left Chicago in 1904, his spirit of progressive prag-

Box 1. Scholarly Awards Commemorating the Work of Gilbert F. White

National Academies of Sciences, Engineering and Medicine:

Gilbert F. White Lecture in the Geographical Sciences (established in 2007)

University of Colorado:

Gilbert F. White Doctoral Fellowship, Department of Geography

Resources for the Future (RFF):

Gilbert F. White Postdoctoral Fellowship Program

Association of State Floodplain Managers (ASFPM):

Gilbert F. White National Flood Policy Forum

American Association of Geographers:

Gilbert F. White Dissertation Award, Hazards, Disasters, and Risk Specialty Group

American Geophysical Union (AGU):

Gilbert F. White Distinguished Lecture Award, Hazards Focus Group

Gilbert F. White Award



19 Words from one of White's memorandum to FDR used in his January 1935 Message
 20 to Congress on Natrual Resources is inscribed on the wall of the FDR Memorial in
 21 Washington D.C.

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matism still infused the Lab School and college during Gilbert's student years. James Wescoat identifies four themes shared by Dewey and White in their respective intellectual lives: (1) the precariousness of existence; (2) the pragmatic conception of inquiry; (3) learning from experience; and (4) discourse and democracy.⁴

Soon after Gilbert entered the geography doctoral program in 1933 to study with Harlan H. Barrows, his mentor was recruited to be a New Deal "brain-truster" as head of the Mississippi Valley Committee, a unit of the Public Works Administration that was directed by another Chicago progressive, Harold L. Ickes. Barrows promptly invited White to join him in Washington, DC, as staff officer for the committee. What started as a short-term commitment stretched into eight years as White gained experience in a series of resource planning agencies and the Bureau of the Budget—each housed in the Old Executive Office Building next door to the White House.

Among his duties, Gilbert was tasked with the preparation of background memos relating to conservation and water resource policy, some of which were forwarded by Harold Ickes to President Franklin D. Roosevelt. Less than a year

after Gilbert's arrival in Washington, Roosevelt used wording from one of his memoranda in a January 1935 Message to Congress on Natural Resources. Those very words are now inscribed on a wall at the FDR Memorial in Washington, DC: "Men and Nature must work hand in hand. The throwing out of balance of the resources of Nature throw out of balance also the lives of men."⁵

Gilbert quickly learned how to navigate the bureaucratic labyrinth of New Deal Washington in working with top officialdom of the U.S. Army Corps of Engineers, the Bureau of Reclamation, the Department of Agriculture, and the new Tennessee Valley Authority and Soil Conservation Service. Scarcely intimidated by the powerful overseers of these agencies, Gilbert established a niche for himself and the planning agencies he served as a conduit to the White House. As related much later, White recalled that various agency heads were "disturbed about a prospective heavy commitment to financing Corps projects for flood control. They used the National Resources Board people as one means among many of trying to reach the President on the importance of having some kind of integrated planning . . . instead of having it solely under the Corps."⁶

Gilbert of course was partly referring to himself in that recollection. In 1937, for example, he wrote a memorandum—passed on to the White House by Ickes—that persuaded the President to veto a congressional attempt to insulate the Corps of Engineers flood control program from oversight by Roosevelt's cherished national planning agency.⁷ White's skill in writing government reports undoubtedly mirrored that of his mentor Harlan Barrows, which he described as "direct, accurate unequivocal. He slashed Federalese, the sodden engineering description, and the politically ambiguous prose that came within his reach."⁸

After Pearl Harbor, Gilbert White assumed various responsibilities with the American Friends Service Committee. Beginning in 1942, he served as an ambulance driver and relief worker in occupied France, followed by 13 months of internment in Nazi Germany. After the war, he helped conduct an investigation by the American Council of Voluntary Agencies of living conditions for civilians in Germany itself. White wryly recalled later: "So I found myself having been detained by the Germans [for] dealing with refugees from the Germans during the war, and trying to help the Germans themselves at the end of the war."⁹

White's debt to both Dewey and Barrows is reflected in his 1945 doctoral thesis title: *Human Adjustment to Floods: A Geographical Approach to the Flood Problem in the United States*. Based on his work in Washington, his dissertation was submitted in 1942 before he left for Europe and was published by the Department of Geography in 1945.¹⁰ In 1946, at the age of 35, White was appointed president of Haverford College, where he remained until returning to the University of Chicago as a professor of geography in 1956. By then, White was already recognized as an international authority on public policy concerning water resources and natural hazards.

A consistent thread unifying Gilbert's long career was to persuade public and private decision makers to adjust

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1 human activities to natural constraints,
2 rather than trying—expensively and
3 often unsuccessfully—to control na-
4 ture. Riverine and coastal flood disas-
5 ters would receive his closest attention.
6 His doctoral thesis challenged the na-
7 tion's reliance on structural flood con-
8 trol projects (storage reservoirs, dams,
9 levees, channelization, and sea walls)
10 and continues to be a seminal work in
11 the field.¹¹ Gilbert famously advocated a
12 broader array of “multiple adjustments,”
13 including wise use of flood-prone areas
14 (land-use planning, floodplain zoning,
15 elevation or relocation of buildings, and
16 building codes), and measures to reduce
17 or defray the costs of floods (warning
18 systems, evacuation, disaster assistance,
19 and flood insurance).

20 A series of hurricane disasters in the
21 1950s and 1960s prompted the Bureau
22 of the Budget to appoint a special task
23 force to review the effectiveness of the
24 nation's flood policies under the chair-
25 manship of Gilbert. Not surprisingly,
26 the task force report¹² and a subsequent
27 executive order¹³ issued by President
28 Lyndon B. Johnson each reflected their
29 principal author's “multiple adjust-
30 ments” perspective.¹⁴

31 Beyond redirecting the nation's flood
32 policies, White's keen intellect and tal-
33 ent for mobilizing the best efforts of his
34 associates made him a natural leader
35 of complex interdisciplinary projects,
36 a role that often required him to medi-
37 ate among strong-willed participants.
38 He served in leadership capacities for
39 the U.S. National Academy of Sciences/
40 National Research Council, the Bureau
41 of the Budget, Resources for the Future
42 (RFF), the U.N. Scientific Commit-
43 tee on Problems of the Environment
44 (SCOPE), the Department of the Inter-
45 rior, the American Association of Ge-
46 ographers, and the American Friends
47 Service Committee, among many other
48 organizations.¹⁵

49 In 1969, Gilbert and Anne left Chi-
50 cago, partially in protest against the uni-
51 versity's treatment of antiwar student
52 demonstrators, as well as to address
53 their desire to move west to their even-
54 tual retirement place. They relocated to
55 Boulder, Colorado, near their summer-
56

time “ranch” in the Rocky Mountain
foothills. As Gustavson Distinguished
Professor of Geography and Director of
the Institute for Behavioral Science at
the University of Colorado, Gilbert es-
tablished the Natural Hazards Research
Center, the professional base for the rest
of his career.

White was the recipient of many
awards and honors,¹⁶ including receiv-
ing the President's Medal of Science in
2000 from President Bill Clinton

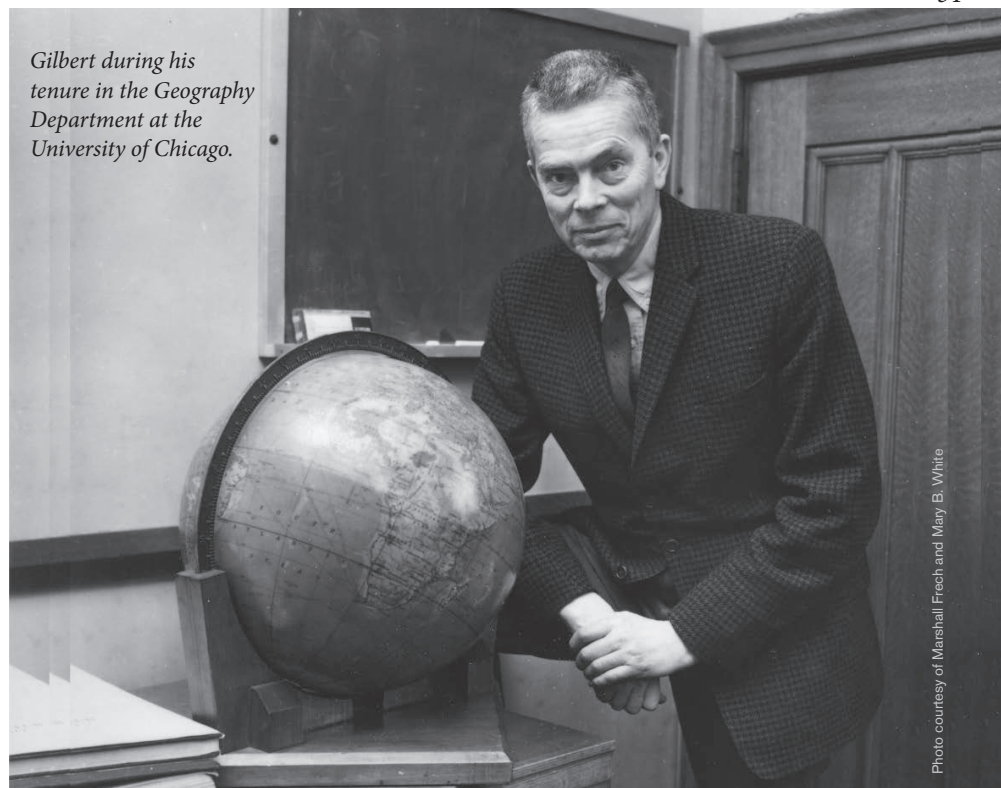
*For outstanding leadership and sci-
entific contributions to geography
and other Earth and environmen-
tal sciences, and for helping shape
cooperative efforts to assess the Na-
tion's floodplain, water use, and
natural disaster policies for more
than five decades.*¹⁷

Gilbert's Legacy and Challenge (Reflections by Ian Burton)

It is with some trepidation and much
pleasure and gratitude that I join in this

celebration of Gilbert White's life and
legacy. First, one legacy among many:
Three generations of students, (some
of his own students, their students, and
the student's students) have participated
in and contributed to the work of the
Intergovernmental Panel on Climate
Change (IPCC). Some geographers
were among those who collectively re-
ceived the award of the Nobel Prize for
Peace in 2007, shared with Al Gore. This
legacy is quite fitting because Gilbert
also shared in a Nobel Peace Prize for
his part in the relief work of the Ameri-
can Friends Service Committee in Vichy
France during World War II.

I also shared in Gilbert's opposition
to war, or rather aspiration for peace,
although not on the same principled
pacifism that took Gilbert to France in
1942. I shared with my own father the
idea of just and unjust wars. He served
in the British Army in World War II,
not because he wanted to, but because
he thought it to be a just and neces-
sary war, and hence service was a mat-
ter of duty. For my part, my turn to be
drafted came in the postwar period of
decolonization and the mostly reluc-



*Gilbert during his
tenure in the Geography
Department at the
University of Chicago.*

Photo courtesy of Marshall Frech and Mary B. White

1 tant dismantling of the British Empire.
2 I was able to postpone being drafted as
3 long as I remained in full-time educa-
4 tion. After completing my BA and MA
5 degrees at the University of Birming-
6 ham, my only option apart from join-
7 ing in colonial wars was to continue
8 my studies abroad in the United States.
9 I came to the United States in 1957, first
10 to Oberlin College in Ohio, and then to
11 the University of Chicago. At Oberlin,
12 a research associate in the Department
13 of Geography and Geology asked me
14 about my plans, and I expressed interest
15 in doing a PhD. “What do you want to
16 work on?” she asked. I answered some-
17 thing to the effect that I was interested
18 in floods and water supply. She imme-
19 diately laughed and said that I must
20 go to Chicago and work with Gilbert
21 White. I have to admit that as a 22-year-
22 old Brit just off the boat, I had never
23 heard of Gilbert. I quickly found out
24 enough to realize that I should apply for
25 admission to the PhD program. I did so
26 and was accepted with help from Nor-
27 ton Ginsburg, who hired me to work as
28 a research assistant on his *Atlas of Eco-
29 nomic Development*.¹⁸

30 Gilbert’s interest in natural resources,
31 human ecology, and environment was
32 sparked and strengthened by his sum-
33 mer experiences working as a ranch
34 hand from ages 10 to 18, on the family
35 Quarter-Circle-Bell Ranch near Dayton,
36 Wyoming. Early experiences are often
37 life-forming or -changing. Similarly, my
38 interest in floods and water also came
39 from early experiences. Both sets of my
40 grandparents lived on floodplains, and
41 I experienced floods in their houses
42 from both the Derwent and Trent riv-
43 ers in Derbyshire. My final paper for
44 my bachelor’s degree at the University
45 of Birmingham was on the agricultural
46 geography of six parishes in the Middle
47 Trent Valley (subject to floods), and
48 my master’s thesis was on water sup-
49 ply for the city of Birmingham. The
50 city was supplied with water from res-
51 ervoires built in Wales, and the water it-
52 self came free of charge. The emerging
53 Welsh nationalists argued that Birming-
54 ham should pay for the water. There was
55 much resonance in the United States.
56

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That I found my way to Gilbert and Chicago was more than a coincidence. I realized that I had things in common with Gilbert (opposition to war and search for peace; early formative experiences with environment; and then time at a liberal-arts college). Gilbert had been president at Haverford. I was a student at Oberlin, where I had learned to appreciate the merits of liberal education. When I became aware of these somewhat similar experiences and ideas and met Gilbert in Chicago, my life was transformed and my path forward was set. At the time, this all seemed fortuitous, a matter of chance. In hindsight, it almost has a feeling of destiny.

I know that there are many people, students and others, who had their lives shaped and strongly influenced by Gilbert, including my friend and fellow student at Chicago and later my colleague and co-author, Bob Kates. That Gilbert, Bob, and I went on to be colleagues and close friends is one of the joys of my life.¹⁹ Together with them I have been able to engage in many action-oriented research enterprises, including at the international level with the International Geographical Union (IGU) Commission on Man and the Environment and the International Council of Scientific Unions (ICSU) Scientific Committee on Problems of the Environment (SCOPE).

All this brings me back to the IPCC. In this context, geographers have worked on what the Climate Convention refers to as “adaptation.” With this in mind, I asked Gilbert why he used the word “adjustment” in the title of his ground breaking PhD dissertation. As I recall his answer, it was that the word

“adaptation” came with a lot of intel- 1
lectual baggage associated with Charles 2
Darwin, especially Herbert Spencer, and 3
the ideas of “survival of the fittest” and 4
“adapt or die.” This was decidedly not 5
the message that Gilbert wished to con- 6
vey about living with floods and other 7
extreme events. He probably would have 8
smiled, as I certainly did, when the IPCC 9
came to the task of defining adaptation. 10
The official IPCC definition of adapta- 11
tion in human and natural systems is 12
“The process of adjustment to actual or 13
expected climate and its effects.”²⁰ 14

If the governments and their diplo- 15
mats who negotiated the Climate Con- 16
vention had followed Gilbert’s lead, today 17
we would be talking about adjustments 18
to climate change instead of adaptation. 19
The concept of adaptation, or failure to 20
adapt, can carry the implication of blam- 21
ing the victim. I think that Gilbert’s in- 22
sight carried or implied the idea that pro- 23
tecting people from hazards can be used 24
for the benefit of the few or more pow- 25
erful to the eventual detriment of those 26
at risk. I also doubt that Gilbert would 27
have accepted the convention’s dichot- 28
omy between mitigation and adapta- 29
tion; both would be included in human 30
adjustment. We must become carbon 31
neutral (stop the anthropogenic causes), 32
as well as adjust to climate change, vari- 33
ability, and extremes. 34

35 What else would Gilbert have writ- 36
ten, or thought, or said and done in these 37
much- changed and much troubled 38
times? It is of course impossible to give 39
an authoritative answer, but my guess or 40
supposition is that he would be calling 41
for more fundamental and transforma- 42
tive change. Gilbert had a keen eye for 43
the underlying or root causes of damage, 44
loss, and disasters. He was never satis- 45
fied with just proximate explanations. 46
He famously wrote, “Floods are ‘acts of 47
God,’ but flood losses are largely acts 48
of man.” Gilbert was not satisfied with 49
just promoting disaster risk reduction 50
through better human choices, but he 51
also pointed to the forces and systemic 52
processes that create risk at a faster rate 53
than all the well-intentioned efforts to 54
reduce them. He wanted and demanded 55
more. “What shall it profit a profession,” 56

1 he asked, “if it fabricate a nifty discipline
2 about the world while that world and
3 the human spirit are degraded?”²¹

4 Let us respond to Gilbert’s question
5 by thinking and acting in ways that can
6 bring us together to get us beyond our
7 current situation both nationally and
8 globally. I wish that my friend and col-
9 league Bob Kates could be with us here
10 today to join with us in body as he is in
11 spirit. And as for Gilbert it almost goes
12 without saying ...

13 *“Gilbert, we will do our best to fol-
14 low your example, and aspire to
15 achieve your hopes and expecta-
16 tions.”*

17 **Mr. White and Personal** 18 **Recollections (Reflections by** 19 **Rutherford H. Platt)**

20 I first encountered “Mr. White” dur-
21 ing a September 1967 field trip to the
22 Indiana Dunes for my cohort of Univer-
23

24 sity of Chicago geography graduate stu-
25 dents.²² As we perched on a sand dune
26 facing Lake Michigan, he posed Socratic
27 questions about the relationship of hu-
28 mans and the environment, weighing
29 our earnest replies with a kindly but
skeptical squint. Little did most of us
appreciate the significance of the place
where we sat or the distinction of the
professor who challenged us to ponder
why we wanted to become geogra-
phers.²³ Nor did I imagine that he would
become my mentor and a dear older
friend over the next four decades.

Like many others, I came to the field
of geography unexpectedly and by an
indirect path. After graduating from
Yale in 1962 with a BA in political sci-
ence and the rank of ensign in the U.S.
Navy, I spent two years serving on a
Navy icebreaker literally visiting “the
ends of the earth” (Labrador, Greenland,
Antarctica, and the Boston Navy Yard).
In 1964, I entered the University of Chi-
cago Law School—where I became a
geographer. This unexpected outcome

(rather upsetting to my parents) was in-
spired by the posthumous influence of
my uncle, Robert S. Platt (1890–1964),
the longtime chair of the geography de-
partment at the university, and his inde-
fatigable wife Harriet S. Platt, an ardent
champion of doing your own thing.
Finding torts, contracts, and wills not to
be my thing, I gravitated across campus
to fraternize with the geography faculty
and graduate students.²⁴

My first opportunity to combine law
and geography (my career-long quest)
was as a summer research assistant in
a study of the impact of urban renewal
on small businesses in the university
neighborhood, directed by urban geo-
grapher Brian J. L. Berry. Upon finishing
law school and passing the Illinois Bar
exam, I entered the doctoral program
in geography with an urban studies fel-
lowship from the new U.S. Department
of Housing and Urban Development
secured for me by Professor Berry. Be-
fore Gilbert departed for Colorado,
I audited a seminar with him where he

Indiana Dunes National Park.



1 discussed, with skepticism, the newly
2 enacted National Flood Insurance Pro-
3 gram (NFIP).²⁵

4 After a year of coursework, I was
5 hired as staff attorney for the Open
6 Lands Project, a small but feisty envi-
7 ronmental group in downtown Chicago.
8 This proved to be a dream opportunity
9 to combine my law and geography in-
10 terests in my doctoral dissertation un-
11 der the helpful direction of Brian. I also
12 made myself a gadfly in the Chicago en-
13 vironmental scene as advocate for pre-
14 serving neighborhoods, parks, and Lake
15 Michigan from ill-advised development
16 proposals.²⁶

17 After four vibrant years with the
18 Open Lands Project (today's Open-
19 lands), I accepted a geography faculty
20 position at the University of Massachu-
21 setts Amherst in 1972. But the transition
22 from hard-knuckle Chicago politics to
23 the bucolic tranquility of western Mas-
24 sachusetts left me a bit bored. A stint
25 serving on a Connecticut River advisory
26 committee reintroduced me to NIFIP,
27 and I wrote a letter about it to Gilbert
28 in Boulder. Eager for evidence of how
29 well the program was performing, he
30 encouraged me to evaluate its impacts
31 (if any) in the Connecticut River Valley.
32 I conducted some very crude local case
33 studies and brashly published a plan-
34 ning article.²⁷

35 In July 1976, I made the first of many
36 annual treks to the annual Natural Haz-
37 ards Workshop in Boulder, where I ex-
38 perienceed Gilbert's trademark standard
39 operating procedure: (1) assemble a
40 diverse mix of government officials,
41 practitioners, and academics; (2) feed
42 them well; and (3) let them talk each
43 other's ears off for two and a half days.
44 The workshop's literal high point in the
45 early years was the barbecue at Gilbert
46 and Anne's ranch high in the foothills
47 overlooking the plains of eastern Colo-
48 rado—as vast as the view of Lake Michi-
49 gan from the Indiana Dunes. A defining
50 feature of the hazards network centered
51 in Boulder was a shared sense of pur-
52 pose among the diverse cast of charac-
53 ters it attracted.

54 In the late 1970s, I was invited by Ian
55 Burton and Bob Kates to contribute a

chapter to a "festschrift" of writings by
and about Gilbert White. Although a
comparative newcomer to the hazard
research world, I was asked to summa-
rize (gulp) his impact on national flood
policy in the United States. This assign-
ment led me to interview two former
directors of New Deal agencies where
Gilbert had worked: Harvard land-
scape architect Charles Eliot II and the
legendary Johns Hopkins water expert
Abel Wolman. My essay appeared in the
second volume of the Festschrift.²⁸

In 1979, my family spent a sabbatical
semester in Boulder with a warm wel-
come from Gilbert and Anne. Boulder
was a wonderful base for family explora-
tion of some of the western national
parks. It was also a launching pad for
interesting new projects. One morn-
ing I heard a news report about an
epic flood in Jackson, Mississippi, and
by that evening I was on a plane to the
scene with a "Quick-Response Grant"
from the Natural Hazards Center. In
the Gilbert White model, I returned to
Jackson six months later and conducted
(if I do say so) a useful critique of post-
flood recovery policy.²⁹

My Boulder sabbatical also yielded
an opportunity to study postflood re-
covery in localities of my choosing
under a contract with the U.S. Water
Resources Council (WRC). Gilbert
recommended me for this study and
firmly counseled me to be "practical"
and not engage in bureaucratic gen-
eralities. With the support of Frank
Thomas at WRC, I trotted from one
disaster site to another, documenting
how public funds were used to restore
the status quo rather than rebuild-
ing more safely (i.e., failing to practice
"hazard mitigation"). Based on my case
studies, I urged the WRC to broker
an interagency agreement to conduct
postdisaster mitigation studies (what
Gilbert called "post-audits") immedi-
ately after a presidential disaster dec-
laration for a river or coastal flood.³⁰
Incredibly enough, this actually hap-
pened: A dozen federal agencies signed
onto the agreement I drafted, and in-
teragency "hazard mitigation teams"
were dispatched to flood-stricken com-

munities. Whether their advice had
any influence on the rebuilding process
remains to be evaluated.

In January 1987, I gave a series
of talks in Beijing on American land
use planning under a contract with
UNESCO. As with the WRC contract,
Gilbert recommended me for this as-
signment—a reassuring boost to a more
junior associate. With long underwear
beneath my three-piece suit, I showed
slides to the Mao-jacketed audience of
smoking male bureaucrats while electric
space heaters struggled to offset the bit-
ter cold. (I returned the next autumn for
a conference in a restored Qing Dynasty
complex in the Fragrant Hills outside
Beijing, a delightful contrast to my win-
ter visit.)

During a forum in St. Louis, Mis-
souri, after the great Midwest Flood of
1993, Miriam Anderson (my former
student and by then a flood planner in
St. Charles County) invited Gilbert and
me to view a nearby scene of devasta-
tion. As we strolled in our conference at-
tire among wrecked homes, overturned
vehicles, and ubiquitous mud, Miriam
warned us that local residents who were
prohibited from repairing their homes
might take a shot at us. I told Gilbert it
would be an honor to be gunned down
(shades of "Bonnie and Clyde") in the
Mississippi River floodplain with the
"father of floodplain management."
However, Miriam hustled us off.

Gilbert died gracefully, as he lived,
on October 5, 2006, at his home in Boul-
der with Claire (his second wife) and
other family members at his side. In a
handwritten note in his precise cursive,
he expressed the hope that his memorial
service:

*If there be one, be a time for cheer-
ful recollection. It will be needless
to lament the departed and too
late to reform him. To be explicit,
I instruct my executors to arrange
that the service be followed by a
reception with generous provision
of worldly refreshments, including
coffee, ice cream (preferably cof-
fee ice cream and apricot or rasp-
berry sherbet), and pastries and
chocolates.*



IGU Field Trip to Alberta, Canada with contributors to the volume *Natural Hazards: Local, National, Global* edited by Gilbert F. White.

Identifying and Enabling the Range of Choices (Reflections by James K. Mitchell)

Contemporary public discourse in the United States seems to be increasingly characterized by uncompromising confrontation and willingness to base decisions on opinion rather than evidence. By reflecting on Gilbert's life and work, we can encourage a more productive approach to public decision making.

Gilbert proudly identified himself as a geographer who sought to engage scholars with big problems that face society as a whole: international development, nuclear war, water scarcity, natural hazards, and environmental sustainability. The process of decision making under uncertainty was his central intellectual concern.³¹ By combining insights from behavioral science with data from detailed field studies, he systematized criteria and constraints that had been largely overlooked by theorists of risky choice but for which the value

was readily apparent to practicing environmental professionals. The observations that follow emphasize Gilbert the humane individual because his distinguished scholarship gained much of its power from his ability to relate to people in engaging, ethical, and empathetic ways.

My first encounter with Gilbert took place, fittingly, against the backdrop of a record-setting blizzard in January 1967 that shut down Chicago. At the time, I was looking for an appropriate place to pursue a PhD degree, and he was the only other person who had made it into Rosenwald Hall at the University of Chicago that snowbound morning, so we fell into a lengthy conversation. What quickly caught my attention was that Gilbert offered a way of seeing the world that opened up multiple possibilities for action. Coming as I did from Northern Ireland where there were only two sides to every issue—a Protestant one and a Catholic one—it was truly liberating to be introduced to a range of choice in the management of uncertainties that was

one of the pillars of Gilbert's thinking. His emphasis on observing real-world choices made by ordinary people led Gilbert to promote decision-making schema that accommodate multiple nuanced alternatives rather than oversimplified Olympian "solutions."

In addition to his preference for a Socratic style of instruction, Gilbert's teaching was also marked by other tropes. One of these was the rarity with which he quoted intellectual luminaries; this was not through any lack of respect for their work, but more because he didn't want his audience to confuse personalities with ideas or to be seduced by dazzling wordplay. However, when he did employ quotations, it was worth paying very close attention. This was the case when he recounted the Nobel Prize-winning physicist Lord Rutherford's terse report to his research team after their budget had been slashed: "There is no money; we shall have to think." That statement epitomized Gilbert's highest priority. First and foremost comes the hard work of thinking; all other con-



14 *Maass-White Reference Room Dedication at*
15 *the Institute for Water Resources, US Army*
16 *Corps of Engineers, April 6, 2001.*

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 siderations are secondary and none of them should stand in the way of engaging with a problem. Moreover, he was particularly conscious about the risks and responsibilities that attended thinking, especially when linking research with public policy; in a letter sent to me when I was a newly minted professor, he described this as “the hazardous business of advising others.”

Enabling was a White forte. Wherever he went, Gilbert specialized in dissolving the social distance between people. He did this by encouraging interactions that gave individuals a definite stake in outcomes and involved some form of reciprocity or collaboration. Initially, newly arrived male students at the UC field camp in northern Indiana were invited to share the modest privations of an early-morning cold-water shave with him in the drafty tin-roofed hut that served as a bathroom. Later, if you ate at his home in the upper reaches of Sunshine Canyon, you were expected not just to wash the dishes afterward but also to do so in a manner than conserved precious water supplies. When he offered me his mountain cabin as a vacation retreat, it was with the understanding that while there I would clear the brush from near the building as a responsible act of fire hazard management. Those who worked with Gilbert never escaped such obligations. Neither did participants in conferences and workshops under his aegis. Typi-

cally, one was asked to make a pithy self-introduction and then take on a task as session convener, chair, panelist, rapporteur, or designated questioner. These events were crash courses in getting to know each other; when combined with Gilbert’s genius for populating meetings with stimulating people, the results were frequently revelatory. You got the sense that this intensely modest man knew more than anyone else in the room and that he was unfailingly optimistic about the capacity of everyone to be enlightened. There was a remarkable feeling of being taken out of oneself and shown how to be a better human being.

Gilbert’s relief work with the American Friends Service Committee during World War II is well known, but he was also generous in many lesser ways. Sometimes this might be as simple as loaning his hotel room to an unhoused colleague who had arrived at a distant conference site after a long and sleepless overnight flight. Or he might assist the development of students by finding money to enrich their learning with short study visits to venues where they could gain benefits not available at the University of Chicago. Such visits typically had unexpected ancillary outcomes that validated Gilbert’s recognition of the important role that serendipity and luck could play in human experience.

Success usually attended Gilbert’s endeavors, but there were also some disappointments. During the 1980s, and under the umbrella of the U.S. National Academy of Sciences (NAS), we both worked toward the creation of an ambitious global initiative for reducing the impact of disasters. Despite his support for a draft plan that focused on making better use of existing scientific information, the International Decade for Natural Disaster Reduction (1990–1999) that subsequently emerged initially proceeded in a different direction that emphasized new scientific research.³² Though he was a prominent member of the Academy with many achievements to his credit, from that point onward, Gilbert was no longer called upon to formally take a lead in NAS affairs. This

was a snub that he attributed to his advocacy of a socially responsible science-based program that foregrounded the needs of non-expert information users, an orientation that has since gathered widespread support among scientists and hazard managers alike.

Finally, I want to underline Gilbert’s stance toward innovation and the future. He was very comfortable with the notion that we live in a nondeterministic world, to which humans adapt even as they also change it. For him this was an emergent process, and he had few expectations that human institutions needed to be permanent; rather, he saw them as having shelf lives that should be subject to periodic assessments and retired when they had served their purpose. In other words, he was not mired in fealty to the past. The final words of the last letter that I received from him, when he was already almost 90, might stand as his epitaph as well as a guideline for comporting ourselves in a world that continues to demonstrate enormous capacity for shaking up taken-for-granted knowledge and preconceptions: “(I am) always on the lookout for new perspectives.”

In summary, the Gilbert White that I knew over four decades had an admirable suite of personal qualities that served to buttress his groundbreaking scientific work: Think big; be open to new ideas; take your responsibilities seriously; try to solve problems; be generous; speak concisely and plainly; act morally; treat people with respect; engage them in collaborative action; and help them to show their best sides.

Recalling Gilbert White’s Service (Reflections by Jim Wescoat)

Quite fittingly, the American Association of Geographers (AAG) session, organized by Rud Platt and including Gilbert’s panel of friends, was held in Washington, DC, the city where Gilbert started his professional career in 1934 on flood hazards in the Mississippi Valley. The valley is once again engulfed

1 in floodwaters, 85 years later in 2019.
2 I think Gilbert would only have been
3 happy about the AAG panel if we could
4 demonstrate that it is useful in some
5 way. The recollection that came to my
6 mind for today's panel is Gilbert's ideas
7 about "service," which bring together
8 some of the personal, public, and aca-
9 demic dimensions of his legacy.³³

10 Academic service is a familiar con-
11 cept for those of us in universities
12 through the mantra of research, teach-
13 ing, and service. It is sometimes even
14 quantified as 40–40–20 for the percent-
15 age of time spent on teaching (40%), re-
16 search (40%), and service (20%), though
17 the 20% for service is widely perceived
18 to be an underestimate of time spent.
19 It is also perceived to overestimate the
20 institutional value of service in annual
21 faculty reviews. Even so, it is a large di-
22 mension of what we do in time and in
23 spirit.

24 Public service seems particularly rel-
25 evant in Washington, DC, where Gilbert
26 began his career in public service, where
27 he refused military service, after which
28 he went on to model a life of academic
29 and personal service. While these are
30 all modes of collective service, I think
31 it is fair to say in Gilbert's philosophy
32 they were expressions of personal indi-
33 vidual commitment. This short reflec-
34 tion attempts to outline some of the key
35 sources for Gilbert's service and insights
36 that may be from this perspective.

37 There were many influences on Gil-
38 bert's ideas about service. One was
39 the influence of family members who
40 helped shape his character.³⁴ Gilbert's
41 advisor Harlan H. Barrows modeled
42 geographic inquiry in government ser-
43 vice. The obituary that Charles Colby
44 and Gilbert wrote for Barrows makes
45 explicit the pragmatic, intellectual, and
46 discursive lessons Gilbert took from
47 Barrow's environmental policy studies.³⁵

48 However, several years before that,
49 and in a very different context, Gilbert
50 mentioned two talks at Rockefeller Cha-
51 pel at the University of Chicago in 1930
52 that influenced him greatly. The first was
53 by the progressive, ecumenical, and pro-
54 science minister named Harry Emerson
55 Fosdick, who led the Riverside Church

in New York City. Fosdick had written
a book titled *The Meaning of Service*.³⁶
That book included chapters like "The
peril of uselessness," "Small enemies of
usefulness," and so on, about what it
meant to live a useful life of service.

Even more significantly, shortly after
the Fosdick talk, Gilbert was invited to
spend an evening with a chapel visitor
named Rufus Jones, a Quaker professor
of philosophy and mysticism at Haver-
ford (and an influence on Harry Emer-
son Fosdick). About 15 years earlier, Ru-
fus Jones and colleagues had established
the American Friends Service Commit-
tee (AFSC) to provide principled alter-
natives to military service for conscien-
tious objectors to war. That is, Jones was
a mystic who co-founded a pacifist so-
cial service organization that mobilized
thousands of volunteers in food relief
and work camps.³⁷

In a talk to a Boulder Friends meet-
ing in 1993, Gilbert said, "I was much
attracted to that notion of individual
testimony" [that is, to individual tes-
timony as the basis for social change].
Gilbert continued, "I don't need to tell
those of you who have been under the
spell of Rufus' conversation and writing,
what such an evening meant at that stage
of life. I began reading."³⁸ In addition to
reading Jones's many books on spiritual
life and Fosdick's *Meaning of Service*,
both of those speakers recommended
that Gilbert read William James's *The
Varieties of Religious Experience*. He may
have later read William James's 1906 es-
say on "The Moral Equivalent of War,"
which argued for organized programs of
national service.³⁹

William James influenced Jones and
Fosdick and many others with his ideas
about the bonds between personal spir-
itual feelings and outward social con-
duct. Jones wrote movingly that James
communicated with him "as though
his main purpose in life was to help
somebody get his feet upon the sun-
road to truth. He saw more capacities
in a person than the person himself did
... Though never a disciple of his and
though never able to accept in anything
like fullness his central positions, I al-
ways felt that he gave me the stimulus of

friendship and I acknowledge now with
joy and loyalty the immense debt I owe
him."⁴⁰ It is also significant that James
cited the early Quaker leader George
Fox several times in *The Varieties of Re-
ligious Experience*.⁴¹ For William James
and I think for Gilbert, experience,
religious and otherwise, is subject to
close, even scientific observation and
evaluation (i.e., scientific evaluation
of personal conviction as a source of
social conduct and change). The cen-
tenary anniversary of *The Varieties of
Religious Experience* has prompted re-
newed elaborations and debates about
these ideas.⁴² An important dimension
of the Quaker perspective on individual
experience is its close connections with
community meetings for worship, busi-
ness, and service that are articulated in
books of "faith and practice" and docu-
mented in detailed minutes by commit-
tee and meeting clerks.

After 8 years of public service in
Washington, DC, when the United
States entered World War II, Gilbert
resigned from government and applied
to do relief work with the American
Friends Service Committee (AFSC) in
France. Jones encouraged and helped
him secure that appointment. Gilbert
later became chairman of AFSC in 1963,
and later still he came to have reserva-
tions about its shift away from the in-
dividual spiritual basis of service in the
1990s. But that is to leap ahead.

In between, Gilbert was president of
Haverford College in the late 1940s and
early 1950s, where he overlapped with
Jones during the last year of his life.
There, Gilbert commissioned Henry
Riecken to conduct a psychological
study of student experience in volun-
teer work camps in Europe and the

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[if possible]

1 United States during the late 1940s.⁴³
2 The idea was that volunteer work
3 camps should help cultivate values and
4 character through what we now call
5 service learning.

6 I remembered Gilbert telling me and
7 many others about the principal find-
8 ings from this study, which became
9 Riecken's doctoral dissertation at Har-
10 vard. Riecken went on to a distinguished
11 career at the National Science Founda-
12 tion (NSF), Social Science Research
13 Council (SSRC), and several university
14 professorships. Gilbert mentioned this
15 study on volunteer work camps often.
16 It is an extraordinary study, in part for
17 its methodological rigor and also be-
18 cause the charge from Haverford asked
19 how volunteer work camps affected par-
20 ticipants' attitudes, values, and person-
21 alities. The principal student values that
22 Haverford asked Riecken to study were
23 tolerance/ethnocentrism; democracy/
24 authoritarianism; collaboration/group
25 solidarity; social concern/altruism; and
26 pacifism/aggression.

27 Riecken's psychological evaluation
28 found that the volunteer work camp
29 strengthened all of those character
30 traits, with the partial exception of paci-
31 fism, even a year after the experience,
32 and especially if campers maintained
33 contact afterward. The only negative
34 impact was students' increasing per-
35 ceived alienation from and judgment of
36 the "average man," which the Riecken
37 study treated as an inaccurate view of
38 society at large and a risk that the camps
39 should address. At a time of emphasis
40 on learning outcomes, this was a study
41 of the effects of service learning on atti-
42 tudes, values, personality, and character
43 development. These are not our ordi-
44 nary learning outcome variables.

45 The Riecken study helps us circle
46 back around to the service ideas and
47 ideals of Rufus Jones and Gilbert White.
48 The biography of Jones titled *Friend of*
49 *Life* notes, "When you want to change
50 attitudes, he had long ago found, you
51 do not say so directly but set about at-
52 taining some goal that will arouse group
53 loyalty and create teamwork."⁴⁴ The
54 same could be said of Gilbert.

Historical Significance of Scholarship and Service (Reflections by Martin Reuss)

I was invited to offer my reflections
because, quite correctly, this tribute to
Gilbert's life needed a historian, someone
to supply the dimension of time to the di-
mension of space that is the geographers'
domain. In that vein, I want to discuss his
historical importance. However, this will
be a short explanation: It begins only as
far back as the Middle Ages.

Centuries ago, most people, regard-
less of where they lived, thought of
floods as "acts of God" intended to pun-
ish humans for their evil deeds. Fervent
prayer was the only answer—divine for-
giveness, the ultimate solution. Mean-
while, communities rebuilt and tried to
restore the villages and landscapes they
had depended upon before the floods
came. That remained the usual response
to flooding until the 19th century, when
people continued to restore their com-
munities after disasters hit but perhaps
lost some of their religious fervor. With
technological and scientific help, they
thought flood prevention was possi-
ble, and "flood prevention" became the

mantra of the time. In addition, after
the 1886 Charleston, South Carolina,
earthquake, the city's Chamber of Com-
merce insisted that this was a "natural
disaster," not one caused by either God
or humans, thus giving the world a new
and appealing mantra to describe earth-
quakes, floods, and many other conceiv-
able disasters.

In the early 20th century, people gave
up on preventing floods but still thought
that floods could be "controlled," and
everyone from the local mayor to the
politicians in Washington, DC, looked
to the Army Corps of Engineers to ac-
complish that little bit of magic. That, as
it turned out, was a bridge too far. In Gil-
bert's 1945 University of Chicago disser-
tation, "Human Adjustment to Floods,"
he explained the problem in surely his
most quoted statement: "Floods are
'acts of God,' but flood losses are largely
acts of man."⁴⁵ When I interviewed him
in 1985, he elaborated the point: "The
dissertation suggested a simple but fun-
damental concept that, for any mode
of resources management, finding the
optimal use of a resource theoretically
involves canvassing the whole range of
alternatives that are open to society, and



Arthur Maass and Gilbert White cut the ribbon to the Reference Room named in their honor.
Institute for Water Resources, US Army Corps of Engineers, April 6, 2001.

1 then trying to estimate what the conse-
2 quences would be, both favorable and
3 unfavorable, of undertaking any one of
4 those alternatives or a combination of
5 them.”⁴⁶

6 Gilbert wasn't the only one to think
7 in these terms, but his argument, am-
8 plified and spread across the country
9 and eventually around the world, con-
10 vinced many that the only thing that
11 can be expected from the manipulation
12 of water through structural and op-
13 erational solutions was “flood reduc-
14 tion”; that term stays very much with
15 us. It is a term that possibly would not
16 have impressed a 14th-century peas-
17 ant, but it smacks of a realism that en-
18 compasses natural as well as human
19 needs. As a geographer with significant
20 conclusions and insights regarding the
21 relationship between humans and the
22 natural world, Gilbert inspired trust in
23 him and his message.

24 In 1955, after nine years as presi-
25 dent of Haverford College, Gilbert and
26 his wife, Anne, thought it was time
27 to move on. A year or so earlier, Gil-
28 bert told me that house guest Marg-
29 aret Mead had told him that he was on a
30 “one-way street. You'll never get out of
31 educational administration. They never
32 do.” Gilbert took up Mead's challenge
33 and became determined to do just that.
34 Fortunately, the University of Chicago
35 had an opening, and Gilbert returned to
36 Chicago, where he became head of the
37 Geography Department—presumably
38 low enough in the pecking order to sat-
39 isfy him. In any case, it was a fortuitous
40 decision, both for Gilbert and, more
41 generally, for the geography community.
42 Thank you, Margaret Mead.

43 Gilbert impressed me as a “who,
44 what, when, where, why, and how” kind
45 of teacher. He once told my wife and me
46 that on the first day of his geography
47 grad seminar, he would ask his students,
48 first, what were the important issues be-
49 ing studied in geography and, second,
50 who was doing the significant work?
51 While others may differ, I feel that the
52 anecdote captures Gilbert's approach to
53 his life and his work. Always inquisitive,
54 always asking questions, and, I think, al-
55 ways fair.

Gilbert increased our understand-
ing of the relationship between water
and society, especially when floods and
other disasters threatened that relation-
ship. More than 30 years ago, my wife
and I drove Gilbert and Anne around
the 1.4-million-acre Atchafalaya Basin
in Louisiana; I was then writing a book
about this freshwater swampland. Gil-
bert peppered me with numerous ques-
tions about the Cajun population of the
basin, the natural cycle of the water,
and the ways in which the U.S. Army
Corps of Engineers had altered that
cycle. Here, the particular flood threats
to swampland residents and the human
threats to the natural regimen meet in
precarious balance, and clearly Gilbert
was interested in exploring this connec-
tion. His only disappointment (I think)
was that we couldn't visit the McIlhenny
tabasco plant on Avery Island (actu-
ally, a salt dome) because it was closed
that day.

While it is common to describe a
person's career by highlighting the im-
portant positions and contributions he
or she made, it is often equally instruc-
tive to look at the positions that he was
offered but ultimately declined. In Gil-
bert's case, the list indicates his commit-
ment to applying academic research and
scholarship to practical problems. The
list includes:

- President of Brown University.
- Vice-president of the Rockefeller Foundation.
- Assistant Secretary of Health, Education, and Welfare under John Gardner.
- Deputy Director of the Peace Corps under Sargent Shriver.
- Executive Secretary of the American Friends Service Committee.
- First executive officer of the Population Council.

Although over time Gilbert did serve
in various administrative positions,
both volunteer and paid, he never lost
his interest in research and writing, and
he helped shape the conversation about
water policy and management in the
United States and many other countries.

Moreover, his experiences on his family
ranch, in New Deal water agencies, in
academia, and with his Quaker religion
provided a lifelong respect for truth and
harmony in the world and in daily life.
Both his scholarship and his values are
worthy of emulation.

Role Model and Human Inspiration (Reflections from Claire Rubin)

Gilbert was—and still is—an inspi-
ration and role model for me. I knew
him primarily as director of the Natu-
ral Hazards Center at the University
of Colorado, Boulder. When I decided
to take on the editing of two books on
emergency management last year, I was
reminded that Gilbert was active profes-
sionally into his 90s. I figured in my 70s
I should be able to do the job!

I am not a geographer. My back-
ground is in public administration, so
my comments are about Gilbert as a
person rather than his notable accom-
plishments as a geographer.

I appreciated his interest in my
work and always welcomed the oppor-
tunity to chat with him. Like others,
when I was faced with a difficult pro-
fessional decision or ethical matter,
I sometimes ask myself “What would
Gilbert do?”

Things I admired:

- He was a great listener.
- His extraordinary memory and ability to summarize—for example, three days of conference activities at the end of the annual hazards conference.
- His commitment to the Quaker faith and convictions, which he demonstrated throughout his life-time.
- His prodigious writings and lectures.
- His sponsorship of me to the Cosmos Club when women were newly being admitted. (His picture hangs in the lobby among the Cosmos Club Award winners and I always say hi when I go by.)

1 Recently, while reflecting on the
2 gains and limitations of emergency
3 management, I looked up a recom-
4 mended article—by White, Kates, and
5 Burton—titled “Knowing Better and
6 Losing Even More; The Use of Knowl-
7 edge in Hazards Management,” which
8 Gilbert co-wrote in 2001.⁴⁷ It is a very
9 thoughtful article and useful to reflect
10 upon even today.

11 I want to share a recollection about a
12 little-known aspect of Gilbert’s life that
13 has remained significant to me for many
14 years. The event occurred before his
15 academic career. For me, it speaks vol-
16 umes about his personal integrity, brav-
17 ery, and commitment to the principles
18 of his Quaker faith.

19 I knew he was a pacifist and a Quaker,
20 but I did not know that during World
21 War II he was a conscientious objector.
22 He related his experience during World
23 War II when he was based in Mar-
24 seilles, France, to do relief work with the

American Friends Service Committee
(AFSC).⁴⁸

I had recently read a very mov-
ing book titled *Lest Innocent Blood
Be Shed*.⁴⁹ It was an account of a brave
minister, Andre Trocme, in a small
farm community, whose residents were
French Protestants: the rural town of
Le Chambon in southeastern France,
where about 5,000 residents, mostly
farmers, sheltered at great risk 5,000
people displaced from European coun-
tries, many of them Jewish, during the
4-year duration of the Nazi occupation.
These townspeople took an enormous
risk with the Nazis nearby.⁵⁰

I mentioned the town and the min-
ister to Gilbert, who said he knew about
them and that he and other Quakers had
provided the town with food for the ref-
ugees. Sadly, the unfortunate outcome of
their efforts was that Gilbert and other
Quakers were arrested by the Nazis
and became prisoners of war interned

in Germany. After being exchanged in
1944, he returned to become assistant
executive secretary of the AFSC.

I was amazed and profoundly im-
pacted by the extraordinary humani-
tarian actions of Gilbert and other
Quakers. This story only deepened my
respect and admiration for Gilbert, add-
ing another dimension to what I knew
and valued about his work and his life.

He was the personification of a moral
and ethical person in all endeavors in
his life. He was a person of great integ-
rity and honor. It was my pleasure to
have known him.

Outlaw Connections and Influences (Reflections by Susan L. Cutter)

I don’t recall the first time I actually
met Gilbert, but I assume it was 1982
when he attended the Conference on



Photo courtesy of the Hazards & Vulnerability
Research Institute, University of South Carolina.

Gilbert F. White, Dennis Mileti, Bill Anderson and geography students from the University of South Carolina at the 2003 Annual Boulder Workshop.

Box 2. Pursuit of Peace Through Science: In His Own Words

“Even guerrilla troops have not halted fieldwork. If the United Nations were to designate this area for international development according to the plan already drawn by the four nations, there is a strong possibility that peace could be achieved in a common pursuit of agricultural and industrial growth. This is a solution to Southeast Asian violence which would make sense to peasants in the rice fields and to American taxpayers” (6).

G. F. White, “Vietnam: The Fourth Course,” *Bulletin of the Atomic Scientists* 20, December (1964): 6–10.

the Nuclear Arms Race: Security and Survival at Rutgers University, which Ken Mitchell and I helped to organize. Of course I knew of Gilbert and his work: His legacy was still at the University of Chicago when I arrived in the fall of 1973, 4 years after his move to Colorado.

As an undergraduate at California State University, East Bay, I studied physical geography and environmental studies. The social, antiwar, and environmental activism of the San Francisco Bay area in the late 1960s permeated everything I read and studied. In the middle of the great social experiment of the time, those experiences entrenched my long-standing interests in inequality in all its forms (racial, social, gender, environmental). While I was prone to protesting, as many of us were, I also came under the mentorship of William L. Thomas Jr.⁵¹ I worked for him as an undergraduate assistant on a project using aerial photography and mapping to delineate changes in settlement patterns in Southeast Asia from the U.S. defoliation campaign in Vietnam.⁵² The project was designed to demonstrate the impact of herbicides in human communities, including human health, livelihoods (spray swaths denoting damaged or destroyed vegetation), population displacement, and land use changes from the other instruments of war—vehicle tracks, bombing craters, gun placements, trenches, and so on. This was my first foray into using science to bridge the divide between militarized conflicts, peace, and human rights. Only later did I learn of Gilbert’s efforts in international science cooperation in the Lower

Mekong River Basin to promote agricultural and industrial growth among the four countries—his attempt at pursuing peace through science.

At Chicago, I worked with Brian J. L. Berry to advance my knowledge of spatial analysis and urban geography. Here I was able to combine interests in the intersection of human and natural systems and look at the social burdens of pollution—one of Mr. Berry’s projects at the time for the U.S. Environmental Protection Agency.⁵³ In asking the question “Do poor residents of inner-city neighborhoods bear the greatest burdens of environmental pollution?” this study became one of the earliest empirically based and comparative environmental justice studies of different cities. Reflecting on Gilbert’s penchant for examining the practical side of nature–society interactions, especially society’s capacity to perturb natural systems, I now see where some of Gilbert’s influence still permeated the department.

After a short visiting year-long stint at the University of Washington, where I taught geography and environmental studies courses, I joined the faculty at Rutgers University in an interdisciplinary environmental resources department along with fellow Chicago alumnus Ken Mitchell. Ken was already teaching hazards courses (his lineage to Gilbert was clear), so I took on technological hazards—clearly an emerging issue in the early 1980s, especially after the 1979 accident at Three Mile Island. The tightly coupled human/natural/technology systems, along with the nuclear arms race and the mutually assured destruction policies of the Reagan

years, led Gilbert, among many others, to speak out on the environmental consequences of nuclear war. It was at this juncture that my career followed Gilbert’s path in promoting professional activism and using our geographical voices to address key issues of the time.

Gilbert was also very supportive of my work and wrote a commentary on my first paper that I had published in our flagship journal.⁵⁴ Another disaster, September 11, 2001, again enabled me to use my professional leadership (I was AAG president for 2000–2001, as was Gilbert for 1961–1962) and the bully pulpit it afforded to showcase our professional expertise and that our discipline could help inform policymakers on the nature and extent of terrorism, root causes, and the challenges we face in making our communities, the nation, and the world safer.⁵⁵

In 1993, I left Rutgers University to embark on the third wave of my career at the University of South Carolina. As chair of the geography department, I was asked to broaden the focus beyond the technical areas of remote sensing and geographic information sciences, and I did so readily by adding courses in environmental hazards, the geography of disasters, and the human dimensions of global environmental change—and then hired faculty members to support these areas. When I relocated to South Carolina, I had to relearn natural hazards, as Ken Mitchell had ably handled that subject area, while I focused on technological hazards. During this time as well, I became a regular attendee at the annual “Boulder” workshops, where I would chat with Gilbert at great

Box 3. Professional and Social Activism to Improve the Human Condition: In His Own Words

“The ultimate threat—nuclear war—promises such catastrophic effects that many people are reluctant to think about it ... In thinking about the possible effects of nuclear conflict, we should not forget the continuing threats to the resources that sustain us. Neither should we permit concern for correcting the environmental destruction around us to obscure the haunting image of future nuclear catastrophe.”

G. F. White, “Editorial: The SCOPE ENUWAR Report,” *Environment: Science and Policy for Sustainable Development* 27, no. 8 (1985): 1.

“We must strengthen our ability to teach these things in the classroom and wherever people can be reached. And we must press to have them enter into thinking wherever policy is made ... [It] is our obligation as members of a great human aggregation that slowly, painfully, irritably, is coming to see itself as one fractious family one perilously changing planet.” (15)

G. F. White, “Geographers in a Perilously Changing World,” *Annals of the AAG* 75, no. 1 (1985): 10–16.

length as many others did, with him always asking, what important issues was I working on? He became a de facto mentor to me, just like he was for many others in our field, occasionally sending his famous handwritten notes about something he had read that I wrote and

gently suggesting where I could have done more.

Like Gilbert, I have been associated with *Environment* for many years, first as an author and, since 2008, as an executive editor. In Gilbert’s inaugural editorial with his two co-executive edi-

tors (Alan McGowan and Bill Clark), they introduced new contributing editors, a veritable list of leading scholars in the environmental arena, with the expressed aim “to provide our readers with most significant findings and new perspectives on the Earth as a home for

Box 4. Responsibility as an Educator for Change: In His Own Words

“Let it not be said that geographers have become so habituated to talking about the world that they are reluctant to make themselves a vital instrument for changing the world. This position will no longer do for research, for teaching at the college level, or for teaching at the high school level. It can survive only at the peril of the society which permits its comfortable and encapsulated existence.”

G.F. White, “Geography and Public Policy,” *The Professional Geographer* 24, no. 2 (1972): 101–104.

“A more specific factor may be the reluctance of the officers and guiding groups of the AAG to foster collegial discussion of geographic aspects of the major issues of our time ... Notwithstanding the adoption of a resolution on nuclear war at the Association’s business meeting in 1986, no plenary sessions were arranged ... no special symposia or discussions were arranged in the two journals ... I hope the officers, Council, editors, and editorial boards of the Association will ask themselves whether or not they are exercising as much leadership as they could and should at this stage of scientific thinking about the world around them.”

G.F. White, “Commentary on Geographers and Nuclear War: Why We Lack Influence on Public Policy,” *Annals of the AAG* 78, no. 4 (1988): 718–19.

“The time has arrived for U.S. politicians’ promises of national change to be translated into action on the environmental front ... I hope that the new leadership will take careful note of what has been learned in recent years from incisive appraisals of existing resource-management and environmental protection efforts.”

G. F. White, “Editorial: A Season of Change?,” *Environment: Science and Policy for Sustainable Development* 34, no. 10 (1992): 1.

1 the human family, and to present these
2 in usable, readable form for the citizen
3 who cares for the future.”⁵⁶ The trio kept
4 their word, and during Gilbert’s tenure
5 as executive editor (1983–1992), they
6 produced some of the most provoca-
7 tive and impactful articles written by the
8 leading scholars in the field. Tackling the
9 current issues at the time—nuclear war
10 and its environmental effects, high-level
11 nuclear waste disposal, global environ-
12 mental change and resource manage-
13 ment—the editorials he wrote were part
14 descriptive of that issue’s main featured
15 article but also contained a subtle topical
16 message. His last editorial as he stepped
17 down as executive editor in December
18 1992 focused on calling on the incoming
19 Clinton–Gore administration to use sci-
20 ence to support policy and practice.

21 As an “outlaw”—an indirect part of
22 the White intellectual family—I made
23 a habit of always bringing the next gen-
24 eration of students to the workshops
25 so they could meet hazards research-
26 ers and practitioners, including Gilbert,
27 who was always gracious and inquir-
28 ing of them about their studies. By this
29 time, we had a full-fledged institute at
30 the University of South Carolina that
31 focused on hazards and vulnerability
32 research. The institute has many com-
33 puter stations, each one named for a
34 well-known hazards and disasters scien-
35 tist—Burton, Kates, Kasperson, Mileti,
36 Anderson, Kunreuther, Henry (Quar-
37 antelli), Rubin, Tierney—but our server,
38 the one machine that backed up all the
39 others and held all of our data, was (and
40 is), of course, Gilbert. He enjoyed this
41 notoriety, and every time I saw Gilbert
42 in Boulder, his first question was always
43 “How am I doing?” My reply: “Still go-
44 ing strong and helping us to learn new
45 things every day.”

46 47 48 **A Lasting Legacy:** 49 **Contributions to *Environment*** 50 **(Reflections by Barbara T.** 51 **Richman)** 52

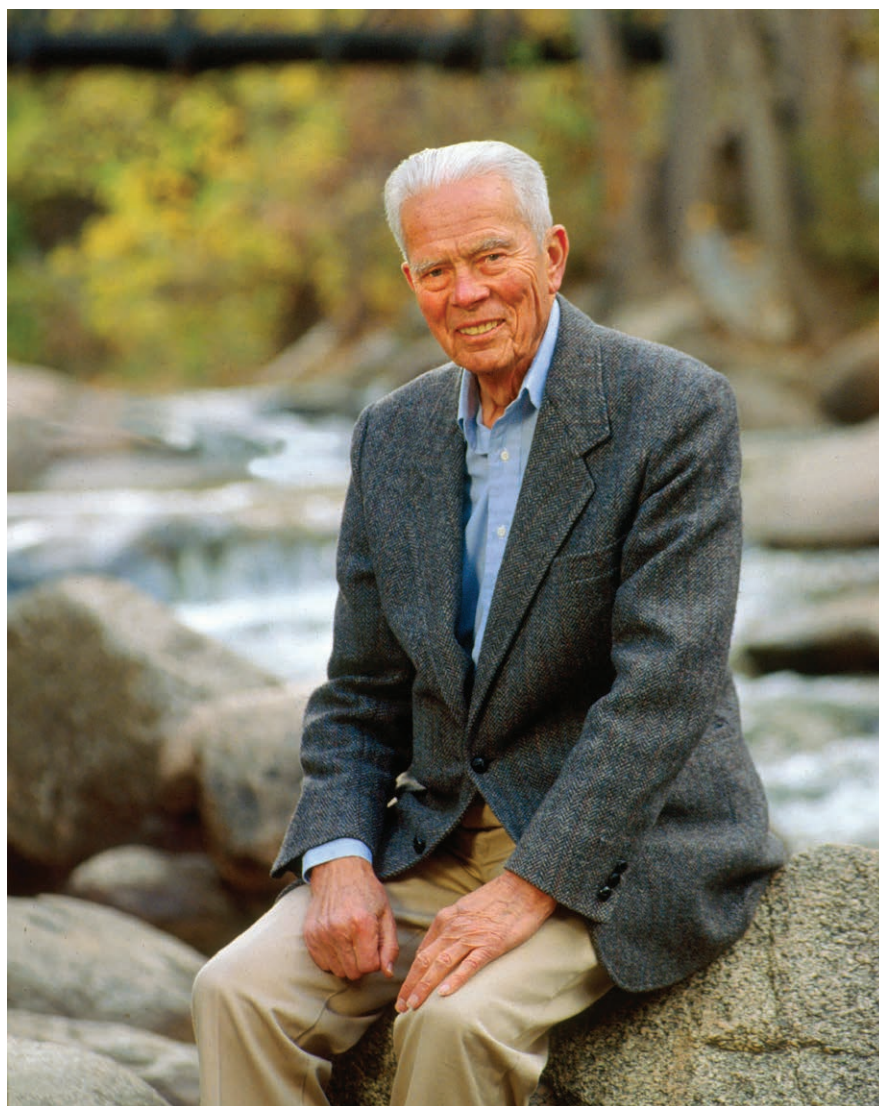
53 The previous contributors to this arti-
54 cle articulated well Gilbert’s background
55 and how his perspectives, insights, and

56 knowledge influenced geography and
geographers across the planet. Count
Environment magazine as highly fortu-
nate that Gilbert applied those qualities
as an executive editor from 1983 to 1992
and then as a contributing editor until
his death in 2006.

Authors, readers, and the magazine’s
staff all benefitted immensely from Gil-
bert’s careful and thoughtful reading of
manuscripts. Typically, during confer-
ence calls with the other executive edi-
tors, he would listen attentively but si-
lently to his colleagues’ comments about
submitted manuscripts. Then he would
offer, in his gentle but direct way—akin
to a “mic drop” today—laser-sharp cri-
tiques and suggestions for additions and

deletions. Not surprisingly, authors who
followed up on those comments usually
moved swiftly to acceptance and then
publication of high-quality manuscripts
that were widely read and cited.

It’s clear that “Gilbert’s lifelong com-
mitment to geography and human un-
derstanding of the world brought to
Environment’s pages an insistence that
readers connect to a sense of place.”⁵⁷
Gilbert pushed the magazine to go be-
yond standard analyses of the science
and policies that affect sustainable de-
velopment; he insisted that we focus on
how the environment affects the wel-
fare of people and what people could
do to influence the environment locally
and globally. As the editors of *Environ-*



Gilbert F. White.

Photo by Ken Abbott, University of Colorado Boulder

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4 Please Provide
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6 Pull Quote
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9 [if possible]
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16 ment noted in a tribute to Gilbert when
17 he stepped down as executive editor,
18 “Above all, Gilbert’s view of the environ-
19 ment has been unapologetically human-
20 istic.”⁵⁸

21 For example, it was under Gilbert’s
22 guidance that the magazine included ar-
23 ticles on such topics as public prepara-
24 tions for natural hazards⁵⁹; glasnost and
25 ecology⁶⁰; the environmental effects of
26 the Aswan High Dam⁶¹; assessments of
27 air pollution in developing countries, in-
28 cluding how indoor cooking with biofuels
29 affected women and their children⁶²;
30 and the environmental consequences of
31 nuclear war,⁶³ among many others.

32 Gilbert left his mark in other ways,
33 too. Before e-mail, editors reviewed
34 and made comments on hard copies of
35 articles. Gilbert once returned to the
36 magazine’s office a manuscript smeared
37 by chocolate, one of his favorite treats.
38 We had physical proof that he’d read the
39 manuscript thoroughly.

40 As described earlier, Gilbert was well
41 known, respected, and personally con-
42 nected to high-level people in academic,
43 government, and nongovernmental
44 communities the world over. Nonethe-
45 less, he consistently urged the magazine
46 to consider contributions from younger
47 scientists, and he worked diligently with
48 them to bring their articles to publica-
49 tion. He set the example for the rest of
50 the editorial team to do the same.

51 Always curious and ever pragmatic,
52 Gilbert, with a gleam in his blue eyes,
53 would routinely ask those he encoun-
54 tered, “What are you doing that’s use-
55 ful?” In that vein, Gilbert was able to ac-
56 complish feats that seemed impossible.

Notably, he brought together a panel of
Israeli, Palestinian, and Jordanian wa-
ter resources experts (along with a few
Americans and Canadians) to address
key hydrologic issues in the Middle East
(without politics). He also ensured that
those Israelis, Palestinians, and Jordani-
ans broke bread together.

As a parting gift to *Environment*, Gil-
bert would not step down as executive
editor and onto the contributing editor
board until he convinced his beloved
colleague Bob Kates to be his succes-
sor. Gilbert was truly one of this world’s
natural wonders. His legacy lives on as a
part of everyone who knew and worked
with him.

Ian Burton is a professor emeritus at the University of Toronto, where he served as director of the Institute for Environmental Studies (1979–1984). In the 1990s he was a senior policy advisor in Environment Canada and founding director of the Climate Adaptation Research Branch. Together with Bob Kates, he was a PhD student of Gilbert White at the University of Chicago (1958–1961). He has served as a lead author and convening lead author on three assessments by the Intergovernmental Panel on Climate Change (IPCC). He is currently an Expert Advisor to the United Nations International Strategy on Disaster Risk, and Canada’s National Platform on Disaster Risk Reduction. **Susan L. Cutter** is a Carolina Distinguished Professor at the University of South Carolina and Director of the Hazards & Vulnerability Research Institute. In 2019 she became an elected Fellow of the American Association of Geographers (AAG), and also received its Wilbanks Award for Transformational Research for her contributions to geography and the interdisciplinary communities focused on hazards and disasters. She is the recipient of both the National Academies’ Gilbert F. White Lecture in the Geographical Sciences award, and the American Geophysical Union’s Gilbert F. White Distinguished Lecture Award. She is the founding editor-in-chief for the *Oxford Research Encyclopedia of Natural Hazard Science* and an executive editor of *Environment*. **James K. Mitchell** is an emeritus professor of geography at Rutgers University. A member of the last cohort of Gilbert White’s PhD students at the University of Chicago, he has published research on the human dimensions of natural hazards in North America, Europe, East Asia, and Australasia. During the 1980s he chaired the National Academy of Science’s ad hoc Committee on the International Decade for Natural Disaster Reduction and the International Geographical Union’s Study Group on the Disaster Vulnerability of Megacities. He is a fellow of the American Academy for the Advancement of Science, and a founder of the Association of American Geographers’ Hazards Specialty Group and of the international journals *Global Environmental Change* and *Environmental Hazards*. **Rutherford H. Platt** (JD, PhD) is an emeritus professor of geography and planning law at the University of Massachusetts Amherst. He specializes in public policy concerning cities, natural hazards, water, and the environment. His most recent books are *Reclaiming American Cities: The Struggle for People, Place, and Nature Since 1900* (2014) and *Land Use and Society: Geography, Law, and Public Policy* (3rd ed., 2014). He has organized many urban conferences and workshops and has served on several panels of the National Research Council (twice as chair). In 2002, he was honored as a Lifetime National Associate of the National Academies. **Martin Reuss** served as senior water resources historian for the U.S. Army Corps of Engineers for more than 25 years and retired in 2006. He also contributed to UNES-

CO’s program dealing with opportunities and obstacles to resolve international water conflicts. Reuss served as the president, Society for the History of the Federal Government; vice-president, International Water History Association; and president of the Washington, DC, chapter of the American Water Resources Association. He has published several books and numerous articles related to water resources. Reuss received the first Public Outreach Career Award given by the American Society for Environmental History for his work to improve communication between academic and nonacademic institutions regarding environmental history. **Barbara T. Richman** was managing editor of *Environment* for 19 years, from 1988 to 2007, and worked closely with Gilbert White. Richman managed and wrote for *Earth, energy, and environmental publications* for nearly 40 years. Most recently, she was editor in chief of the daily online website *Eos.org* and the accompanying *Eos* magazine, published by the American Geophysical Union. Under her leadership, the website and magazine won 11 awards, including most improved journal or magazine in the association world and the 2018 gold EXCEL award from Association Media & Publishing for editorial excellence in digital media. **Claire B. Rubin** is president of Claire B. Rubin & Associates, LLC (clairerubin.com), a small business specializing in disaster research and consulting, located in Arlington, VA. She is a social scientist with more than 40 years of experience in emergency management and homeland security. While affiliated with George Washington University’s Institute for Crisis, Disaster, and Risk Management (1998–2014) she was co-founder and managing editor of the *Journal of Homeland Security and Emergency Management*. Rubin is the author or editor of three books and nearly 100 publications. She currently maintains a disaster recovery blog, RecoveryDiva.com. **James Wescoat** is Aga Khan Professor of Landscape Architecture and Geography at MIT, where he also co-directs the Norman B. Leventhal Center for Advanced Urbanism. He studied Gilbert White’s work as a graduate student at the University of Chicago, and was later fortunate to collaborate with Gilbert at the University of Colorado Boulder on a book titled *Water for Life: Water Management and Environmental Policy*. His research, teaching, and service concentrate on the geography of water systems in South Asia and the United States, from the garden to urban and river basin scales. **AQ1**

NOTES

1. Inspired by White’s professional and educational advocacy and presented by members of the panel, the American Association of Geographers (AAG) Council adopted a Resolution on Climate Change on April 3, 2019, http://www.aag.org/galleries/default-file/AAG_Climate_Change_Resolutions_2006_and_2019.pdf
2. There are many biographical memorials written about Gilbert F. White by former students and colleagues. See Ian Burton and Robert W. Kates, “Gilbert F. White, 1911–2006,” *Annals of the Association of American Geographers* (AAG) 98, no. 2 (2008): 479–486 (http://www.aag.org/cs/membership/tributes_memorials/sz/white_gilbert_f); Robert W. Kates, “Gilbert F. White: 1911–2006, A Biographical Memoir” (Washington, DC: National Academy of Sciences, 2011), <http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/white-gilbert.pdf>.
3. Robert E. Hinshaw, *Living with Nature’s Extremes: The Life of Gilbert Fowler White* (Boulder, CO: Johnson Books, 2006), 43.
4. James L. Wescoat, Jr., “Common Themes in the Work of Gilbert White and John Dewey: A Pragmatic Appraisal,” *Annals of the AAG* 82, no. 4 (1992): 587–607.
5. Kates, note 1, page 15.
6. Martin Reuss, *Water Resources People and Issues: Interview With Gilbert F. White* (Fort Belvoir, VA: Office of History, U.S. Army Corps of Engineers, 1993), 15.
7. The vetoed measure was House Joint Resolution No. 175. See further discussion in R. H. Platt, “Floods and Man: A Geographer’s Agenda,” in R. W. Kates and I. Bur-

1 ton, eds., *Geography, Resources, and Environment, Vol. II: Themes from the Work of Gilbert F. White* (Chicago: University of Chicago Press, 1986), 28–69.

2
3 8. Charles C. Colby and Gilbert F. White, "Harlan H. Barrows, 1877–1960," *Annals of the AAG* 51, no. 4 (1961): 395–400.

4
5 9. Reuss, note 5, page 29.

6
7 10. Gilbert F. White, *Human Adjustment to Floods*. Research Paper No. 29 (Chicago: University of Chicago Press, 1945), republished 1953.

8
9 11. N. MacDonald, D. Chester, H. Sangster, B. Todd, and J. Hooke, "The Significance of Gilbert F. White's 1945 Paper 'Human Adjustment to Floods' in the Development of Risk and Hazard Management," *Progress in Physical Geography* 36, no. 1 (2012): 125–33.

10
11
12 12. "A Unified National Program for Managing Flood Losses," House Document 465, 89th Cong., 2nd Sess., 1966.

13
14 13. Executive Order 11296, "Evaluating of Flood Hazard in Locating Federally-Owned or Financed Buildings, . . ." August 10, 1966.

15
16 14. One major outgrowth of that report was the establishment of the National Flood Insurance Program by Congress in 1968—a measure that Gilbert cautiously endorsed and thereafter worried that it may have perversely encouraged development in flood hazard areas.

17
18 15. Hinshaw, note 2, Appendix 1.

19
20 16. See <https://hazards.colorado.edu/gilbert-f-white/> honors for a full listing.

21
22 17. The citation is found at https://www.nsf.gov/od/nms/recipe_details.jsp?recipe_id=388

23
24 18. Norton Ginsburg, *Atlas of Economic Development* (Chicago: University of Chicago Press, 1961).

25
26 19. Ian Burton, Robert W. Kates, and Gilbert F. White, *The Environment as Hazard, Second Edition* (New York, NY: Guilford Press, 1993). The first edition was published under the same title by Oxford University Press (New York, NY, 1978).

27
28 20. Earlier versions of the IPCC reports had a simpler definition of adaptation as "Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects," which has since evolved to the present version. See IPCC: Annex II: Glossary (K. J. Mach, S. Planton, and C. von Stechow, eds.), in *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Core Writing Team, R. K. Pachauri and L. A. Meyer, eds. (Geneva, Switzerland: IPCC, 2014), 117–130.

29
30 21. Burton and Kates, note 1, page 483.

31
32 22. Traditionally, University of Chicago faculty eschewed the title of "Dr." as superfluous.

33
34 23. The restless and windblown Indiana Dunes landscape around us was world-renowned among natural scientists as the "birthplace of ecology" and the focus of decades of political struggle to "Save the Dunes" from industrial development—partly achieved in the establishment of a state park in 1925 and the Indiana Dunes National Lakeshore in 1966.

35
36 24. After my uncle's death in 1964, my Aunt Harriet Platt continued to welcome the Geography Department faculty and students to the large Platt home on Chicago's far south side, especially for Halloween.

37
38 25. National Flood Insurance Act, P.L. 90-448, Title XIII (codified at 42 U.S.C.A. 4001, et seq.). White cautiously endorsed the concept of the NFIP in his 1966 task force report (House Doc. 465) with the reservation that, in the absence of effective land use and building codes, the availability of flood insurance subsidized by the federal government would likely stimulate unwise development in flood hazards areas (coastal and inland). Thus, the NFIP could magnify rather than reduce the costs of

floods to society, and particularly to taxpayers. His concern was well founded: Over the next four decades, that outcome was confirmed in a multitude of studies of NFIP impacts in various postdisaster settings.

26. I was part of successful efforts to block construction of a "Crosstown Expressway" through low-income neighborhoods and a misguided proposal by Mayor Richard J. Daley to build an airport in Lake Michigan near downtown Chicago.

27. R. H. Platt, "The National Flood Insurance Program: Some Midstream Perspectives," *Journal of the American Institute of Planners* (July 1976): 303–313. My metaphor was inaccurate: The NFIP was still in its "headwaters" and not yet "midstream." But its direction in coming years was definitely "downhill," fiscally as well as politically!

28. R. H. Platt, note 6, pages 28–69.

29. R. H. Platt, "The Jackson Flood of 1979: A Public Policy Disaster," *Journal of the American Planning Association* (Spring 1982): 219–31.

30. R. H. Platt, "Options to Improve Federal Non-structural Response to Floods," Consultant report prepared for the President's Water Policy Committee (Washington, DC: U.S. Water Resources Council, 1979), NTIS PB 80-160146.

31. James K. Mitchell, "Perspectives on Alternatives: Differentiation and Integration in Pursuit of a Better Fit Between Society and Nature," Mini-Forum on the Contributions of Gilbert F. White," *Progress in Human Geography* 32, no. 3 (2008): 451–45; James L. Wescoat, "Gilbert Fowler White (1911–2006), Wisdom in Environmental Geography," *Geographical Review* 96, no. 4 (2006): 700–710.

32. James K. Mitchell, "Confronting Natural Disasters: An International Decade for Natural Hazard Reduction," *Environment* 30, no. 2 (1988): 25–29.

33. Gilbert F. White, *Geography Resources and Environment, Volume 1: Selected Writings of Gilbert F. White*, eds. Robert W. Kates and Ian Burton (Chicago: University of Chicago Press, 1986). See especially chapters 10, "Critical Issues Concerning Geography in the Public Service—Introduction" [1962], and "21, Geography and Public Policy" [1972].

34. Hinshaw, note 2, pages 5–6.

35. Colby and White, note 7.

36. Harry Emerson Fosdick, *The Meaning of Service* (New York, NY: The YMCAs, 1920).

37. Wilmer Cooper, "The Legacy of Rufus M. Jones," in N. Snarr and D. Smith Christopher, eds. *Practiced in the Presence. Essays in Honor of T. Canby Jones*, (Richmond IN: Friends United Press, 1994), 15–35; Elizabeth G. Vining, *Friend of Life: The Biography of Rufus M. Jones* (New York: J. B. Lippincott, 1958); James L. Wescoat Jr., "Gilbert F. White, Environmental Geographer," *International Encyclopedia of the Social and Behavioral Sciences*, revised edition (London, UK: Elsevier, 2014), 558–63.

38. Gilbert F. White, "Quaker Service and Social Change," February 17, 1993, typescript. Revised as "Quaker Volunteer Service: A 70-Year Perspective," *Friends Bulletin* 71, no. 2 (2000): 12–14.

39. Rufus M. Jones, *Rufus Jones: Essential Writings*, ed. Kerry Walters (Maryknoll, NY: Orbis Books, 2001); William James, *The Varieties of Religious Experience: A Study in Human Nature* (New York: Viking Penguin, 1902/1982); William James, "The Moral Equivalent of War," in *The Writings of William James*, ed. John J. McDermott (Chicago: University of Chicago Press, 1906/1977), 660–70.

40. Stephen A. Kent, "Psychological and Mystical Interpretations of Early Quakerism: William James and Rufus Jones," *Religion* 17, no. 3 (July 1987): 251–74. Quote is from note 36.

41. James, note 38, pages 7, 291, 335, and 411.

42. Wayne Proudfoot, ed., *William James and a Science of Religion: Reexperiencing the Varieties of Religious Experience* (New York, NY: Columbia University Press, 2004); Ann Taves, *Religious Experience Reconsidered: A Building Block Approach to the Study of Religion and Other Special Things* (Princeton, NJ: Princeton University Press, 2009); Charles Taylor, *Varieties of Religion Today: William James Revisited* (Cambridge, MA: Harvard University Press, 2002).

43. Henry W. Riecken, *The Volunteer Work Camp: A Psychological Evaluation* (Cambridge, UK: Addison-Wesley, 1952); Gilbert F. White, "Friends' Responsibility for Service," Friends Face their Fourth Century, The Third World Conference of Friends. Oxford England, July 28–August 6, 1952, 78–90.

44. Vining, note 36, pages 79 and 165.

45. White, note 9, page 2.

46. Reuss, note 5, page 27.

47. Gilbert F. White, Robert W. Kates, and Ian Burton, "Knowing Better and Losing Even More: The Use Knowledge in Hazards Management," *Global Environmental Change Part B: Environmental Hazards* 3, no. 3–4 (2001): 81–92.

48. Hinshaw, note 2, p. 48, which has a one-line mention of this.

49. Philip Hallie, *Lest Innocent Blood Be Shed. The Story of the Village of Le Chambon and How Goodness Happened There* (New York, NY: Harper Perennial Press, 1979).

50. "Le Chambon Sur Lignon," in *Holocaust Encyclopedia* (Washington, DC: United States Holocaust Memorial Museum), <https://encyclopedia.ushmm.org/content/en/article/le-chambon-sur-lignon>

51. Thomas is best known for editing *Man's Role in Changing the Face of the Earth*, Volumes I and II (Chicago: University of Chicago Press, 1956). This volume was the conference proceedings of an international symposium on man's [sic] role in changing the face of the earth, held in Princeton, NJ, in 1955, cosponsored by the Wenner–Gren Foundation for Anthropological Research and the National Science Foundation.

52. W. L. Thomas, "Economic Stress and Settlement Changes," in Committee on the Effects of Herbicides in Vietnam, National Research Council, *The Effects of Herbicides in Vietnam, Part B: Working Papers* (Washington, DC: National Academy of Sciences, 1974).

53. Brian J. L. Berry, ed., *The Social Burdens of Environmental Pollution: A Comparative Metropolitan Data Source* (Cambridge, MA: Ballinger, 1977).

54. Gilbert F. White, "Commentary on Geographers and Nuclear War: Why We Lack Influence on Public Policy," *Annals of the AAG* 78, no. 4 (1988): 718–19; Susan L. Cutter, "Geographers and Nuclear War: Why We Lack Influence on Public Policy," *Annals of the AAG* 78, no. 1 (1988): 132–43.

55. Susan L. Cutter, Douglas B. Richardson, and Thomas J. Wilbanks eds., *The Geographical Dimensions of Terrorism* (New York, NY: Routledge, 2003).

56. Gilbert F. White, Alan McGowan, and William Clark, "Editorial," *Environment* 26, no. 7 (1984): 1.

57. The Editors, "Gilbert F. White, November 26, 1911–October 5, 2006," *Environment* 48, no. 10 (December 2006): 45.

58. The Editors, "Special Tribute: Thanks, Gilbert," *Environment* 34, no. 10 (December 1992): 45.

59. See *Environment* 34, no. 3 (April 1992): 16.

60. See *Environment* 30, no. 10 (December 1988): 6.

61. See *Environment* 30, no. 7 (September 1988): 4.

62. See *Environment* 30, no. 10 (December 1988): 16.

63. See *Environment* 30, no. 5 (June 1988): entire issue.