

# Leisure Time and Technology

by Stefan Poser

Generally speaking, the amount of available leisure time continually increased from the mid-19th century onward. This development culminated in Western Europe in the 1980s in the so-called leisure society, a phenomenon that is recognised today as being of both social and economic importance. The available leisure time presents a framework for a very wide scope of individual leisure activities that often reflect contemporary changes. The hallmark of most recreational activities, at least since industrialisation, seems to be the interpenetration of leisure and rapidly evolving technology. As this article demonstrates, technology is linked with the parameters of leisure and with the recreational activities themselves.

## TABLE OF CONTENTS

1. Introduction
2. Terminology
3. Leisure Research and Social Policy
4. Leisure-Time Activities at a Glance
5. Leisure and Technology
  1. Leisure-Time Activities and Leisure-Time Mobility
  2. Technological Development and Leisure-Time Activities
  3. Technology as a Model for Toys
  4. Transformation of Technology by Consumers
  5. Identification with Technology
6. Leisure Time – Meaningful or Disruptive?
7. Appendix
  1. Sources
  2. Bibliography
  3. Notes

Citation

## Introduction

Leisure time constitutes a period of free time that may be spent in any manner one chooses. It provides a framework for a very wide scope of individual leisure activities: from pro-active to passive pursuits; from personal productivity to ostentatious consumption; from relaxing, quiet activities at home such as reading to making music and attending and/or throwing techno parties; from indoor activities such as watching TV or playing computer games to going to restaurants, fairs and museums; and, finally, from shopping and participating in outdoor sports to space tourism. These are activities that occur in very different contexts and circumstances, some of which can only be undertaken with the aid of some type of technology. Historical research on these highly individualised leisure-time activities, their transformation and the period-specific activities of individuals can be just as informative as analyses of the social, economic and technological conditions that influenced them.

▲ 1

Leisure time appears to have been first distinguished from heteronomous learning within the context of the school system. Over the course of industrialisation (→ Media Link #ab), the concept was subsequently contrasted with gainful employment.<sup>1</sup> Recognising that people had free time even before the concept of "leisure" was formulated, it is useful to look more closely at its availability and how it was utilised in the more distant past.<sup>2</sup>

▲ 2

Enlightenment ideas about freedom and human development contributed greatly to the positive conception of leisure time as an interval that should be spent productively and further the individual education.<sup>3</sup> From the mid-19th century onward, the availability of leisure time generally continued to increase. As this article demonstrates, the hallmark of most

leisure-time activities, at least since the beginning of industrialisation, has been the interpenetration of leisure and technology. This has occurred because the gains in productivity resulting from technology's use have led to an increase in time and money, the principal commodities that make participation in leisure possible. Whether watching TV at home or taking a holiday flight, leisure-time activities have been increasingly influenced by technology. Technology, as a consequence, has become more and more connected with both the economical conditions for the possibility of leisure and with the actual leisure-time activities themselves. After first illustrating the evolution of "leisure" as a concept, this article will examine the theoretical and social debate surrounding the phenomenon of leisure time as part of an increasingly technological world.

▲3

## Terminology

The idea that students need a period of recreation may be found relatively early in the history of formal education. Johann Amos Comenius (1592–1670) (→ Media Link #ad), for instance, speaks of *vacatio* and *recreatio*.<sup>4</sup> The pedagogue Friedrich Fröbel (1782–1852) (→ Media Link #ae) also uses the term "Freizeit" in this context, but in the sense of a break, or holiday, from regular instruction. After several months, teachers and students require a period of time, "wo der Gebrauch derselben für sie von der gewöhnlichen und strengen [Unterrichts-]Folge losgesprochen und ihnen zur Anwendung nach ihren persönlichen und individuellen Bedürfnissen freigegeben ist" ("whose use is freed from the ordinary and strict sequence of instruction and instead made available for personal and individual needs"). This interlude should be utilised for repetition, practice and preparation, but also include a completely free "Erholungszeit" (recreation period). Fröbel consequently notes that the first days of "Freizeit in den Weihnachten sind den Freunden gewidmet" ("leisure time at Christmas should be dedicated to friends").<sup>5</sup> In an essay from 1861, Wichard Lange (1826–1884) (→ Media Link #af), director of a *Realschule* (secondary school) uses the concept of "Freizeit" to stress the importance of promoting student concentration by having breaks. After each lesson, students should be able to "[sich] frei ergehen und austummeln [können]" ("indulge themselves and let off steam").<sup>6</sup> Even though these descriptions of leisure time correspond to more contemporary notions that also contrast leisure time with work, the concept was nonetheless slow to develop. For instance, the German encyclopaedia *Der Große Brockhaus* defined leisure time in 1930 in the sense of "Rüstzeit" (prep time) – an organised meeting lasting several days that was intended for either shared recreation or mental labour of "gesinnungsverwandte Menschen" (like-minded people).<sup>7</sup> Leisure is distinguished from work in the 1982 German *dtv-Lexikon* as "der (im einzelnen unterschiedlich definierte) Zeitraum, der dem arbeitenden Menschen neben seiner berufl. oder berufsähnlichen Verpflichtungen verbleibt (als Gesamtheit dieser 'Nicht-Arbeitszeit' oder nur als die darin enthaltene 'Mußzeit' definiert)".<sup>8</sup> Along with the period required for recuperation (which involves for example nutrition, sleep, personal hygiene), the article also addresses the issue of "verhaltensbeliebige" (discretionary) time that is used for pleasure or activities that contribute to personal growth. Particular attention is paid to the topic of cultivating social relations and any associated mutual interests, as in the arts or handicrafts. "Recreational sport" – which also belongs in this context – has a separate entry.<sup>9</sup> The article furthermore notes that the increase in leisure time is due to a reduction of working hours and already notices the existence of a "leisure industry", a term describing the manufacturing and service companies specialising in leisure.<sup>10</sup> Thus, the author implicitly points to the technology-based nature of leisure. Although Jürgen Habermas argued in 1971 that the concept of leisure has only secondary import "in einer Gesellschaft, deren zentrale Kategorie immer noch die Arbeit ist",<sup>11</sup> the category of "work" cannot be said to have the same significance today. Indeed, more recent research suggests that the common earlier distinction between leisure and work is no longer satisfactory. Leisure's special quality has instead been located in the condition of freedom and thus broadly encompasses "alle Zeit, in der freie Selbstbestimmung möglich ist"<sup>12</sup> ("all the time in which free self-determination is possible").

▲4

## Leisure Research and Social Policy

Leisure was already a subject of research and the social discourse by the 19th century. The Hegelian philosopher Karl Ludwig Michelet (1801–1893) (→ Media Link #ag) who taught at the Friedrich-Wilhelms-Universität in Berlin, for example, dedicates a chapter of his book *Die Lösung der gesellschaftlichen Frage* (The Solution of the Societal Question) to a "Gliederung des Genusses" (classification of pleasure). Drawing a distinction between public sociability and family life, he argues that experiencing pleasure is a question of lifestyle.<sup>13</sup> A textbook on empirical psychology from 1858 includes a chapter on work and recreation. Its author Gustav Adolf Lindner (1828–1887) (→ Media Link #ah) asserts that recuperation from work not only consists of relaxing activities, but also of physical exercises, games, merriment, theatre,

excursions into nature and reading. He refers in this context to the spiritual ("seelische") importance of work-appropriate recreation.<sup>14</sup>

▲5

At the end of the 19th century it was primarily individuals and institutions interested in promoting industrial safety, hygiene and worker welfare who also began to focus on leisure time. It was with these particular aims in mind that the Berlin *Centralstelle für Arbeiter-Wohlfahrtseinrichtungen* (Central Office for Worker Welfare Institutions) organised a social policy conference in 1892<sup>15</sup> that concentrated on the "zweckmässige Verwendung" (purposeful utilisation) of leisure time and the "Veredelung der Erholung" (refinement of recreation).<sup>16</sup> Thus, education was regarded as more important than recreation. General ideas on how to put leisure time to the best use included attending lectures, instruction in handicrafts, collecting books and pictures, employee and holiday trips, work outings, company festivities, supporting libraries and theatres as well as founding sports, choral and music clubs for employees. Further topics related to setting up gardens and houses for employees and apprentices. In preparing for the conference, the organisers carried out a qualitative survey of employers, employees and civil servants following the Anglo-American model.<sup>17</sup> American journals discussed the importance of leisure time and a person's right to it at the turn of the 20th century, and statistical surveys were assessed quantitatively probably for the first time in a PhD thesis on the leisure-time activities of workers in 1912.<sup>18</sup> Cinema garnered considerable scientific attention before the First World War as a fascinating contemporary leisure-time activity. In her dissertation, Emilie Altenloh (1888–1985) (→ Media Link #aj) was consequently prompted to conduct a sociological study of cinema goers.<sup>19</sup>

▲6

After the First World War, the topic of leisure time had acquired such significance that the French Ministry of Labour published the *Enquête sur l'Utilisation des loisirs créés par la journée de huit heures* (Survey of the Utilisation of Leisure Time Made Available by the Eight-hour Workday) in 1920. The International Labour Office in Geneva, recognising the issue of workers' leisure time as one of its top responsibilities, issued specific recommendations to workers in 1924.<sup>20</sup> The office's suggestions were aimed to make "Freizeit" a reality for workers in the actual sense of the word.<sup>21</sup> Twelve years later, the preface to the Hamburg *Weltkongress für Freizeit und Erholung* (world congress of leisure and recreation) blithely remarked: "Die Völker bemühen sich heutzutage nicht bloß, Arbeit zu schaffen und die Arbeitsbedingungen ... zu verbessern, sondern sie wollen auch die Arbeit glücklich und die Freizeit fröhlich gestalten."<sup>22</sup> The International Labour Office argued that, from an economic point of view, balancing work with appropriate leisure-time activities increases workers' efficiency and also provides the "sicherste Bürgschaft des Fortschritts für alle industriellen Gemeinschaften"<sup>23</sup> ("greatest assurance for the advancement of all industrial societies"). Priority was therefore given to establishing conditions under which such a balancing might occur: reducing the number of work hours and promoting fair wages were just as important as improving workers' hygiene and living conditions or fighting alcoholism. Some of the office's recommendations were specifically directed at the creation of leisure-time activities and calculated to encourage programmes that would

- a) improve "die häusliche Wirtschaftsführung und das Familienleben des Arbeiters ... (Arbeitergärten, Schrebergärten, Kleintierzucht)" ("the worker's budget management and domestic life – workers' gardens, allotment gardens, small-animal farming") combining recreation with "wirtschaftlicher Vorteil" ("economic gain")
- b) promote "die körperliche Kraft und Gesundheit des Arbeiters durch Ausübung von Sport ... , der den unter die äusserste Arbeitsteilung der modernen Industrie fallenden Arbeitern Gelegenheit zur freien Entfaltung ihrer Kräfte gibt und sie mit neuer Spannkraft und neuem Wetteifer erfüllt" ("the worker's physical strength and health through sport, giving those who are part of the modern work force the chance to freely develop their abilities and renew their vigour and competitive spirit") and
- c) encourage "die berufliche und allgemeine Bildung ... (Bibliotheken, Lesesäle, Vorträge, Kurse zur beruflichen und allgemeinen Fortbildung usw.)" ("vocational training and general education – through libraries, reading rooms, lectures, courses for work-related instruction and general education, etc.").

It was explicitly noted that employee programmes like these should not impact on the individual's freedom in any way.

▲7

By the prosperous latter half of the 1920s, the topic of leisure was so firmly embedded in society that it attracted mass audiences to exhibitions, which no doubt contributed to its even greater social acceptance. Leisure was, for instance, the subject of a wide-ranging exhibition in 1926 in Düsseldorf, the *Ausstellung über Gesundheitspflege, Sozialfürsorge und Leibesübungen – GESOLEI* (Exhibition on Health Care, Social Welfare and Physical Exercise) (→ Media Link #ak). The exhibition's centrepieces were physical activities and sports, which were highlighted from different angles. It further

presented sports medicine research and had an exhibition area dedicated to the representation of sports in the world of art. Competitions also took place on the occasion of the exhibition.<sup>24</sup> The first international conferences to deal with leisure as a primary theme were organised in cities such as Liège (1930), Los Angeles (1932), Brussels (1935), Hamburg (1936) and Rome (1938). In Nazi Germany, the government attempted to seize on the increasing interest in the topic of leisure, particularly through the organisation *Kraft durch Freude* (Strength through Joy), which was modelled on the Italian Fascist leisure and recreational organisation *Dopolavoro* (After Work). In order to promote themselves, the Nazis endorsed leisure in a seemingly modern way. However, their supervision of the leisure-time activities contradicted the idea of freedom and, in the end, perverted the recreational endeavours.<sup>25</sup>

▲ 8

Early statistical studies on patterns of consumption and leisure were done in the United States at the turn of the 20th century. In Western European countries it was only in the 1950s, as the leisure phenomenon began to enjoy greater public awareness, that similar studies were conducted.<sup>26</sup> Today, leisure research has become a fixture of numerous academic disciplines such as education, sociology, history, geography, media studies, economics and engineering. Leisure education and leisure sociology developed as sub-disciplines. "Leisure Studies" emerged as a transdisciplinary area of research in the United States in the 1930s.<sup>27</sup> The above-mentioned approaches to leisure-time research encompass concepts that either have a formative influence on leisure or observe and analyse its development, depending on the discipline that employs them. This has led to correspondingly diverse theoretical assumptions and objectives. Not only the growing importance of leisure influenced the development of leisure oriented science; changing societal priorities influenced both, leisure and science. As a result of leisure's economic importance, for example, the issue of environmentally sustainable leisure became significant for leisure activities as well as for research on leisure in the century's final decades.<sup>28</sup>

▲ 9

## Leisure-Time Activities at a Glance

Traditional forms of leisure-time activities have included dancing, various kinds of celebrations, visiting fairs and taverns, attending opera and the theatre, as well as reading, painting and playing music. Beginning in the 18th century, Grand Tours (educational excursions that were at first reserved for the nobility) and attending salons became common, as did visits to museums at the turn of the 19th century.<sup>29</sup> Finally, strolling through the city came to be a classic pastime in the 19th century. With the growth of cities during industrialisation, not only cities turned into tourist attractions, but also ostensibly untouched natural areas as alternative realities to human-engineered urban environments.<sup>30</sup> Numerous sports were adopted from England (→ Media Link #am) in the second half of the 19th century and quickly spread across the continent.<sup>31</sup> The period before the First World War shows evidence of efforts being made to engage many people in sports and to establish a link between leisure sports and health.<sup>32</sup>

▲ 10

While the first world exhibition in 1851 in London's Crystal Palace (→ Media Link #an) featured different technical advances, entertainment became a focal point in subsequent decades. An amusement park ride – the first Ferris wheel (→ Media Link #ao) – was the symbol of the 1893 Chicago Fair.<sup>33</sup> The fair reached its peak in popularity during industrialisation, as the use of steam and later on electric motors enabled ever-faster and more complex rides and contemporary modes of transportation gave new design impulses for carousel wagons. All these fairground businesses were adorned by progressively brighter electric lighting.<sup>34</sup> Besides fair and vaudevillian performances, the cinema became one of the most important leisure-time activities, its heyday lasting until the 1960s when TVs became available for the masses.<sup>35</sup> The advent of radio in the 1920s signified an unprecedented technology-based expansion of domestic leisure since it permitted the audience to experience in real time events that happened outside their homes.<sup>36</sup> This development would be intensified with the invention of television and the Internet. Compared to the passive forms of recreation represented by radio and television, however, the Internet requires at least some degree of active involvement. Starting in the 1950s, rising wages and a growing number of vacation days led to a substantial expansion of tourist travel (→ Media Link #ap). Both the distance to destinations and the overall number of tourists grew considerably. While the share of holiday travellers among the West German population in the 1960s was still around 10%, in the 1980s the percentage was already at 40%, rising to about 70% by the turn of the century.<sup>37</sup>

▲ 11

If leisure time in the 1950s was characterised by a desire for rest and recreation due to the long periods of work, its devotion to the purpose of consumption would become the norm in the following decades. Cars, televisions and clothing (→ Media Link #aq) developed into status symbols.<sup>38</sup> The rise of the consumer society coincided with the development of shopping as a pastime for all classes. For many people this led to the accumulation of a growing number of leisure-time accessories, from games, books and cameras to music and video equipment as well as sporting paraphernalia. Owing to an initial saturation of the demand for such merchandise in the 1980s, advertising now linked shopping to tourism – signalling the start of a redefinition of leisure. The goal of having a special kind of experience had now become paramount.<sup>39</sup> Not by coincidence, many of the new sports that started to take off in the 1980s, such as mountain biking or paragliding, were characterised by potential risk and the resulting adrenalin "kick".<sup>40</sup>

▲ 12

Der Erlebnismarkt hat sich zu einem beherrschenden Bereich des täglichen Lebens entwickelt. Er bündelt enorme Mengen an Produktionskapazität, Nachfragepotential, politischer Energie, gedanklicher Aktivität und Lebenszeit. Längst sind Publikum und Erlebnisanbieter aufeinander eingespielt. ... Routiniert sind auch die Nachfrager geworden. Alles wird ausprobiert ...<sup>41</sup>

Emerging counter trends became increasingly important as well, including such recent health-oriented leisure-time activities as ayurveda and wellness. "Chilling" developed as a form of cultivated inactivity. A typical trait of all above-mentioned activities is that even though their contents are subject to processes of modernisation, few actually became "extinct". New, different and often technology-oriented approaches are instead introduced to the activities, supplementing older ones which may indeed lose their appeal.

▲ 13

## Leisure and Technology

At least since industrialisation, technology and leisure have become intertwined in several respects:<sup>42</sup>

▲ 14

1. Leisure-time activities and leisure-time mobility have developed a wider range through the use of technology.
2. Technologies that had originally been developed for commercial, scientific or military purposes have been (and will continue to be) developed for leisure-time use. New technologies often have a phase of leisure-time use in which they are optimised. Other technological changes are specifically aimed at the leisure sector.
3. Technological devices serve as prototypes for models that are adapted for or used during leisure time.
4. Technology has been customised for leisure-time activities.
5. Technology used in leisure-time activities has given users the chance to identify with it.

▲ 15

## Leisure-Time Activities and Leisure-Time Mobility

Railways, the bicycle, the automobile and the airplane – they drastically changed people's mobility. These developments also influenced leisure-time travel, making new destinations accessible.<sup>43</sup> The British rail companies introduced trains that were used exclusively for excursions already at an early stage of railway development. As a result, coastal locations were now as accessible as attractive regions closer to home. Sporting events and industrial fairs were also target destinations for special trains. Adding to the excursion traffic of regular trains, these special trains already carried several million passengers by 1860.<sup>44</sup> Contemporaries were well aware that a new type of mobility had emerged which they equated with progress:

▲ 16

To-day we travel in many wondrous ways. The great liners that go all over the great seas are floating palaces, and we can cross the Atlantic Ocean ... in little over a week. Then we have the ... Motor Omnibus ... Electric railways and under-ground, but the last I am going to mention is to my mind the best of all, the Express Train that carries us away for a happy holiday. ... When our great-grandfathers lived, there were no trains at all ... so they did not travel nearly as much as we do now ... But think what wonderful progress we have made since

Construction of the Austrian Southern Railway (Vienna–Trieste) in 1842 made it easier for Vienna's residents to indulge in their interest in alpine hiking or summer recreation, giving the tourist industry in the Rax and Schneeberg region a substantial boost.<sup>46</sup> Hiking and climbing routes, chalets and inns, mountain railways and cable cars and, later, ski slopes were all being constructed (→ Media Link #as). For a region that had been used to some extent by agriculture, but had remained in other parts largely untouched by men, the pursuit of leisure-time activities in the area caused dramatic changes.<sup>47</sup> A similar development has occurred in the Mediterranean since the late 1960s, although on a much larger scale. The establishment of charter services, promising shorter travel times and lower costs, triggered a rush of tourists to the Mediterranean shores that had been developed (or disfigured) since the 1960s to accommodate a massive influx of visitors (→ Media Link #at).<sup>48</sup> In Andalusia, the resulting structural changes were especially extreme: a rural and largely coastal region of mostly fishing villages was covered with the city-like development of an area 100 kilometres long, but only a few hundred meters wide.<sup>49</sup>

▲ 17

The growth of leisure-time travel had an impact on individual leisure-time activities and consumer demand. Technology made new kinds of events possible such as film screenings and also brought larger audiences to more traditional events. In the 1930s, when concerts could first be supported by sound systems, it also became possible to have performances on large open-air stages or in sports arenas. As radio and, later, television broadcasts hit the air waves, the size of the potential audience expanded even further. More recently, performances have been enhanced by multi-media presentations on large screens. Musical experiences changed along with the development of new media. Some directors saw the artistic potential of incorporating sound's new acoustic possibilities into their productions such as by using music at different moments to augment certain scenes.<sup>50</sup> The composers' and performers' experimentations with technology not only influenced potential concert goers, but also opened the way to novel kinds of creativity.<sup>51</sup>

▲ 18

#### Technological Development and Leisure-Time Activities

Most technological developments in the area of leisure have been the result of attempts to simplify technologies previously used outside of the realm of mass consumption. The camera is one pertinent example. The roaming photographers who started visiting fairs in the 1860s of course contributed a great deal to the popularisation of photography,<sup>52</sup> laying a foundation for the camera's recreational use. Photography, however, was so complicated and expensive that it was virtually limited to professional photographers until George Eastman (1854–1932) (→ Media Link #au) introduced celluloid-based roll film in the 1880s. He was able to combine low-cost and light weight in a film-loaded camera that needed, however, to be returned to his laboratories for developing. With his invention, the entrepreneur established the groundwork for the spread of photography as a hobby of the masses.<sup>53</sup> In the 1970s cheaper, easy-to-use cameras with automatic exposure were introduced to the market which led to an even more intensive use of the camera during leisure time and made photography the preferred way to document leisure-time activities and family gatherings.

▲ 19

Especially with regard to fairs and sporting events high-tech developments have played – and still play – an important role. Such developments include sophisticated technologies specifically used for leisure-time activities – like the roller coaster (→ Media Link #av) (→ Media Link #aw) – or advances in no-longer commercially viable technologies such as those used since the mid-19th century in sailing or rowing boats. Finally, technologies have also been developed during testing and implementation phases, as occurred, for example, with the automobile and the airplane before the First World War.<sup>54</sup> Both attending a sporting event and participating in recreational sport are regarded as leisure-time activities.

▲ 20

The public response to early aviation contests was remarkable. Although still in its "experimental stage" in 1909, the fledgling sport attracted 150,000 visitors at the *Berliner Flugwoche* (Berlin air show).<sup>55</sup> Air shows (→ Media Link #ax) became enormous festival events with massive appeal, which, despite the significant risk of accidents, contributed to the excitement surrounding technology and the airplane's almost mystical conception.<sup>56</sup> From a technological point of view, this era of multiple mishaps and short flights of only a few minutes was a crucial testing phase and opportunity for

firing up the public's imagination. While the concern here was with the further evolution of a new technology, rowing, another propulsion technology that was centuries-old and had slowly been made superfluous by roads and steamships, was only developed further for competitive and recreational sports. Boats that were intended for transporting passengers and cargo were utilised for the first rowing regattas. Already in the 19th century, the boat's construction was transformed for sports activities and rowing boats became the fastest muscle-powered vessels on water. While those boats were made from wood, key developments of the vessel's construction in the 20th century were based on the introduction of new materials like glass-fibre and carbon-fibre reinforced plastics. The extent to which the rowing boat's construction possibilities were modified and refined for the sake of sport and leisure is indicated in an overstated account from 1886 in the German sports newspaper *Deutsche Turnerzeitung*.

▲ 21

Erreichung möglicher Schnelligkeit im Fahren ... hat den ... Bau [von Ruderbooten] in einer Weise beeinflusst, daß schließlich nur noch ein Zerrbild eines Fahrzeugs übrig blieb: lange, ganz schmale Dinger, mit Wänden so dünn wie Cigarrenkistchen, in die der Ruderer nur mit Mühe hineinsteigen kann. ... Mit einem solchen Fahrzeug wäre man im Nothfall nicht einmal im Stande, einen ertrinkenden Menschen zu retten; sie sind eben zu nichts nütze, als nur zum Schnellfahren.<sup>57</sup>

Speed and acceleration were and are key elements in the design of amusement rides, their combination permitting a type of mobility only found at fairs and amusement parks. Roller coasters that could attain speeds of up to 60 km/h had already been built before the First World War. By contrast, coasters today reach speeds of 150 km/h and accelerate to 5 g (five times the acceleration of gravity).<sup>58</sup> As iron began to replace wood as the construction material of amusement rides in the 1960s, their construction became a task for engineers. The building process was becoming more scientific and construction firms specialising in structural analysis and the dynamics of amusement rides emerged. Rides became faster, movement and acceleration more varied. The basis for these advances was the use of high tech, both in design and construction. Even linear motors, whose drive concept was originally developed for maglev trains, have been used since the 1990s.<sup>59</sup> Rides at fairs and amusement parks thus bring together specific developments in leisure-time activities and technological innovations stemming from other industries.

▲ 22

### Technology as a Model for Toys

Technology that is suitable as a model for toys needs to have an "excitement factor" – or at least a certain level of familiarity – and be accessible and intuitive at the same time (→ Media Link #ay). It should engage the user on an emotional level, for a sense of wonder about technology inspires interest in playing with its replica. Furthermore, simulated technology used for play probably facilitates the technology's acceptance, as the playful interaction directs the user's attention back to the original. Such simulations can further promote important technological skills and know-how.<sup>60</sup> Technology plays an important role regarding such toys as steam engines and model trains, which came on the market towards the end of 19th century,<sup>61</sup> but also for computer-based simulations that can be used at work as well as during leisure time.<sup>62</sup> The question of whether a technology, displayed in a toy, is relevant to contemporary life can have great implications for its model's economic success. Because steam engines had largely disappeared by 1960, and therefore had also lost their attractiveness as toys, the company Wileco from Leverkusen fashioned a steam engine model that was combined with a replica of a nuclear power plant (→ Media Link #az).<sup>63</sup> The contemporary fascination with nuclear energy contributed much to the success of the model and it is easy to imagine that this hybrid would have been difficult to sell during the growing anti-nuclear movement a decade later.

▲ 23

### Transformation of Technology by Consumers

Technology has always been playfully adapted for leisure-time activities. For example, turntablism – the use of record players as an instrument to achieve unusual sound effects – started in the 1940s and continues to evolve to this day.<sup>64</sup> DJs manipulate the speed of turntable revolutions manually, scratch the tone arm across the record, and let the music of the two turntables overlap. This use of a record player, which is foreign to the technology itself, is now so widespread that the devices have acquired an entirely new function that is put on display at regular DJ competitions.<sup>65</sup> One typical characteristic of the leisure-time customisation of technology is a tendency to commit socially subversive acts

with it. A few examples may serve as illustrations. In the 1990s, Berlin youth discovered S-Bahn (metro) surfing as a favourite pastime. Involving opening and leaning out of a train's doors or walking along its exterior, this extremely dangerous activity was made possible by the fact that older trains' doors could be opened during the ride, which permitted access to an overhang between the wagon wall and the floor. There was also an overhead luggage rack for grabbing onto.<sup>66</sup> Thus, the train's structural properties were the technological starting point for the creation of a leisure-time sport, whose appeal is found in the thrill of danger. The activity tested the individual's mettle in a way that combined the taste of freedom with a sense of danger. A much lower level of risk is involved in attempts to modify computer games by reprogramming them. The more or less subversive software conversions, or *mods*, are intended to either secure players some (not always game-compliant) advantages through their programming skills or to offer new ways of playing that depart from those intended by the manufacturer. *Mods* thus reflect creative uses of computer games whose programming and technology are supposed to be predetermined by the manufacturer.<sup>67</sup> It is likely that such conversions of technology also contribute to the user's identification with it.

▲24

### Identification with Technology

The enjoyment of particular technologies during leisure time gives users a chance to identify with their devices. Under some conditions, the scope of identification may expand to include the forming of relationships with others in social groups. In the 1950s, for example, young people acquired motorcycles in order to meet up at certain locations, attend concerts or take trips. These social gatherings obtained additional significance from the frequent discussions about the vehicles and the shared experience of mobility as a form of freedom. The motorcycle is especially easy to identify with, as it is a technical cult object that allows the thrilling experience of movement and conveys a sense of symbiosis between man and machine.<sup>68</sup> This quality was reinforced in the 1970s as the motorcycle's image changed from being an everyday mode of transport to a leisure-time vehicle.<sup>69</sup> Inline skates, whose earliest stages of development date back to the 1960s, also present an opportunity for identification and for the coming together of like-minded people. While experienced skaters judge their peers' technical knowledge on the basis of their equipment and its wear, social circles are distinguished by the use of certain skates and accessories.<sup>70</sup> Other, completely different examples for leisure activities that lead to group cohesiveness are do-it-yourself restoration projects or tinkering with cars. Just as with the motorcycle enthusiasts, the technological artefact here is front and centre. A further example of this is found in the early 1970s when the private maintenance of vintage automobiles started to gain popularity. This activity went beyond constant tinkering to include the formation of the necessary network of kindred spirits. In contrast to the motorcycle, the process of identification in this case has less to do with the act of driving the "beloved object"<sup>71</sup> than with looking at it while lying below the chassis during the repair process.

▲25

In light of the great number of technologically based leisure-time activities, the above-mentioned examples are merely intended to serve as illustrations. They indicate, however, the extent to which the range of leisure-time activities has expanded with technology – for both proactive and more-or-less passive participants. The opportunities for identification that transpire out of the use of technology often result in an almost symbiotic relationship, which is especially true in the case of leisure-time sport. Leisure has therefore become part of the technologised environment over the course of industrialisation.<sup>72</sup>

▲26

Until the end of the 19th century, Great Britain's social, economic and technical head start over the European continent contributed to its more rapid technological evolution in the area of leisure in comparison to, for example, the German states. Given the close affinity between industrialisation and leisure, it may be assumed that a comparable pattern of development occurred in other contemporary European countries.<sup>73</sup> Sport took root earlier in England, as did tourism; the all-inclusive packages developed in the UK came to be the dominant form of organised travel for the whole of continental Europe. Fairs and amusement parks resembling those in operation today effectively counterbalanced the world of modern industrial work. Their increasing popularity is at least in part due to the fact that they cornered the market on amusement rides. The use of steam power at fairs in Great Britain happened earlier than in continental Europe, as did the introduction of steam engines and model railroads as technical toys.<sup>74</sup> In contrast, the adoption of technology by way of its leisure-time use was delayed in other European countries, as was the related development of technologised environments.

▲27

## Leisure Time – Meaningful or Disruptive?

A justification already given in the 1930s for coming to terms with the issue of leisure time surfaced again later on in the larger debate surrounding the leisure or experience-seeking society. Work of the industrial age was viewed to be a professionally and existentially unfulfilling one-dimensional form of employment,

▲ 28

welche die Auswirkungen der Persönlichkeit im Werk mehr oder weniger stark verwehrte und sich [im Zuge der Industrialisierung] dauernd auf eine unverhältnismäßig lange Zeit erstreckte, ... erwachte das Gefühl der Notwendigkeit der Freizeit wie einer neuen Sinnggebung des Lebens.<sup>75</sup>

However, where leisure time was generally portrayed as something positive and desirable in the writings of the 1920s and 1930s, mainly insofar it was seen as a means for meeting the "kulturellen Forderungen der Arbeiter ... [und der] volkswirtschaftlichen Möglichkeiten"<sup>76</sup> ("cultural needs of the workers ... [and] promoting economic opportunity"), the perspective has changed since the late 1970s: leisure time is now frequently regarded as a problem that should be addressed by Leisure Studies. In the 1920s and 1930s, leisure time was still a rare commodity for most people. Although the *Internationale Arbeitsamt* (International Labour Office) campaigned for the eight-hour workday, its introduction was slow and, in any case, also applied to Saturdays. Guaranteed vacation for workers was furthermore only established in the 1920s, and, finally, the income levels of most working families left little money for leisure-time expenditures.<sup>77</sup> Similar to the situation during industrialisation, where the new technology received an undeniably positive reception without being a dominating factor in most people's lives, discussions of the phenomenon of leisure time, while present, were still hardly ubiquitous or even relevant to most people. Income gains from the 1950s to the 1970s allowed for more leisure-time consumption and, with regard to the allocation of time over the course of an entire year, the increase in freely disposable time in Western industrialised nations ultimately reversed the relationship between work and leisure time.<sup>78</sup> Leisure, therefore, has only been a relevant phenomenon for the whole of (Western) society since the late 1960s, when slogans about the leisure or experience-seeking society gave expression to a societal transformation.<sup>79</sup> As a result, the opinions regarding leisure time changed, as had been the case, in an analogous development, with the opinions regarding technology. From within this social context, the onset of "Leisure Shock" in industrial society was predicted in 1981 by a book of the same name.<sup>80</sup> Other authors examined the uncertainty and disappointment that accompanies the new focus on the "event",<sup>81</sup> or looked closely at the issue of "leisure stress".<sup>82</sup> The ascendancy of leisure time over work today appears to have dimmed the individual's relationship to what had previously only been a hypothesis and a goal. The issues raised by these authors were either not broached earlier or only tentatively addressed. Along with the preconditions for leisure time (time and disposable income) established through the use of technology and the mutual interaction between technology and leisure, another relation, or symmetry, between technology and leisure has become apparent: the perceptions about the world's technologisation and leisure time have changed since the late 19th century, and they have done so in much the same way.

▲ 29

Stefan Poser, Hamburg

## Appendix

### Sources

Altenloh, Emilie: Die Kino-Unternehmung und die soziale Schichten ihrer Besucher, Diss., Jena 1914.

[Anonymous]: Art. "Freizeit", in: Der Große Brockhaus 6 (15th ed. 1930), p. 588.

[Anonymous]: Art. "Freizeit", in: dtv-Lexikon in 20 Bänden, vol. 6 (1982), p. 120f.

[Anonymous]: Art. "Freizeitsport", in: dtv-Lexikon in 20 Bänden, vol. 6 (1982), p. 121.

[Anonymous]: Die erste Berliner Flugwoche, in: Zeitschrift für Luftschiffahrt 2 (1909), p. 865.

Art. "Train Surfing", in: Wikipedia, [http://en.wikipedia.org/wiki/Train\\_surfing](http://en.wikipedia.org/wiki/Train_surfing) [21/09/2011].

Ausstellungskatalog Bing-Spielwaren: Bing-Werke, vorm. Gebrüder Bing A.-G., Nürnberg: Fabrik feiner Metall-Spielwaren 1910. Deutsches Technikmuseum Berlin, Historisches Archiv, II 2.05427.

Bevans, George E.: How Workmen Spend their Spare Time, PhD thesis, New York 1913.

Böhmert, Viktor: Die Erholung der Arbeiter außer dem Hause, in: Die zweckmäßige Verwendung der Sonntags- und Feiertage: Vorberichte und Verhandlungen der Konferenz vom 25. und 26. April 1892, Berlin 1893 (Schriften der Centralstelle für Arbeiter-Wohlfahrtseinrichtungen 2), pp. 1–24.

Father Tuck's Express Train: Panorama with Movable Pictures, [instructions for the board game aimed at the English market] ca. 1910. Deutsches Technikmuseum Berlin, Historisches Archiv II, No. 1096.

Geck, L.: Die Entwicklung der Freizeitbewegung: Zum Weltkongress für Freizeit und Erholung 23.–30. Juni 1936 in Hamburg, in: Soziale Praxis, Zentralblatt für Sozialpolitik und Wohlfahrtspflege 45 (1936), pp. 866–874.

Jeanmaire, Claude: Gebrüder Bing: Spielzeug zur Vorkriegszeit 1912–1915, Technisches Spielzeug aus der (guten alten Zeit): Händler-Hauptkatalog und Nachträge, Villingen 1977.

Kirby, Gustavus Town: Geleitwort für den Weltkongress für Freizeit und Erholung Hamburg, 23. bis 30. Juni 1936, in: Weltkongress für Freizeit und Erholung, vom 23. bis 30. Juni 1936, published by the Deutschen Organisationsausschuß des Weltkongresses für Freizeit und Erholung, Hamburg 1937, p. 8

Krueger, Julius: Zur Frage der Freizeittätigkeit des männlichen Industriearbeiters: Eine Einleitung in begrifflicher, problematischer und methodologischer Hinsicht, Diss. jur., typewritten, Hamburg 1935.

Lindner, Gustav A.: Lehrbuch der empirischen Psychologie nach genetischer Methode, Cilli 1858.

Minns, J.E.: Modellokomotiven, Frankfurt am Main 1969.

Souron, Stephanie: Eigenhändig nach Malle, in: Stern 17, 2 (2010), pp. 2–4.

## Bibliography

Adamowsky, Natascha: Spielfiguren in virtuellen Welten, Frankfurt am Main et al. 2000.

Alkemeyer, Thomas: Mensch-Maschine mit zwei Rädern: Überlegungen zur riskanten Aussöhnung von Körper, Technik und Umgebung, in: Gunter Gebauer et al. (eds.): Kalkuliertes Risiko, Frankfurt am Main 2006, pp. 225–247.

idem: Die "Verflüssigung" des Gewohnten: Technik und Körperlichkeit im neuen Wagnissport, in: Stefan Poser (ed.): Homo Faber ludens: Geschichten zu Wechselbeziehungen von Technik und Spiel, Frankfurt am Main 2003, pp. 175–200.

Bauer, Reinhold: Kurzer Boom und lange Krise: Die Deutsche Motorradindustrie nach dem Zweiten Weltkrieg (1940er bis 1970er Jahre), in: Technikgeschichte 75 (2008), pp. 307–328.

Becher, Ursula A.J.: Geschichte des modernen Lebensstils: Essen – Wohnen – Freizeit – Reisen, Munich 1990.

Blanchard, Jan (ed.): Labour and Leisure in Historical Perspective: Thirteenth to Twentieth Centuries, Stuttgart 1994 (Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, Beihefte 116).

Borsay, Peter: A History of Leisure: The British Experience since 1500, Basingstoke et al. 2006.

Braun, Hans-Joachim (ed.): "I Sing the Body Electric": Music and Technology in the 20th Century, Hofheim 2000.

idem: Komposition und Konstruktion: Zum Verhältnis von musikalischer und technischer Kreativität in der ersten Hälfte des 20. Jahrhunderts, in: Christoph Lütge, et al. (eds.): Musik – Technik – Philosophie: Fragen und Positionen, Freiburg et al. 2005, pp. 106–127.

idem (ed.): Music and Technology in the 20th Century, Baltimore et al. 2002.

Bruckmüller, Ernst et al. (eds.): Turnen und Sport in der Geschichte Österreichs, Vienna 1998 (Schriften des Instituts für Österreichkunde 60).

- Burke, Peter: The Invention of Leisure in Early Modern Europe (1995), in: Past & Present (1995), online: [http://findarticles.com/p/articles/mi\\_m2279/is\\_n146/ai\\_17249828/](http://findarticles.com/p/articles/mi_m2279/is_n146/ai_17249828/) [21/09/2011].
- Corbin, Alain: L'avènement des loisirs: 1850–1960, Paris 1995.
- Curtius, Andreas: Tretautos – Das Glück auf kleinen Rädern, in: Stefan Poser et al. (eds.): Spiel mit Technik: Katalog zur Ausstellung im Deutschen Technikmuseum in Berlin, Leipzig 2006, pp. 84–89.
- Dering, Florian: Volksbelustigungen: Eine bildreiche Kulturgeschichte von den Fahr-, Belustigungs- und Geschicklichkeitsgeschäften der Schausteller vom 18. Jahrhundert bis zur Gegenwart, Nördlingen 1986.
- Dienel, Hans-Liudger: Verkehrsgeschichte auf neuen Wegen, in: idem (verantw.): Verkehrsgeschichte auf neuen Wegen: Transport Infrastructure and Politics, Berlin 2007 (Jahrbuch für Wirtschaftsgeschichte 2007 1), pp. 19–36.
- Diñçal, Noyan: Stadien, Sportparks und Musterspielplätze: Großsportanlagen und Publikum in Deutschland, 1900 bis 1930, in: Technikgeschichte 75 (2008), pp. 215–232.
- Dinh, Günter: Die Semmeringerbahn: Der Bau der ersten Hochgebirgsbahn der Welt, Vienna et al. 2003.
- Dumazedier, Joffre: Vers une Civilisation du loisir, Paris 1962.
- Eisenberg, Christiane: "English Sports" und deutsche Bürger: Eine Gesellschaftsgeschichte 1800–1939, Paderborn et al. 1999.
- Freericks, Renate / Hartmann, Rainer / Stecker, Bernd: Freizeitwissenschaft: Handbuch für Pädagogik, Management und nachhaltige Entwicklung, Munich 2010.
- Freyer, Walter: Tourismus: Einführung in die Fremdenverkehrsökonomie, 8th ed., Munich et al. 2006.
- Garncarz, Joseph: Jahrmarktskino – Eine Europäische Institution, in: Sacha Szabo (ed.): Kultur des Vergnügens: Kirmes, Jahrmarkt oder Freizeitparks – Schausteller und Fahrgeschäfte: Facetten nicht-alltäglicher Orte, Bielefeld 2009, pp. 123–144.
- Gebauer, Gunter et al. (ed.): Kalkuliertes Risiko: Technik, Spiel und Sport an der Grenze, Frankfurt am Main et al. 2006.
- Gershuny, Jonathan: Changing Times: Work and Leisure in Post Industrial Society, Oxford et al. 2000.
- Gottwaldt, Alfred: Spielzeug Eisenbahn, in: Stefan Poser et al. (eds.): Spiel mit Technik: Katalog zur Ausstellung im Deutschen Technikmuseum Berlin, Leipzig 2006, pp. 78–83.
- Gruppe, Ommo: Was ist das Besondere am Rudern? Erfahrungsmöglichkeiten im Rudersport, in: Wolfgang Fritsch et al. (eds.): Rudern im Spiegel der Wissenschaft: Berichte zur Festakademie zum 100. Jubiläum des Deutschen Ruderverbandes am 18. März 1983 in Köln, Hannover 1987, pp. 122–131.
- Gunn, Simon: "How Manchester is Amused: The Cultural Economy of the Industrial City, 1860–1920", in: Martina Hessler et al. (eds.), Creative Urban environments: Historical Perspectives on Culture, Economy, and the City, Frankfurt am Main 2008, pp. 101–118.
- Habermas, Jürgen: Soziologische Notizen zum Verhältnis von Arbeit und Freizeit, in: Hermann Giesecke (ed.): Freizeit und Konsumerziehung, 2nd ed., Göttingen 1971, pp. 105–122.
- Habermas, Tilmann: Geliebte Objekte: Symbole und Objekte der Identitätsbildung, Frankfurt am Main 1996.
- Hachtmann, Rüdiger: Tourismus – Geschichte, Göttingen 2007.
- Harris, David: Key Concepts in Leisure Studies, London et al. 2005.
- Hascher, Michael / Trischler, Helmut: Historische Verkehrsforschung, in: Bettina Gundle et al. (eds.): Unterwegs und mobil: Verkehrswelten im Museum, Frankfurt am Main et al. 2005 (Beiträge zur historischen Verkehrsforschung, Sonderband), pp. 77–89.
- Haubner, Barbara: Nervenkitzel und Freizeitvergnügen: Automobilismus in Deutschland 1886–1914, Göttingen 1998.

- Hein, Christoph: Der Turntable als Musikinstrument [Paper presented at the conference "Musik und Maschine" in July 2000], in: PopScriptum 7: Musik und Maschine, published by Forschungszentrum Populäre Musik der Humboldt-Universität zu Berlin.
- Hengartner, Thomas: Technisierte Lebenswelten, in: European History Online (EGO), published by the Institute of European History (IEG), Mainz YYYY-MM-DD. URL: <http://www.ieg-ego.eu/> # # #. URN: # # # [YYYY-MM-DD], [forthcoming].
- Hessler, Martina et al. (eds.): Creative Urban environments: Historical Perspectives on Culture, Economy, and the City, Frankfurt am Main 2008.
- Jenkins, Clive / Sherman, Barrie: The Leisure Shock, London 1981.
- Katz, Mark: Capturing Sound: How Technology has Changed Music, Berkeley et al. 2005.
- Kehrt, Christian: "Das Fliegen ist noch immer ein gefährliches Spiel": Risiko und Kontrolle der Flugzeugtechnik von 1908 bis 1914, in: Gebauer, Gunter et al. (eds.): Kalkuliertes Risiko: Technik, Spiel und Sport an der Grenze, Frankfurt am Main et al. 2006, pp. 199–224.
- idem: Moderne Krieger: Die Technikerfahrung deutscher Militärpiloten 1910–1945, Paderborn et al. 2010.
- Knocke, Erich (ed.): Gesammeltes Vergnügen: Das Essener Markt- und Schaustellermuseum, Essen 2000.
- König, Wolfgang: Mechanische Aufstiegshilfen und Skisport in den Schweizer Alpen 1900–1945, in: Stefan Poser et al. (eds.): Homo faber ludens: Wechselbeziehungen von Technik und Spiel, Frankfurt am Main et al. 2003 (Technik interdisziplinär 4), pp. 157–174.
- idem: Geschichte der Konsumgesellschaft, Stuttgart 2000 (Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, Beihefte 154).
- idem: Massenproduktion und Technikkonsum: Entwicklungslinien und Triebkräfte der Technik zwischen 1880 und 1914, in: idem et al.: Netzwerke Stahl und Strom: 1840 bis 1914, Berlin 1990 (Propyläen Technikgeschichte 4), pp. 265–552.
- König, Wolfgang / Weber, Wolfhard: Netzwerke: Stahl und Strom: 1840 bis 1914, Berlin 1990 (Propyläen Technikgeschichte 4).
- Kopper, Christopher: Die Reise als Ware: Die Bedeutung der Pauschalreise für den westdeutschen Massentourismus nach 1945, in: Zeithistorische Forschungen 4 (2007), pp. 61–83.
- Kos, Wolfgang (ed.): Die Eroberung der Landschaft: Semmering – Rax – Schneeberg: Katalog zur Niederösterreichischen Landesausstellung Schloss Glognitz, Vienna 1992.
- Koshar, Rudy (ed.): Histories of Leisure, Oxford et al. 2001.
- Kosok, Lisa et al. (eds.): Viel Vergnügen: Öffentliche Lustbarkeiten im Ruhrgebiet der Jahrhundertwende, Essen 1992.
- Langewiesche, Dieter: Zur Freizeit des Arbeiters: Bildungsbestrebungen und Freizeitgestaltung österreichischer Arbeiter im Kaiserreich und in der Ersten Republik, Stuttgart 1979 (Industrielle Welt. Schriftenreihe des Arbeitskreises für moderne Sozialgeschichte 29).
- Lütge, Christoph et al. (eds.): Musik – Technik – Philosophie: Fragen und Positionen, Freiburg et al. 2005.
- Maase, Kaspar: Grenzenloses Vergnügen: Der Aufstieg der Massenkultur 1850–1970, Frankfurt am Main 1997.
- idem et al. (eds.): Schund und Schönheit: Populäre Kultur um 1900, Köln et al. 2001 (Alltag & Kultur 8).
- Maines, Rachel P.: Hedonizing Technologies: Paths to Pleasure in Hobbies and Leisure, Baltimore 2009.
- Müller, Corinna: Frühe deutsche Kinematographie: Formale wirtschaftliche und kulturelle Entwicklungen 1907–1912, Stuttgart 1992.
- Nahrstedt, Wolfgang: Die Entstehung der Freizeit, Göttingen 1972.
- idem: Freizeitpädagogik – Kulturarbeit – Reisepädagogik: Zur Metamorphose einer neuen erziehungswissenschaftlichen

Teildisziplin, in: Freizeitpädagogik: Forum für Kultur, Medien, Sport, Tourismus 17 (1995), pp. 8–23.

idem: Leben in Freier Zeit, Darmstadt 1990.

Nennen, Heinz-Ulrich: Wirklicher als Wirklichkeit: Über Spielen-Lassen-Können, in: Stefan Poser et al. (eds.): Spiel mit Technik: Katalog zur Ausstellung im Deutschen Technikmuseum Berlin, Leipzig 2006, pp. 164–171.

Norden, Gilbert: "Schuhe zum 'Eislaufen ohne Eis'" und "spiegelglatte, 'kaum von einem Eisspiegel zu unterscheidende' Laufflächen": Eine Geschichte des Rollschuhes und der Rollschuhbahnen bis 1914 unter besonderer Berücksichtigung Österreichs, in: Blätter für Technikgeschichte 60 (1998), pp. 11–42.

Opaschowski, Horst W.: Freizeitpädagogik, in: Dieter Lenzen (ed.): Pädagogische Grundbegriffe 1, 4th ed., Reinbek 1996, pp. 656–674.

idem: Freizeitpädagogik in der Schule: Aktives Lernen durch animative Didaktik, Heilbronn 1977.

Pilarczyk, Ulrike: Faszination der 3-D-Aktion-Spiele, in: Stefan Poser et al. (eds.): Spiel mit Technik: Katalog zur Ausstellung im Deutschen Technikmuseum Berlin, Leipzig 2006, pp. 127–133.

Pirsig, Robert M.: Zen oder die Kunst ein Motorrad zu warten, Frankfurt am Main 1978.

Poser, Stefan: Heiraten Sie auf der Achterbahn! Jahrmarktsvergnügen aus sozial- und technikhistorischer Perspektive, in: idem et al. (eds.): Homo faber ludens: Wechselbeziehungen von Technik und Spiel, Frankfurt am Main et al. 2003 (Technik interdisziplinär 4) pp. 113–133.

idem: Austin Roadster und Atomic Lab: Popularisierung von Technik durch Spielzeug, in: Dresdener Beiträge zur Geschichte der Technikwissenschaften 31 (2006), pp. 49–64.

idem: "Kannst Du bremsen, Geliebter?" Wechselbeziehungen zwischen Technik, Spiel und Risiko, in: Gunter Gebauer et al. (eds.): Kalkuliertes Risiko: Technik, Spiel und Sport an der Grenze, Frankfurt am Main et al. 2006, pp. 15–37.

idem: Glücksmaschinen oder Mechanismen des gestörten Gleichgewichts? Technik auf dem Jahrmarkt, in: Sacha Szabo (ed.): Kultur des Vergnügens: Kirmes, Jahrmarkt oder Freizeitparks – Schausteller und Fahrgeschäfte: Facetten nicht-alltäglicher Orte, Bielefeld 2009, pp. 101–122.

idem: Die Maschinerie des Spiels: Technik und Spiel als Thema der Technikgeschichte, in: idem et al. (eds.): Homo faber ludens: Wechselbeziehungen von Technik und Spiel, Frankfurt am Main et al. 2003 (Technik interdisziplinär 4), pp. 19–35.

idem: Playing with Technology, in: ICOHTEC Newsletter: Newsletter of the International Committee for the History of Technology ICOHTEC 49 (2009), pp. 2–10, online: <http://www.icohtec.org/publications/newsletter/2009-04-icohtec-newsletter-no49.pdf> [27/09/2011].

idem: Spiel mit Technik – Eine Einführung, in: idem et al. (eds.): Spiel mit Technik: Katalog zur Ausstellung im Deutschen Technikmuseum Berlin, Leipzig 2006, pp. 9–13.

idem et al. (eds.): Spiel mit Technik: Katalog zur Ausstellung im Deutschen Technikmuseum Berlin, Leipzig 2006.

idem: Der "ultimative Kick" oder: Was wäre die Erlebnisgesellschaft ohne ihre technischen Grundlagen?, in: Kultur & Technik 3 (2001), pp. 20–25.

idem: Die vergnügliche Industrialisierung? Der Jahrmarkt, die Technik und das Erlebnis des Außerordentlichen, in: Alemania Studens 8 (1998), pp. 107–121.

Poser, Stefan / Zachmann, Karin: Homo faber ludens – einführende Überlegungen zum Verhältnis von Technik und Spiel, in: Stefan Poser et al. (eds.): Homo faber ludens: Wechselbeziehungen von Technik und Spiel, Frankfurt am Main et al. 2003 (Technik interdisziplinär 4), pp. 7–16.

Richter, Dietmar: Pädagogische Analyse und Bewertung des Freizeiterlebens von Jugendlichen im Zeitvergleich von 20 Jahren, Frankfurt am Main et al. 1992 (Europäische Hochschulschriften, series XI, 486).

Schmidt, Uta C.: Vom "Spielzeug" über den "Hausfreund" zur "Göbbels-Schnauze": Das Radio als häusliches Kommunikationsmedium im Deutschen Reich (1923–1945), in: Technikgeschichte 65 (1998), pp. 313–328.

Schildt, Axel: *Moderne Zeiten: Freizeit, Massenmedien und "Zeitgeist" in der Bundesrepublik der 50er Jahre*, Hamburg 1995 (Hamburger Beiträge zur Sozial- und Zeitgeschichte 31).

Schulze, Gerhard: *Die Erlebnisgesellschaft: Kultursoziologie der Gegenwart*, [1st ed., Frankfurt am Main 1992] 8th ed., Frankfurt am Main 2000.

Schützmannsky, Klaus: *Roller Coaster: Der Achterbahndesigner Werner Stengel* [Begleitbuch zur gleichnamigen Ausstellung im Münchner Stadtmuseum], Heidelberg 2001.

Schwartz, Vanessa R.: *Spectacular Realities: Early Mass Culture in Fin-de-Siècle Paris*, Berkeley et al. 1998.

Simmons, Jack: *The Victorian Railway*, New York 1991.

Spode, Hasso: *Zur Geschichte der Tourismusgeschichte*, in: Wiebke Kolbe et al. (ed.): *Tourismusgeschichte(n)*, München et al. 2009, pp. 9–22.

Stadler, Andrea: *Karussellfabriken um 1900*, in: Stefan Poser: *Spiel mit Technik: Katalog zur Ausstellung im Deutschen Technikmuseum Berlin*, Leipzig 2006, pp. 200–206.

Stercken, Angela: *Die GESOLEI als Schaubild des Körpers: Sektionen, Überblick*, in: Hans Körner et al. (eds.): *Kunst, Sport und Körper: 1926–2002: GESOLEI, Ostfildern-Ruit 2002*, vol. 1–3, here vol. 1, pp. 99–123.

Steward, Jill: *The Attractions of Place: The Making of Urban Tourism, 1860–1914*, in: Martina Heßler et al. (eds.): *Creative Urban Milieus: Historical Perspectives on Culture, Economy, and the City*, Frankfurt am Main 2008, pp. 255–284.

Szabo, Sacha (ed.): *Kultur des Vergnügens: Kirmes, Jahrmarkt oder Freizeitparks – Schausteller und Fahrgeschäfte: Facetten nicht-alltäglicher Orte*, Bielefeld 2009.

Timm, Albrecht: *Verlust der Muße: Zur Geschichte der Freizeitgesellschaft*, Buchholz et al. 1968.

Veal, Anthony J.: *Leisure and the Future*, London et al. 1987 (*Leisure and Recreation Studies* 4).

Zahn, Ulf: *Der Fremdenverkehr an der spanischen Mittelmeerküste*, Regensburg 1973 (*Regensburger geographische Schriften* 2).

## Notes

1. ^ Opaschowski, *Freizeitpädagogik in der Schule* 1977, p. 59.
2. ^ See e.g. Blanchard, *Labour and Leisure* 1994, and Burke, *The Invention of Leisure* 1995.
3. ^ See Nahrstedt, *Freizeit* 1972, p. 17.
4. ^ Comenius, Johann: *Didactica magna* (1657), chapter XV/13, cited in: Opaschowski, *Freizeitpädagogik in der Schule* 1977, pp. 55f.
5. ^ Fröbel, Friedrich: *Fortgesetzte Nachricht von der allgemeinen deutschen Erziehungsanstalt in Keilhau, Rudolstadt 1824*, cited in: Opaschowski, *Freizeitpädagogik in der Schule* 1977, pp. 56f.
6. ^ Lange, Wichard: *Zehn Jahre aus meiner pädagogischen Praxis: Ein Rückblick* (1861), cited in: Opaschowski, *Freizeitpädagogik in der Schule* 1977, p. 57.
7. ^ [Anonymus], Art. "Freizeit", in: *Der Große Brockhaus* 1930, p. 588.
8. ^ "the (individually determined) period of time that is available to working people in addition to their occupational or work-related responsibilities (leisure is thus defined as 'non-work' in its entirety or as simply the available 'leisure time')"; transl. by C.R., here and in the following [Anonymus], Art. "Freizeit", in: *dtv-Lexikon* 1982, pp. 120f. The lexicon draws on material from the Brockhaus Verlag.
9. ^ [Anonymus], Art. "Freizeitsport" 1982, p. 121.
10. ^ [Anonymus], Art. "Freizeit", in: *dtv-Lexikon* 6, 1982, pp. 120f.
11. ^ "in a society whose central category is still work"; transl. by C.R., J. Habermas, *Soziologische Notizen* 1971, p. 105.
12. ^ Freericks / Hartmann / Stecker, *Freizeitwissenschaft* 2010, p. 20. This definition admittedly goes too far as it would also include self-employment.
13. ^ See Geck, *Freizeitbewegung* 1936, p. 870.

14. ^ Lindner, Empirische Psychologie 1858; Geck, Freizeitbewegung 1936, p. 870.
15. ^ Böhmert, Erholung 1893.
16. ^ ibidem, p. 1.
17. ^ ibidem, pp. 2ff.
18. ^ Bevans, Spare Time 1913.
19. ^ Altenloh, Kino-Unternehmung 1914.
20. ^ Krüger, Freizeittätigkeit 1935, p. 2. Also: Vorschlag betreffend die Benützung der Freizeit der Arbeiter: Sechste Jahrestagung 1924, in: Internationales Arbeitsamt: Von der Internationalen Arbeitskonferenz auf den ersten sechs Jahrestagungen (1919–1924) angenommene Entwürfe von Übereinkommen und Vorschläge, Genf 1924, printed in Krüger, Freizeittätigkeit 1935, appendix, pp. I–IV.
21. ^ ibidem, p. I.
22. ^ "People today do not simply endeavour to create work and improve their working conditions; they also want their employment to be organised fortuitously and their leisure time to be joyful"; transl. by C.R., cited in: Kirby, Geleitwort 1937, p. 8. Nonetheless, the conference's accompanying programme reveals the Nazis' efforts toward political appropriation.
23. ^ Here and in the following: Krüger, Freizeittätigkeit 1935, appendix, pp. IIIff.
24. ^ Stercken gives an overview of the sport related items at the GESOLEI, Stercken, GESOLEI 2002, pp. 115ff.
25. ^ Nahrstedt, Leben in Freier Zeit 1990, p. 105; König, Konsumgesellschaft 2000, pp. 290ff.
26. ^ Dumazedier, Vers une civilisation du loisir? 1962; König, Konsumgesellschaft 2000, p. 333. For more on its development in Germany, see: Schildt, Moderne Zeiten 1995, and Richter, Pädagogische Analyse 1992.
27. ^ Nahrstedt, Freizeitpädagogik 1995, p. 17. For an early (technical) historical work, see: Timm, Verlust der Muße 1968. For more recent perspectives, see: Harris, Key Concepts 2005, and Freericks / Hartmann / Stecker, Freizeitwissenschaft 2010.
28. ^ See for instance ibidem, pp. 241ff.
29. ^ With regard to recreation in the 18th century, see for instance Becher, Geschichte des modernen Lebensstils 1990, pp. 158ff.; on the topic of the turn of the 19th century with a focus on Paris, see: Schwartz, Spectacular Realities 1998. Leisure time in industrialised regions are discussed in Kosok, Viel Vergnügen 1992, also Gunn, Manchester 2008, pp. 101ff. Kaspar Maase analyses the expansion of a leisure-based mass culture between 1850 and 1970; see Maase, Grenzenloses Vergnügen 1997. Maase takes a look at the situation in Germany in: Schund und Schönheit 2001. Diverse leisure-time activities from the 19th to the mid 20th centuries are depicted in Koshar, Histories of Leisure 2001.
30. ^ For the development of city tourism, see for instance: Steward, Attractions 2008, p. 255ff. Excursions to "untouched nature" and the ability to reside there was at least made easier through technology; see Poser / Zachmann, Homo faber ludens 2003, pp. 7f.
31. ^ Eisenberg, "English Sports" 1999, particularly p. 145ff. Bruckmüller surveys the introduction (and development) of various kinds of sports, focusing on Austria, Turnen und Sport 1998.
32. ^ Probably it was the 1911 International Hygiene Exhibition in Dresden that made a particular contribution to the popularization of recreational sports. See Dinçkal, Stadien 2008, pp. 221ff.
33. ^ Poser, Glücksmaschinen 2009, p. 104.
34. ^ Dering, Volksbelustigungen 1986; Knocke, Gesammeltes Vergnügen 2000; with a focus on technology: Poser, vergnügliche Industrialisierung? 1998, pp. 114ff.
35. ^ Müller, Kinematographie 1992; for the development of cinema at the fair in Europe, Garncarz, Jahrmarktskino 2009, pp. 123ff.; the importance of cinema in the post-war period is discussed in: Schildt, Moderne Zeiten 1995, pp. 141f.
36. ^ Schmidt, Radio 1998, pp. 313ff.
37. ^ Freyer, Tourismus 2006, pp. 107ff., for a historical evaluation, Spode, Geschichte der Tourismusgeschichte 2009, pp. 9ff.
38. ^ On the topic of recreation in the 1950s, see Schildt, Moderne Zeiten 1995, for a comparative study of the 1960s and 1980s, see Richter, Pädagogische Analyse 1992.
39. ^ Opaschowski, Freizeitpädagogik 1996, p. 657.
40. ^ Poser, Ultimativer Kick 2001, pp. 20ff.; Gebauer, Kalkuliertes Risiko 2006.
41. ^ "The market for events now plays a dominant part in everyday life. It ties up enormous manufacturing capacity, consumer demand, political and intellectual activity as well as time. The consumer and the 'experience providers' are well-attuned to each other ... the customers have become more and more experienced ... everything is given a try", transl. by C.R., Schulze, Erlebnisgesellschaft 2000, p. 542.
42. ^ For a discussion focused on technology and play, see: Poser / Zachmann, Homo faber ludens 2003; Gebauer, Kalkuliertes Risiko 2006; Poser et al. (eds.), Spiel mit Technik 2006; an international perspective is offered by Poser, Playing with Technology 2009, pp. 2ff. For a look at the American development with regard to recreation

- and technology as a hedonistic pursuit see Maines, *Hedonizing Technologies* 2009.
43. ^ An overview of the current state of research on the topic of leisure-time travel is presented by Hascher / Trischler, *Historische Verkehrsforschung* 2005, pp. 84f., perspectives on the general history of transport may be found in Dienel, *Verkehrsgeschichte* 2007, pp. 19ff.
  44. ^ König, *Konsumgesellschaft* 2000, pp. 270f.; Simmons, *The Victorian Railway* 1991, pp. 270ff., pp. 300ff.
  45. ^ *Father Tuck's Express Train: Panorama with Movable Pictures*, [instructions for the board game aimed at the English market] ca. 1910. Deutsches Technikmuseum Berlin, *Historisches Archiv II*, No. 1096. Figures of passengers, baggage and station personnel are placed on the platform of a departing express train.
  46. ^ The completion of the section Wien–Gloggnitz took place in 1842; see Kos, *Eroberung der Landschaft* 1992; Din-hobl, *Semmeringer Bahn* 2003, pp. 64f., pp. 181f.; König, *Mechanische Aufstiegshilfen und Skisport* 2003, pp. 157ff.
  47. ^ The area had also been used since the 1820s for supplying water.
  48. ^ An overview from an economic-historic perspective is presented by Kopper, *Reise als Ware* 2007, pp. 61ff.; see also Hachtmann, *Tourismus – Geschichte* 2007.
  49. ^ The results were already addressed in the 1970s: Zahn, *Fremdenverkehr* 1973.
  50. ^ As an example, consider the opera production on two different shores of Berlin's Wannsee in the summer of 1988; the concept of the Love Parade, which has taken place annually since 1990, was implemented in an entirely different manner; see Adamowsky, *Spielfiguren in virtuellen Welten* 2000, pp. 119ff.
  51. ^ See for instance Braun, *I Sing the Body Electric* 2000; *ibidem*, *Music and Technology* 2002; *ibidem*, *Komposition und Konstruktion* 2005, pp. 106ff.; Lütge, *Musik - Technik - Philosophie* 2005.
  52. ^ Poser, *Glücksmaschinen* 2009, pp. 111f.
  53. ^ König, *Netzwerke* 1990, pp. 527ff.
  54. ^ See for instance Haubner, *Automobilismus* 1998, pp. 167ff.; Kehrt, *Moderne Krieger* 2010, pp. 87f., pp. 114ff.
  55. ^ [Anonymus], *Die erste Berliner Flugwoche* 1909, p. 865.
  56. ^ Cf. Kehrt, *Fliegen* 2006, pp. 204f.
  57. ^ "The aim of achieving the greatest possible speed ... has had such an impact on the construction [of rowing boats] that what is left over is something that has only the very slightest resemblance to an actual water vessel: they are long and rather narrow things that have walls as thin as wooden cigar boxes and into which rowers may only step with difficulty ... Should the need arise with such a craft, one couldn't even save a drowning man; they are simply not good for anything other than speed" (transl. by C.R.) Schmidt, F. A.: *Sport und Leibesübungen*, in: *Deutsche Turnzeitung: Blätter für die Angelegenheiten des gesamten Turnwesens* 4 (1886), cited in: Gruppe, *Rudern* 1987, p. 124.
  58. ^ This type of wooden roller coaster from 1913 can still be found at the Tivoli in Copenhagen. For roller coasters' construction data since the 1960s, see Schützmannsky, *Roller Coaster* 2001, pp. 140ff.
  59. ^ For the early history of roller coasters, see Poser, *Heiraten Sie* 2003, pp. 127ff., on the strategies for dealing with risks, see Poser, *Kannst du bremsen?* 2006, p. 28.
  60. ^ Poser, *Maschinerie* 2003, p. 33.
  61. ^ For an overview of the variety available prior to the Second World War, see the catalogues of the Bing company, Nürnberg. See also the reprint Jeanmaire, *Gebrüder Bing* 1977. For a historical perspective on model trains, see Gottwaldt, *Spielzeug Eisenbahn* 2006, pp. 78ff.; for model-like kids' vehicles, see Curtius, *Tretautos* 2006, pp. 84ff.; for a survey of technical toys, see Poser, *Austin Roadster* 2006, pp. 49ff.
  62. ^ See for instance Souron, *Eigenhändig* 2010, pp. 2ff. For a look at the significance of simulations, see Nennen, *Wirklicher als Wirklichkeit* 2006, pp. 169f.
  63. ^ A model of the nuclear power plant with a steam engine is located at Berlin's Deutsche Historische Museum. For more on toys and atomic energy, see also Poser, *Austin Roadster* 2006, p. 59.
  64. ^ Katz, *Capturing Sound* 2005, pp. 114ff.
  65. ^ A distinction may be made between scratching and the more recent beat juggling. See Hein, *Turntable* 2000.
  66. ^ Train surfing continues to be practiced today; see the Wikipedia article about *Train Surfing* 2011.
  67. ^ Pilarczyk, *Faszination der 3-D-Aktion-Spiele* 2006, p. 131.
  68. ^ Pirsig, *Zen oder die Kunst ein Motorrad zu warten* 1978, p. 10. Alkemeyer, *Mensch-Maschine* 2006, pp. 232ff.
  69. ^ Bauer, *Kurzer Boom und lange Krise* 2008, p. 322.
  70. ^ Alkemeyer, "Verflüssigung" des Gewohnten 2003, pp. 175ff. For more on the trend of roller skating in the 19th and early 20th centuries and the related development of Inline skating, see Norden, *Schuhe* 1998, pp. 11ff.
  71. ^ T. Habermas, *Geliebte Objekte* 1996.
  72. ^ See also Hengartner, *Technisierte Lebenswelten* [forthcoming].
  73. ^ For the topic of Great Britain, see for instance Borseley, *A History of Leisure* 2006; for France, see Corbin, *L'avènement des loisirs* 1995.
  74. ^ An overview of the production of fair rides in Europe is presented in: Stadler, *Karussellfabriken* 2006, pp. 200ff.

For more on model steam engines, see for instance the Bing toy company catalogue: Ausstellungskatalog Bing-Spielwaren um 1910, p. 23. Deutsches Technikmuseum Berlin, Historische Archive, II.2.05427. For the topic of early model trains, see Minns, Modelllokomotiven 1969, p. 8f., pp. 59ff., and Gottwaldt, Spielzeug Eisenbahn 2006, pp. 78ff.

75. ^ "which limited the impact of the individual's personality and carried on [as a result of industrialisation] for an inordinately long period ... there arose a sense of the need for leisure time as a new meaning of life" (transl. by C.R.), Geck, Freizeitbewegung 1936, col. 866.
76. ^ Krüger, Freizeittätigkeit 1935, p. 10.
77. ^ Annual data for Germany. For a concise overview and additional references, see König, Konsumgesellschaft 2000, pp. 127f.
78. ^ Statistical data on the time available to the individual can be found at: Gershuny, Changing Times 2000, p. 62ff. A case study on the leisuretime of working-class families, using Vienna as an example, may be found in: Langewiesche, Freizeit des Arbeiters 1979, pp. 334ff. In Germany, for instance, the amount of working hours determined by collective agreement decreased between 1960 and 1990 by approximately 25 per cent: Nahrstedt, Freizeitpädagogik 1995, p. 9.
79. ^ The pros and cons of this term are discussed e.g. in: Veal, Leisure and the Future 1987, pp. 1f. Regarding the relativisation of the individual concept: Schulze, Erlebnisgesellschaft 1992, p. 15.
80. ^ Jenkins / Sherman, The Leisure Shock 1981. Also Jonathan Gershuny for instance notes a growing "leisure problem" due to a lack of work, making reference in this context to a text from 1928 by John Maynard Keynes (1883–1946); Gershuny, Changing Times 2000, pp. 58ff.
81. ^ Schulze, Erlebnisgesellschaft 1992, pp. 60ff.
82. ^ Opaschowski 1988, cited in: Schulze, Erlebnisgesellschaft 1992, p. 65.

This text is licensed under: CC by-nc-nd - Attribution, Noncommercial, No Derivative Works

---

Translated by: Christopher Reid  
Editor: Helmuth Trischler  
Copy Editor: Lisa Landes

---

DDC: 175 [Info  ] , 600 [Info  ] , 790 [Info  ]

---

## Citation

Poser, Stefan: Leisure Time and Technology, in: European History Online (EGO), published by the Institute of European History (IEG), Mainz 2011-09-26. URL: <http://www.ieg-ego.eu/posers-2010-en> URN: urn:nbn:de:0159-2011051216 [YYYY-MM-DD].

When quoting this article please add the date of your last retrieval in brackets after the url. When quoting a certain passage from the article please also insert the corresponding number(s), for example 2 or 1-4.

## Link #ab

- Industrialization (<http://www.ieg-ego.eu/en/threads/backgrounds/industrialization-as-an-historical-process/richard-h-tilly-industrialization-as-an-historical-process>)

## Link #ad

- Johann Amos Comenius (1592–1670) VIAF  <http://viaf.org/viaf/29835535> DNB  (<http://d-nb.info/gnd/118521691>) ADB/NDB  (<http://www.deutsche-biographie.de/pnd118521691.html>)

## Link #ae

- Friedrich Fröbel (1782–1852) VIAF  <http://viaf.org/viaf/45094018> DNB  (<http://d-nb.info/gnd/11853629X>) ADB/NDB  (<http://www.deutsche-biographie.de/pnd11853629X.html>)

#### Link #af

- Wichard Lange (1826–1884) VIAF   (<http://viaf.org/viaf/52498791>) DNB  (<http://d-nb.info/gnd/119425262>)

#### Link #ag

- Karl Ludwig Michelet (1801–1893) VIAF   (<http://viaf.org/viaf/39456419>) DNB  (<http://d-nb.info/gnd/11858216X>) ADB/NDB  (<http://www.deutsche-biographie.de/pnd11858216X.html>)

#### Link #ah

- Gustav Adolf Lindner (1828–1887) VIAF   (<http://viaf.org/viaf/62356386>) DNB  (<http://d-nb.info/gnd/119342197>) ADB/NDB  (<http://www.deutsche-biographie.de/pnd119342197.html>)

#### Link #aj

- Emilie Altenloh (1888–1985) VIAF   (<http://viaf.org/viaf/49379723>) DNB  (<http://d-nb.info/gnd/101860730>)

#### Link #ak



-  (<http://www.ieg-ego.eu/en/mediainfo/poster-for-gesolei-exhibition-1926?mediainfo=1&amp;width=900&amp;height=500>)  
Poster for GESOLEI Exhibition, 1926

#### Link #am

- Transfer des englischen Sports (<http://www.ieg-ego.eu/de/threads/modelle-und-stereotypen/anglophilie/michael-maurer-vom-mutterland-des-sports-zum-kontinent-der-transfer-des-englischen-sports-im-19-jahrhundert>)

#### Link #an



-  (<http://www.ieg-ego.eu/en/mediainfo/opening-of-the-first-world-exhibition-in-london-1851?mediainfo=1&amp;width=900&amp;height=500>)  
Opening of the First World Exhibition in London, 1851

#### Link #ao



-  (<http://www.ieg-ego.eu/en/mediainfo/ferris-wheel-at-the-world2019s-columbian-exposition-1893?mediainfo=1&amp;width=900&amp;height=500>)  
Ferris Wheel at the World's Columbian Exposition, 1893

#### Link #ap

- The History of Tourism (<http://www.ieg-ego.eu/en/threads/europe-on-the-road/the-history-of-tourism/ueli-gyr-the-history-of-tourism>)

#### Link #aq

- European fashion (<http://www.ieg-ego.eu/en/threads/models-and-stereotypes/the-spanish-century/gabriele-ment-ges-european-fashion-1450-1950>)

#### Link #ar



- <http://www.ieg-ego.eu/en/mediainfo/board-game-express-train-1910?mediainfo=1&amp;width=900&amp;height=500>  
Board Game Express Train, 1910

#### Link #as



- <http://www.ieg-ego.eu/en/mediainfo/werbeplakat-fuer-cortina-dampezzo-um-1920?mediainfo=1&amp;width=900&amp;height=500>  
Advertisement for Cortina d'Ampezzo ca. 1920

#### Link #at



- <http://www.ieg-ego.eu/en/mediainfo/giant-hotel-complexes-in-benidorm-2008?mediainfo=1&amp;width=900&amp;height=500>  
Giant Hotel Complexes in Benidorm, 2008

#### Link #au

- George Eastman (1854–1932) VIAF  <http://viaf.org/viaf/32805674> DNB  <http://d-nb.info/gnd/141628103>

#### Link #av



- <http://www.ieg-ego.eu/en/mediainfo/roller-coaster-at-night-ca.-1925?mediainfo=1&amp;width=900&amp;height=500>  
Roller Coaster at Night, ca. 1925

#### Link #aw



- <http://www.ieg-ego.eu/en/mediainfo/two-passengers-of-bremen-engineer-and-showman-sieboldt?mediainfo=1&amp;width=900&amp;height=500>  
Two Passengers of Bremen Engineer and Showman Sieboldt

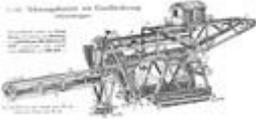
#### Link #ax



- <http://www.ieg-ego.eu/en/mediainfo/american-air-show-1910?mediainfo=1&>

amp;width=900&height=500)  
American Air Show, 1910

**Link #ay**



- (<http://www.ieg-ego.eu/en/mediainfo/overburden-excavator-modelled-on-a-prototype-of-the-krupp-company-1930?mediainfo=1&width=900&height=500>)  
Overburden Excavator Modelled on a Prototype of the Krupp Company, 1930

**Link #az**



- (<http://www.ieg-ego.eu/en/mediainfo/steam-engine-with-nuclear-power-plant-r-200?mediainfo=1&width=900&height=500>)  
Steam Engine with Nuclear Power Plant R 200



**Kompetenzzentrum**  
für elektronische Erschließungs-  
und Publikationsverfahren in  
den Geisteswissenschaften



**INSTITUT FÜR  
EUROPÄISCHE  
GESCHICHTE**

<http://www.ieg-ego.eu> ISSN 2192-7405