Beata KOPECKA
University of Rzeszow, Poland

bkopec@ur.edu.pl

PEOPLE IN AVIATION – A LINGUISTS' INSIGHT
INTO HISTORY

Abstract: History can be studied from a number of angles and on the basis of a variety of sources. Researchers interested in the history of aviation typically focus on the development of subsequent types of flying machines. This study relates to the history of aviation, but, due to its linguistic bias it concentrates on the semantic field <people in aviation>. The structure of this field is analysed on the basis of a collection of nouns that form the relating lexical fields.
In detail the study is aimed to cast some light on the history of modern aviation, i.e. aviation that started with the 1903 flight made by the Wright Brothers in an engine-driven machine, and has been continued up to now. Importantly, in 1911, soon after the first flight took place, the first dictionary of aviation was published. This specialized dictionary served as an inspiration for an attempt to draw a linguistic picture of the discipline at the beginning of the 20th century, and later to contrast it with a linguistic picture of the discipline as emerging from modern specialized dictionaries of aviation one century later. Additionally, the analysis of particular nouns, including the study of their morphological structure and semantics leads to some interesting observations relating to the history of modern aviation.

Key words: agent nouns, aviation, field theory, history

Introduction

The beginning of modern-day aviation dates back to 1903 when the brothers Orville and Wilbur Wright rose into the air in a heavier-than-air, engine-driven, human-controlled machine. The achievement of the Wright brothers was soon followed by others, and today, excluding the period of the Covid-19 pandemic lockdown, there is hardly a day without an airplane appearing in the sky. Importantly, in addition to airline pilots, aviation attracts a number of other persons.

The aim of this paper is to study the semantic field <people in aviation> in terms of its structure and changes that have occurred over 100 years of the

history of modern aviation. First, the nouns belonging to the lexical field <people in aviation> at the beginning of the 20th century are analyzed, followed by a presentation of the 21st century state of the field. In the final section of this paper, major differences within the lexical field <people in aviation> are discussed. Throughout the paper, comments concerning the morphological and semantic nature of terms are made.

Methods and materials

The term *lexical field*, introduced by Trier in 1931, is connected with the field theory in linguistics. Trier claimed that words should not be studied in isolation but in groups. He stressed the fact that lexical items of a given language are semantically linked and they are related to an underlying conceptual field. At present there are numerous versions of the field theory with the governing principle being the analysis of a group of words under chosen criteria. When it comes to the terminology that is applied to this theory, two notions, *lexical field* and *semantic field*, are of primary importance. Lexical field is generally defined as a group of lexemes, a collection of words, which are used to denote notions relating to a semantic field. Semantic field is a mental construct organizing concepts related in meaning. Lexical fields enable communication about the concepts forming the semantic field (see Kronenfeld & Rundblad, 2003:67–68).

In this paper the lexical field named <people in aviation> refers to a group of English-language nouns denoting people who perform different aviation-related jobs and activities at a given time period. The set of words for the analysis was compiled with the help of lexicographic works. The dictionaries chosen are so-called specialist dictionaries, i.e. including specialist vocabulary, as distinguished from the general language vocabulary (see, e.g. Faber et al., 2012, Grygiel 2017). The lexical field <people in aviation> is one of the many lexical fields that can be distinguished as relating to the specialist language of aviation.[1]

The primary aim of this paper is to show changes that occurred within the lexical field <people in aviation> from the time of the first flight until the early 21st century. With this in mind, the set of nouns for the analysis of the state at the beginning of the 20th century was collected on the basis of the *Dictionary of Aviation* (henceforth: DA1) by R. M. Pierce, issued in 1911. Importantly, since the compilation of this dictionary must have taken several years, the author is certain to have started gathering the material for his work only a few years after the first flight had taken place. As admitted by Pierce (1911:1) in the preface to

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[1] The language of aviation is discussed in detail by Borowska (2017), and, on a smaller scale, by Kopecka (2017) or Petrashchuk (2018).

the dictionary *(...) the subject itself [aviation] is indeed somewhat new*. In order to gather the set of lexemes belonging to the field 'people in aviation' in the 21st century, two dictionaries were chosen. One of them is the *Dictionary of Aviation* (henceforth: DA2), by D. Crocker, published in 2007.[2] The other is a dictionary of civil aviation by B. Czerkowski published in 2016 (henceforth: CAD). These modern-day dictionaries were chosen for the following three reasons: First, they are supposed to reflect the up-to-date 21st century aviation vocabulary. Second, according to the information in the front matter, both of them include basic and most frequently used terms in general aviation rather than military aviation or the more technically oriented aeronautical vocabulary. Third, both of them provide English-language definitions of lexemes which, regarding the overall structure, makes them comparable with the DA1 dictionary.

In all of the dictionaries agent nouns possessing the status of headwords were identified in a manual search. Subsequently, sematic features of lexemes were analyzed, and, on the basis of this analysis, lexemes were assigned to semantic categories. A category was distinguished if at least two lexemes could be assigned to it, and hence, additionally, categories including miscellaneous items had to be created. In some cases one lexeme was ascribed to more than one semantic category, which means that it developed more than one human-related sense within the field <people in aviation>.

People in aviation at the beginning of the 20th century

The scrutiny of headwords in DA1 led to the identification of 90 lexemes[3] denoting people, and it was possible to distinguish 7 meaning-based categories for them. The categories are as follows:
1) Someone who controls aircraft
2) Someone who describes weather/ physical conditions of flight
3) Someone who is involved in bird-related activities
4) Someone who observes aircraft
5) Someone who deals with kites
6) Someone who is involved in aircraft-related offences/ crimes
7) Someone who uses a parachute
8) Miscellaneous items

Within the first category above, i.e. *someone who controls aircraft*, 4 relatively rich subcategories were distinguished, as shown in Table 1:

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[2] The first edition of this dictionary appeared in 1999.

[3] The lexemes from DA1 are shown in Table 1 and Table 2.

Table 1: *Someone who controls aircraft* (DA1)

1	Someone who controls aircraft (different types)	a) aerialist, aeroman, aeronaut, airman, air-pilot, air-sailor, (airship-)driver, aviator, birdman, floater, flyaway, flyer, flying-man, pilot, sky-cycler, sky-flyer, sky-man, sky-pilot, sky-sailor, sky-skimmer, steerer, steersman, wing-flyer, winger b) [a woman] air-woman, aviatress, bird-woman, pilotess
2	Someone who controls a specific type of aircraft	a) balloon: aerostat, ascensionist, balooner, baloon-expert, baloonist, baloon-man, inflator, valve-tender, (aerial) navigator, air-navigator, airgonaut b) monoplane: monoplanist c) glider: glider, sailing-man d) engine-driven airplane: aeroplaner, aeroplanist
3	Someone who is involved in competition/ who possesses special skills in air navigation	aeroplanist, air-jockey, air-king, air-racer, air-wizard, aviation-expert, entrant, height-flyer, high-flyer, sky-skimmer
4	Someone who has a special role in controlling aircraft	airship-commander, airship-skipper, captain, co-aviator

The first observation to be made on the basis of Table 1 above is the impressive number of more or less synonymous lexemes relating to people operating an aircraft without specifying what type of aircraft it is. Many of these lexemes evoke a vivid mental picture of someone high in the sky. For example, a *floater* – floats in the air like on waves, a *sky-cycler* cycles in the sky as if riding a bicycle, a *birdman/ birdwoman* resembles a bird in his/her ability to rise above the ground. Similarly, providing one is familiar with the fact that *avia-* is related to the Latin *avis* 'bird,' the lexemes *aviator, aviatress* might evoke a picture of a human being like a bird in the sky. The lexemes *winger* and *wing-flyer* stress the use of wings, which, in the early days of modern aviation, differentiated airplanes from balloons.

Second, as many as 16 items in Table 1 exhibit different connections with nautical terms. For instance, according to the Oxford English Dictionary (henceforth: OED), the history of the lexemes *captain, pilot, pilotess, steerer, steersman* dates back to 16th century nautical English. In the compounds *air-sailor(-er), sky-sailor*, *aerial/ air navigator*, *air-skipper*, *airship-driver, airship-commander*, one of the elements has a sense relating to the nautical realm. Furthermore, the lexemes *airman* and *aeroman* were, as indicated in the OED, coined by analogy to *seaman*. According to the Meriam Webster dictionary, the lexeme *sky-man* followed the same pattern. In turn, in both *aeronaut* and *airgonaut* the Greek item *nautikos* 'pertaining to sea' can be traced. Additionally,

the *OED* explains that the lexical item *aeronaut* was created as an allusion to *Argonaut*, that is a lexeme denoting one of legendary heroes sailing in the ship Argo to find the golden fleece. All the examples show that early aviation, in terms of the medium, was seen as somehow similar to, and at the same time contrasting with, sea navigation. The similarity is stressed with words that were originally used in nautical language, whereas the contrast is shown by means of such lexemes as: *air*, the Greek combining form *aero-* 'air', and *sky*.

Next, in the case of 16 lexemes, the sense 'someone who controls an airplane' was directly preceded by the development of the sense 'someone who controls a balloon.' This is the case with: *aerialist, aerial/ air navigator, aeronaut, airgonaut, airman, air-sailor (-er), airship-driver, aviator, captain, pilot, pilotess, steerer, steersman, sky-flyer, sky-sailor*. This linguistic trend is a reflection of the extralinguistic reality. Namely, hot air balloons allowed people to rise into the air long before the first airplane was constructed. The role of balloons in the days prior to the beginning of modern aviation is also evident from the number of lexemes relating to someone operating a balloon contained in DA1. In Table 1, there are 11 lexical items denoting those dealing with balloons, whereas only 2 items denote 'someone who flies a glider,' and 1 item with the meaning 'a pilot of a monoplane' was identified. Since many of words in DA1 which denote 'someone who controls an aircraft' were originally used in connection with sea, a regular 3-step meaning development can be observed for this group of words. First, the sea related meaning of a given word was developed; second, the novel sense 'someone who controls a balloon' appeared; third, the sense 'someone who controls an airplane' arose.

Additionally, Table 1 testifies to the role of airplanes in social life at the beginning of the 20th century. Judging by the relatively high number of lexemes (8 items) in the subcategory *Someone who is involved in competition/ who possesses special skills in air navigation*, one may conclude that the pilots of the first airplanes competed with one another trying to beat the records for height, speed and distance. The role of competition in the early days of aviation is evident from the semantics of such lexemes as *entrant, air-jockey, air-racer, high/height flyer*. The metaphorical allusion to horse-racing can be postulated in the case of the lexeme *air-jockey*. Also, lexemes in the category *Someone who observes aircraft*, in Table 2 below, confirm the competitive character of early modern-day aviation. These lexemes denote people standing on the ground and admiring the achievements of fliers. In fact, the audience and their admiration is vital for any competition or performance.

In turn, the presence of such lexemes as *airship-commander, airship-skipper, captain, co-aviator*, assigned to the category *Someone who has a special role in controlling the aircraft* proves that not infrequently at least 2 people were responsible for the flight with one of them assuming the role of the leader, and the other one taking the role of the assistant.

Table 1 testifies also to the fact that early airplanes attracted not only men, but also women. The participation of women in the first flights is evident from the presence in DA1 of the following lexemes: *air-woman, aviatress, bird-woman, pilotess.*

In addition to the category *Someone who controls aircraft,* the following 7 categories were distinguished on the basis of DA1 data, as shown in Table 2.

Table 2: People in aviation - early 20th century (DA1)

Someone who describes weather/ physical conditions of flight	*aerophysicist, aerographer, aerologist, aeromancer, cloud-assembler, cloud-cleaver, cloud-compeller, cloud-disperser, meteorologist, rain-maker, weather-forecaster, weather-man, weather-prophet, weather-sharp*
Someone who is involved in bird-related activities	*bird-catcher, bird-fancier, wing-shot*
Someone who operates kites	*kite-designer, kite-expert, kite-fancier, kite-flyer*
Someone who observes aircraft	*air-scout, airship-gazer, observer*
Someone who is involved in aircraft-related offences/crimes	*air-hog , smuggler*
Someone who uses a parachute	*parachutist, parachute-jumper*
Miscellaneous items	*flying-instructor, aeroplane-owner, air-trave(l)ler*

As emerging from Table 2, and in particular judging from the number of lexemes in the category *Someone who describes weather/physical conditions of flight* in DA1, weather observation was of vital importance for aviation. Additionally, lexemes in this category prove that on the one hand weather was described in terms of physical measurements, but on the other hand it remained outside human control. The physical, scientific approach is confirmed by such lexemes as *aerographysicist, aerographer, aerologist*, whereas lexemes *areomancer, weather-prophet, cloud-assembler, cloud-compeller* stress the role of magic or gods when it comes to the weather; the compounds *cloud-assembler* and *cloud-compeller* are Homeric epithets of Zeus.

Regarding the category *Someone who is involved in bird-related activities*, the presence of the lexemes, i.e. *bird-catcher, bird-fancier* and *wing-shot* in an aviation dictionary might seem somewhat strange at first sight. Namely, according to the definitions provided in DA1 *bird-catcher* is 'someone who catches birds', *bird-fancier* 'one who fancies, or takes pleasure in rearing or collecting birds; also, a dealer in pet or captive birds', *wing-shot* 'someone who shoots flying birds'. However, it should be kept in mind that birds interfere with

flying airplanes and hence terms denoting people dealing with birds appeared in the aviation dictionary of the early 20th century.

Furthermore, the category *Someone who operates kites* proves that at the beginning of the 20th century any flying object, even a kite, was considered important for aviation, whereas the category *Someone who is involved in aircraft-related offences/ crimes* testifies also to the existence of problems of a criminal nature connected with early modern-day aviation. These problems included the smuggling of goods and hooligan behaviour in the air like, for instance, dropping sand-bags on pedestrians.

 Last but not least, at the beginning of the 20th century the lexical field *People in aviation* includes, according to the DA1, 2 lexemes denoting those who jumped with parachutes, as well as such lexemes as *flying-instructor, aeroplane-owner* and *traveller*. Their presence in the dictionary shows that the profession of a flying instructor appeared as early as in the first decade of the 20th century, airplanes were generally owned by individuals, and they started to be used as a means of transport.

People in aviation at the beginning of the 21st century

The search in DA2 resulted in a set of 54 lexemes denoting people, while in CAD 86 such lexemes were identified. The overall number of lexemes under analysis is, however, not the sum of these two numbers as the overwhelming majority of lexemes were registered by both dictionaries. Out of the data collected from both dictionaries, 8 semantic categories were created; however, since for each dictionary one category with no counterpart in the other dictionary was distinguished, the list below consists of 10 categories. In one case there was striking difference in the number of elements between the two dictionaries. Namely, 35 lexemes were assigned to the category *Someone who travels in aircraft* on the basis of CAD data, while only 5 lexemes belonging to it were identified in DA2. For the purpose of this analysis the overall number of lexemes in both dictionaries was taken into account, and consequently the category *Someone who travels in aircraft* is placed at the top of the list below. The categories created on the basis of the search in contemporary aviation dictionaries are as follows:
1) Someone who travels in aircraft
2) Someone who controls aircraft
3) Someone who participates in the organization of air traffic
4) Someone who is involved in passenger service
5) Someone who is involved in aircraft accidents and flight safety
6) Someone who is involved in aviation training
7) Someone who is involved in legal matters regarding aircraft

8) Someone who is involved in aviation engineering/ technical service of aircraft
9) Someone who is involved in aviation-related medical issues
10) Someone who describes weather/ physical conditions of flight

Undoubtedly, judging from the contents of Table 3, passenger transport is an important section of modern aviation. 3 lexemes are used, more or less synonymously, with reference to those travelling by air. Two of them, i.e. *passenger* and *occupant* appear also in general English, and in their primary sense denote: 'a person using any means of transport,' and 'a person using a room, building, area, etc.,' respectively. Their air-travel related senses are activated contextually. It seems worth noting here that, as confirmed by data in the Coca corpus,[4] in general English the compounds *airline(s) passenger(s), air passenger(s)* are frequently used with reference to people travelling by an airplane. It might thus be concluded that in aviation-related English the reference to the *passenger* as an *airline/air passenger* is tautological, whereas in general English such meaning specification is necessary as the term *passenger* is polysemic and refers to people using any means of transport. Finally, when it comes to the term *pax*, in official aviation English, it is used primarily in written documents.[5]

Table 3: Someone who travels in aircraft (DA2 and CAD)

1	Air-traveller	*passenger, occupant, pax*
2	Travellers with no/some special needs	*able bodied passengers (ABP), blind passenger (BLND), deaf passenger, disabled passenger needing assistance (DPNA), someone with disabilities, someone with reduced mobility (PRM), wheelchair – assistance on the ramp only (WCHR), wheelchair – assistance to steps (WCHS), wheelchair (WCH), wheelchair cabin seat (WCHC), very important person (VIP)*
3	Traveller causing problems/ involved in crimes	*deported passenger-escorted, deported passenger without assistance, deportee accompanied, deportee unaccompanied, disruptive passenger, hijacker, improperly documented someone, inadmissible someone (INAD), potentially disruptive passenger, stowaway, unruly passenger*
4	Traveller according to the type of journey	*arriving passenger, transfer passenger, transit passenger*
5	Traveller according to his/her age	*infant, child, adult, unaccompanied minor (UM)*
6	Miscellaneous items	*aeronaut, declarant, volunteer*

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[4] Corpus of Contemporary American English (available from: www.english-corpora.org/coca).

[5] This abbreviation was formed in the times of telex communication when the number of characters in any message had to be limited (see https://www.quora.com/Why-are-passengers-called-pax).

As emerging from Table 3, the subcategories *Travellers with no/some special needs* and *Traveller causing problems/ involved in crimes* are abundant with lexical items. Importantly, the lexemes assigned to them are not synonymous, but they denote different kinds of needs and different kinds of problematic behaviour respectively. The passengers' needs that, judging on the basis of the collected vocabulary items, are taken into account in air transport are primarily different sorts of mobility problems, and additionally vision and hearing impairments. For a linguist, it is interesting to observe that the lexeme *wheelchair* meaning 'a passenger with mobility problems' can be interpreted metonymically, with metonymy relying on the relationship of contiguity between the object and the person for which the name of the object is used (see Kövecses, 2010:171–193). The same lexeme in the sense 'passenger with special needs' also appears in a number of phrases, i.e. *wheelchair – assistance on the ramp only, wheelchair – assistance to steps, wheelchair cabin seat.* Many of the items in the subcategories *Travellers with no/some special needs* and *Traveller causing problems/ involved in crimes* are descriptive phrases, such as: *disabled passenger needing assistance), someone with disabilities, someone with reduced mobility* or *deported passenger without assistance, potentially disruptive passenger.* As evident from the table for many of them there exists an abbreviation or an acronym.

When it comes to the category *Traveller according to his/her age*, it is interesting to note that the air-travel related senses of the lexemes *infant, child* and *adult* are different from their every-day senses. Namely, in general English the lexeme *infant* refers, most frequently, to a baby aged 1 month to 1 year. In aviation English the lexeme refers to children up to 2 years of age. The lexeme *child* in general English denotes someone younger than 14, while in aviation it refers to someone between 2 and 12. Finally, *adults* in general English are above 18 years old, whereas in aviation English, they are above 12. The development of aviation-related senses of the lexemes *infant, child* and *adult* is connected with fees that depend on the age of the traveller. The collocation *unaccompanied minor* testifies to the service offered in most airlines, whereby the staff take care of children travelling without parents.

Table 3 also includes terms classified as referring to passengers according to the type of journey, and here two lexemes, i.e. *transfer passenger* and *transit passenger* show that the system of modern airline transport is widely developed, and during a journey travellers may change from one airplane to another.

The category with miscellaneous items contains three lexemes. The lexeme *aeronaut* refers here to a 'passenger of a balloon'. The lexeme *declarant* is borrowed from legal English where it denotes 'a person who makes a declaration.' In aviation English the meaning of the lexeme *declarant* is restricted to 'someone who makes a goods declaration'. Similarly, the everyday sense of the lexeme *volunteer* 'a person who offers to do something' is restricted in aviation English to 'someone who has

presented himself/herself for boarding and, in response to the air carrier's call, is eager to surrender their reservation in exchange for benefits.'

Apart from lexemes assigned to the semantic category *Someone who travels in aircraft,* within the set of aviation-related lexemes denoting people at the beginning of the 21st c. ten more categories have been distinguished, as shown in Table 4 below:

Table 4: People in aviation – early 21st century (DA2 and CAD)

1.	Someone who controls aircraft	a) *aviator, pilot* b) *[different types of aircraft] aeronaut, airman, remote pilot, RPA (remotely piloted aircraft) observer,* c) *[different roles in controlling the aircraft] co-pilot (CP), cruise relief pilot, first officer, pilot-in-command, pilot-in-command under supervision, test pilot,* d) *private pilot, wingman*
2.	Someone who participates in the organization of air traffic	e) *aerodrome operations duty officer/manager, (air (traffic)) controller (ATCO), batsman, flight controller, flight engineer, flight information service operator (FISO), flight operations officer, flight dispatcher, loadmaster, marshaller, rated air traffic controller*
3.	Someone who is involved in aircraft accidents and flight safety	f) *accredited representative, adviser, civil aviation inspector, investigator, investigator-in-charge, safety manager, sky marshal, air marshal, flight marshal, security guard, stretcher, survivor*
4.	Someone who is involved in passenger service	*air host, air hostess, cabin attendant, cabin crew member, chief flight attendant, flight attendant, flight purser, steward, stewardess, purser, (travel) agent*
5.	Someone who is involved in aviation training	*class rating examiner, class rating instructor, flight instructor (FI), flying instructor, ground instructor, instructor student, license holder, trainee*
6.	Someone who is involved in legal matters regarding aircraft	*accountable manager, airline representative, authorized agent, lessor, (aircraft) operator*
7.	Someone who is involved in aviation engineering/ technical service of aircraft	*aeronautical engineer, designer, aircraft engineer, flight engineer (F/E)*
8.	Someone who is involved in aviation-related medical issues	*authorized medical examiner, medical assessor, medical examiner*
9.	Someone who describes weather/ physical conditions of flight	*meteorologist, observer*
10.	Miscellaneous items	*parachutist, member (e.g. of a gliding club)*

Regarding the category *Someone who controls aircraft,* and in particular the lexemes *pilot* and *aviator,* it has to be noted that in modern aviation English it is the lexeme *pilot* that is the standard reference to 'one controlling an airplane in flight,' whereas the lexeme *aviator* is used with reference to pilots of early engine-driven planes. The outstanding role of the lexeme *pilot* in modern aviation vocabulary is stressed by the number of compound lexemes including it, and denoting mainly special roles in controlling airplanes, like for instance, *co-pilot* or *pilot-in-command*. The lexemes in the subcategory 'a person who controls the aircraft – different types,' have in modern aviation English strictly specified meanings. Namely, an *aeronaut* is 'someone who controls a balloon,' *airman* is 'a pilot being a member of an air force and flying military aircraft,' whereas both *remote pilot* and *RPA observer* refer to people who control unmanned aircraft from the ground. The unmanned flying objects are state-of-the art aircraft.

A category that is abundant with lexemes is the category *Someone who participates in the organization of air traffic*. The appearance of this category is connected with the development of airports operating a number of airplanes at the same time. This category includes 12 lexemes referring to those who, working in the control tower, on the ground of the aerodrome, or on board aircraft, support the work of pilots, enhancing safe air traffic. Within this category, one group of lexemes deserves special attention. These are synonymous denotations of those who support air traffic from control towers, i.e. *air traffic controller (ATC), air controller, flight controller, controller*. The high synonymity appears to indicate the relative novelty of the job in question.

Similarly, it can be assumed that the synonymity of the lexemes *sky marshal, air marshal, flight marshal*, referring to those trying to discover and prevent terrorist attacks might be attributed to the relative novelty of the problem of air terrorism. High synonymity can also be observed within the category *Someone who is involved in passenger service*, where the lexemes *air host/ air hostess, cabin crew member, flight attendant, air host, cabin attendant, steward/ stewardess* all refer to persons whose job is to guarantee the comfort of passengers during a flight. However, unlike with the previously discussed groups of synonyms, the explanation of the high synonymity within this group of lexemes can be attributed to language sexism. As explained by LaGrave (2017) both *air hostess* and *stewardess* have over the years attracted pejorative meaning, and, starting from the 1980s, they have gradually been replaced by gender neutral lexemes. Today the lexeme *flight attendant* is the primary means of reference to a person caring for the needs of air passengers. Here, it seems interesting to note that the category *Someone who is involved in passenger service* is the only category distinguished for the beginning of the 21st century where gender-specific lexemes are found.[6]

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[6] CAD registers a female-specific lexeme, i.e. *aviatrix*, but it is noted in the definition that the lexeme is obsolete; therefore it does not appear in table 4.

The presence at the beginning of the 21st century of such semantic categories as *Someone who is involved in aviation training, Someone involved in legal matters regarding aircraft, Someone who is involved in aviation engineering/ technical service of aircraft,* or *Someone who is involved in aviation-related medical issues* testifies to changes in the world of aviation. First, aviation training has become highly regulated, with a number of licenses corresponding to different qualifications. Second, numerous standards and regulations have been set over the decades, and consequently new job opportunities have been created for persons who ensure that they are fulfilled. Third, design and construction of modern airplanes, which are highly complex machines, requires the work of engineers and other specialists in technical matters. Finally, to guarantee that aviation personnel do not suffer from sudden medical problems that might negatively influence a flight's safety, medical personnel are required to conduct regular check-ups of staff members. Within these categories, in contrast to the previously discussed ones, the level of synonymity is low. Particular lexemes denote different professions or responsibilities connected with the world of aviation.

The list of semantic categories distinguished for the beginning of the 21st century finishes with the category *Someone who describes weather/ physical conditions of flight*. This category includes only 2 lexemes, i.e. *meteorologist* and *observer*. All lexemes alluding in their sense-threads to gods or magic at the beginning of the 20th century, and evidenced in DA1, have disappeared from the lexical field under analysis. This may be a corollary of the fact that at present atmospheric phenomena are studied exclusively by means of professional meteorological instruments.

When it comes to the influence of nautical vocabulary on the language of aviation, new lexemes whose history can also be traced back to the language used by sailors, have appeared in the field after the publication of DA1. Namely, according to the *OED,* in the 15th century the lexeme *steward* developed the sense 'an officer in a ship who arranges for the serving of meals.' Starting from the end of the 19th c. the female form *stewardess* was applied in the sense 'a female attendant on a ship whose duty it is to wait on the women passengers.' Furthermore, the lexeme *purser*, which in aviation English denotes 'the chief flight attendant,' was used in the 15th century in the sense 'the officer on board a ship who keeps the accounts, and usually has charge of the provisions'. Some traces of nautical language can also be found in the case of the lexeme *marshal* present in the compounds *air marshal, flight marshal, sky marshal*. In 17th century nautical English *marshal* meant 'an official on a ship who superintends the carrying out of punishments,' whereas in modern aviation English it refers to a counterterrorist agent on board a commercial aircraft to counter aircraft hijacking.

One may wonder about the fact that 21st century dictionaries do not mention the existence of lexemes referring to women controlling aircraft. In fact, the aviatrix appeared in CAD, but it was marked as 'dated,' and therefore excluded

from the analysis. The lack of other female terms, however, cannot be attributed to the absence of women in modern aviation, but rather to the tendency to avoid using gender-marked profession terms in modern English[7].

Discussion

The presentation of the state of the lexical field 'people in aviation' at the beginning of the 20th century and at the beginning of the 21st century leads to a number of observations. First, the general structure of the field in terms of semantic categories distinguished is strikingly different. Only two categories, i.e. *Someone who controls aircraft* and *Someone who describes weather* appear both in the early days of modern aviation and now; however, there are changes when it comes to the lexemes assigned to these categories.

As regards the internal structure of the subcategory *Someone who controls (different types of) aircraft,* out of 24 lexemes assigned to it at the beginning of the 20th century, there are only 2 lexemes, i.e. *aviator* and *pilot*, to be found a century later. 2 lexemes that in the early days of aviation referred to those controlling different types of aircraft, i.e. *airman* and *aeronaut*, have gained more restricted meanings with time. Namely, *airman,* which in DA1 was defined as 'a man skilled in managing aircraft; a workman used to working on airship; a sailor of the air; an aeronaut, an aviator' is currently defined as 'a pilot being a member of air force and flying military aircraft,' whereas *aeronaut* is registered in modern-day dictionaries as 'someone who controls a balloon'. All the lexemes evoking vivid mental pictures, like for instance *sky-cycler*, have disappeared from the official aviation vocabulary; nevertheless, the lexemes *birdman* and *skipper* belong at present to aviation slang.[8]

The category *Someone who describes weather/ physical conditions of flight* has undergone major changes in terms of the number of lexemes assigned to it, with 14 lexemes registered in DA1 and only 2 in current dictionaries of aviation English; 1 lexeme – *meteorologist* is registered by both the DA1 and modern aviation dictionaries. All of the lexemes in this category alluding in their sense-threads to gods or magic forces have disappeared from the lexical field <people in aviation>. This may be a corollary of the fact that at present, for aviation purposes, atmospheric phenomena are studied by means of professional meteorological instruments.

All the remaining categories distinguished on the basis of DA1 are non-existent in the modern-day structure of the lexical field 'people in aviation.' This shows that aviation, as a discipline, has undergone major changes. At its outset it

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[7] Cetnarowska (2018) studies gender-marking of terms relating to women flying airplanes in general English texts and compares them with terms used in general Polish.

[8] See Chorążykiewicz 2012

used to be a kind of sporting activity involving participants who competed for records and the audience admiring them from the ground. For modern-day aviation passenger transport is of primary importance. This fact is confirmed by the high number of lexemes that belong to the category *Someone who travels in aircraft*, with only one lexeme, i.e. *air-traveller* registered at the beginning of the 20th century. The importance of passenger traffic is also confirmed by the lexemes in the category *Someone who is involved in passenger service*. Interestingly, 11 lexemes were assigned to the category *A traveller causing problems/involved in crimes*, which means that the significant increase in the number of people travelling by planes, has led to a rise in problematic situations.

In addition, on the basis of categories distinguished for modern aviation English, it can be concluded that at present aviation offers jobs to a number of professionals responsible for air traffic, production and maintenance of airplanes, as well as in pilots' training. This conclusion is supported by lexemes belonging to such categories as: *Someone who participates in the organization of air traffic, Someone involved in aircraft accidents, Someone involved in aviation training, Someone involved in aviation engineering/technical service of aircraft*.

Conclusion

Aviation as a discipline of human activity has been developing rapidly, and the art of flying as performed by the Wright brothers and their contemporaries is a far cry from modern-day aviation. Language allows us to name and communicate concepts that appear in the changing extralinguistic reality. Linguistic analyses of different types, including those based on lexicographic works, can give us an insight into a fraction of the world around us, an insight that is not infrequently different from, and thus complementary to, what can be learnt from other sources.

As shown by the analysis above, mainstream aviation began as a sporting activity for those who wanted to be like birds in their ability to fly high and far away, a sporting activity that attracted spectators for whom those in the sky seemed like they were floating or cycling above their heads. It also required those who were able to predict weather, be it on the basis of some instruments or merely observations of nature. Today, mainstream aviation is passenger oriented, and with a network of airports worldwide and a number of airlines, it attracts highly qualified specialists who control airplanes, those who supervise air traffic from control towers, members of onboard staff, as well as many other specialists who guarantee the smooth running of the whole business.

Last but not least, the analysis has shown that, judging on the creation of terms in the fields <people in aviation>, aviation is a younger sibling of sea navigation.

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