

Standing Committee on Bicycle Transportation (ANF20)
Jamie Parks, Chair

Bicycle Transportation Committee

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The TRB Standing Committee on Bicycle Transportation (ANF20) applauds TRB on its 100th Anniversary. Our committee has been in existence for about 45 years, founded in 1974 as the Bicycling and Bicycles Committee. We had an early name change to the Committee on Bicycling and Bicycle Facilities shortly after our birth and became the Bicycle Transportation Committee in 1996.

OUR PAST

Our existence closely parallels the history of bicycle transportation research in the United States. Very little was done prior to the mid-1970s, when a surge of interest in bicycling for transportation occurred in the United States. This coincided with the popularization of the 10-speed bicycle. Prior to this time, our history has largely been assessed and preserved by history scholars. Good scholarly research on bicycling before the dawn of the motorcar age is found in Carlton Reid's *Roads were Not Built for Cars*, highlighting cycling's role in developing networks of paved roads and travel routes between nearby cities and the influence of bicycle technology on automobiles and aircraft. Peter Norton's *Fighting Traffic* is a good source of history of bicycling from 1920 to 1940, when advocates from that era fought to maintain the privilege of using roadways as auto traffic grew. This story is also in the background of Walt Disney's *Who Framed Roger Rabbit* movie.

We were pleased to work with TRB's History of Transportation Committee in 2018 to develop a series of papers on the history of bicycle transportation. Highlights of that effort include James Longhurst's *Reconsidering the Victory Bike in World War II*. The paper highlights an honorable plan to encourage the U.S. residents to ride bicycles to reduce consumption of fuel and materials during wartime that failed due to lack of manufacturing of needed bicycles. Other notable papers included *A Historical Perspective on the AASHTO Guide for the Development of Bicycle Facilities 2* and *The Impact of the Vehicular Cycling Movement* by staff of Toole Design Group.

Even with the establishment of our committee, publication of bicycle research in the *Transportation Research Record* was slow. TRB did not publish any journal articles on the topic of bicycling from 1971 to 1990. FHWA produced some publications that helped to establish bikeway design standards in the late 1970s, but the research community was relatively quiet in the 1980s. Facility development was heavily influenced by the writings of John Forester. His book, *Effective Cycling*, codified the bicycling technique known as Vehicular Cycling. Bicycling's largest advocacy group, the League of American Wheelmen, endorsed his technique and built bicycle education programs around it. These instructions taught users to "drive" a

bicycle in a manner similar to motorists, maximizing visibility and “taking the lane” so that following vehicles were required to slow or pass in the adjacent lane.

Bicycle research has grown steadily from its inactivity through the 1980s, including 40 articles in the 1990s (much of this was brought on by the 1991 Federal transportation authorization bill, the Intermodal Surface Transportation Efficiency Act [ISTEA], which put dedicated money toward bicycle transportation), 118 articles from 2001-2010, and 184 articles from 2011 to 2019. Much more academic research can be found on TRIS. Figure 1 shows the trend in papers reviewed by our committee over the past 20 years. Our annual review of over 150 papers is now one of the largest workloads of any TRB committee.

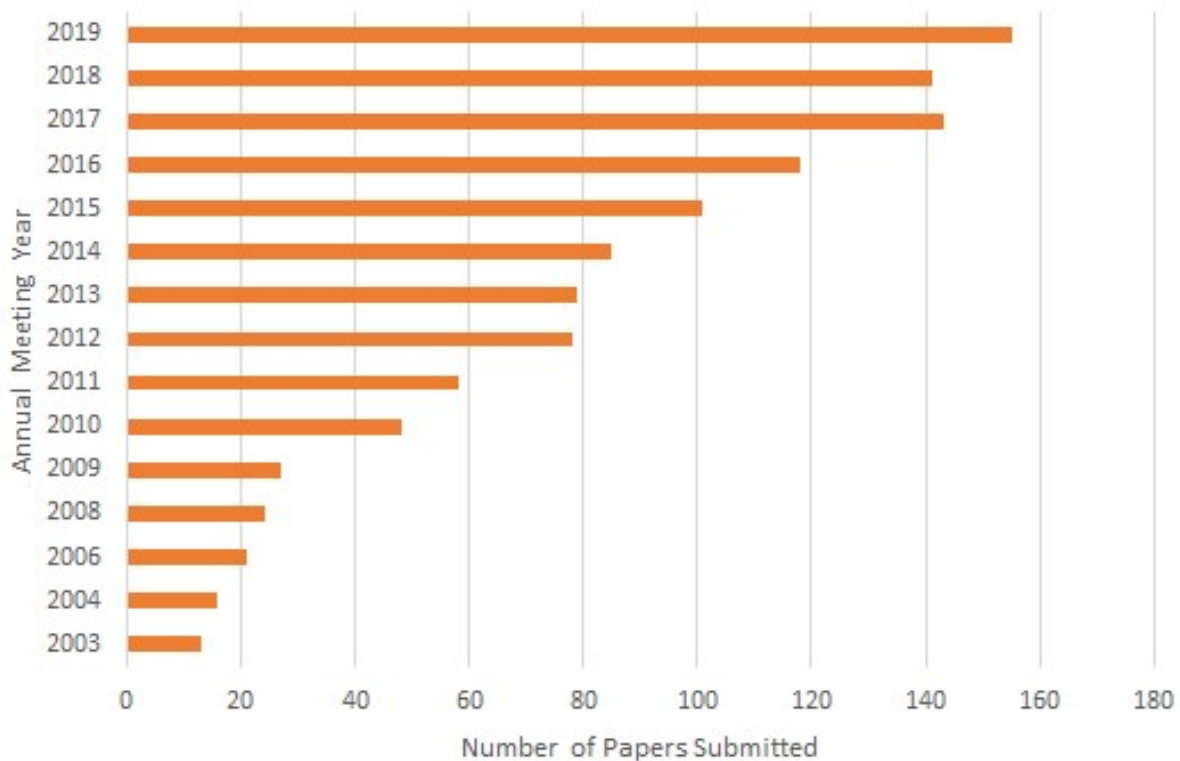


Figure 1 – Number of Papers Submitted to ANF 20 for TRB Annual Meeting (2003-19)

The committee itself has grown along with increased interest in bicycle research, starting in the 1990s. Past committee chairs recall that in the early 1990s there were about 20-30 people at the full committee meetings and one small bicycle session at the Annual Meeting. There were no subcommittees at the time and most of the discussion at the committee meeting was information sharing. Meeting attendees all chipped in to fund the Feet First Caucus. However, that began to change after the passage of ISTEA. Meeting attendance began to rise until the small room in the basement of the Hilton was packed to capacity. Subcommittees, which still exist in a similar format today, were put in place and the committee became more formal. Instead of only one bicycle program, there became competing non-motorized programs at the same time. TRB began to fund the Feet First Caucus. Highlights of this transitional period included a visit from then U.S. Representative Jim Oberstar (D-MN) who was instrumental in securing federal

funding for bicycle transportation and support from Rick Pain, the TRB staff member assigned to the committee, who continuously advocated for the committee's needs as it grew.

The volume of research closely parallels the rise and fall of interest in bicycling since the mid-1970s. The 1970s produced criteria for bikeway designs that focused upon trails and on-street bicycle lanes for the next 35 years. Our mode-share stubbornly remained below 1% of all commute trips while bicycling in other countries rose to 25% or more in Europe and Japan. A great overview of recent cycling history can be found in Pucher and Beuhler's *City Cycling*. Co-author Ralph Buehler served as the chair of our TRB committee from 2012-2018.

The combination of vehicular cycling and the development of a fractured network of bicycle lanes and trails did little to increase interest in bicycling for transportation in the US until about 2005. A combination of fuel costs, growing recessionary economy, lack of interest in automobiles by the Millennial generation, successes seen in Europe, a boom in recreational mountain biking, and other factors started increasing interest in bicycling for transportation. Communities started developing and testing U.S. versions of European bicycle infrastructure and studying why bicycling was so slow to grow in the United States. This greatly increased the need and opportunities for research.

While TRB affiliated research in cycling was beginning to increase, other disciplines were also actively producing valuable research. An important sample is the work of Peter Jacobsen entitled *Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling* that appeared in the *Journal of Injury Prevention* in 2003. Jacobsen showed that overall safety risk for cycling was inversely related to the number of cyclists. More cyclists appeared to increase motorist awareness, resulting in fewer collisions. The public health and injury prevention industries continue to produce valuable research on cycling, especially in the safety areas.

OUR PRESENT

Hot topics today include safety, infrastructure design, use forecasting, attitudes and behavior including the vicious circles that tend to discourage bicycling, bike sharing, electronic bikes (e-bikes), data collection and management, and many others. Many of these topics are the same ones that the research community began to grapple with in the 1990s, but some are also new. Researchers today are exploring new questions within these topics. Because the past history of bicycle transportation research was so limited, it has resulted in tremendous opportunities for today's research community to do ground-breaking research that can help formulate future policy and applications.

INTERNATIONAL INVOLVEMENT

Our committee has always welcomed the participation of representatives from other countries. We have often found that experiences in Europe can provide a great contrast to our own experience. Also, conditions in other auto-reliant countries such as Canada and Australia are quite similar to conditions in the United States. Unique and valuable experience is also coming from China where a unique history has formed. They were heavily reliant on bicycling for transportation until only the past 10-15 years when auto ownership began to rise, and issue of use of transportation space within cities became a significant issue. We know that we can learn a lot from each other.

THE FUTURE

We believe that bicycling offers great promise for the future, especially for cities. We know that nearly half of all urban trips are within the distance and competitive travel time for bicycling of three to five miles or less. Many communities are exploring ways to reduce reliance upon automobile transportation and have found that the development of a complete and friendly bicycle network can have many positive effects. This can be supplemented by E-bikes and bike share systems, which are increasingly emerging today and will likely play a larger role in the future. Polls have shown that a strong majority of U.S. residents support the development of new cycling facilities (as long as they are not inconvenient). An especially beneficial effect is improved public health. Academic studies have strongly concluded that the health benefits of cycling outweigh its crash/injury risks by a large degree. In addition, the studies have concluded that the health and life expectancy of bicyclists is better than average and the safety risks can be reduced through better infrastructure and increased participation.

HONOR ROLL

We owe much of our success to the great leadership of the Bicycle Transportation Committee and especially our committee chairs:

- Mark Akins 07/10/1974 - 01/31/1976
- Robert Theisen 02/01/1976 - 01/31/1979
- Catherine Moran 02/01/1979 - 01/31/1982
- Curtis Yates 02/01/1981 - 01/31/1986
- William Wilkinson 02/01/1986 - 05/31/1990
- Peter Lagerway 02/01/1990 - 01/31/1993
- Jane Stutts 02/01/1993 - 01/31/1999
- Andy Clarke 02/01/1999 - 01/31/2002
- Lisa Aultman-Hall 02/01/2002 - 07/31/2004
- Martin Guttenplan 08/01/2004 - 04/14/2005
- Hugh Morris 04/15/2005 - 04/14/2006
- Jennifer Dill 04/15/2006 - 04/14/2012
- Ralph Buehler 08/01/2012 - 04/14/2018
- Jamie Parks 04/15/2018 - Present

CONCLUSION

Our enthusiastic interest in bicycle research is founded by our shared belief that cycling has special role in addressing many future issues. This success can be increased through our greater understanding of why people cycle, how they cycle, and what we can do to help the future of cycling.

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