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GOTHIC ART: A MORPHOLOGICAL AND SEMANTIC COMPARISON OF POLISH AND ENGLISH ARCHITECTURAL TERMS

Terminology

The description to follow will be of a Gothic church, which, to many people, is a prototypical and spectacular embodiment of a church building. However, the main traits of its skeleton should be sought in *Carolingian* and *Romanesque* temples, where the typical model is a *nave-and-chancel church* ('kościół z nawą i chórem'). Here, the main internal space for the congregation is the longitudinally located *nave* ('nawa główna'), extending up to the *altar* ('ołtarz'), which is the focal point of worship, and beyond the transepts. A *transept* ('transept, nawa poprzeczna') is a transverse space to either side of the *crossing* ('skrzyżowanie naw'), that is, an area where the nave, the transepts and the chancel intersect. The *chancel* ('chór, chór kapłański') is the space to the east of the crossing, which contains an altar, and often a choir and an apse. East of the choir is the *presbytery* ('prezbiterium'), where the high altar is situated. The easternmost section is the *apse* ('apsyda'), that is, a semicircular or polygonal space behind the high altar, often roofed with a *half-dome* ('półkopuła, koncha'). If the temple has three apses arrayed in a trefoil arrangement, then it represents a *triconch church* ('kościół trójkonchowy'), that is, a three-apsed church. The *choir* ('chór kapłański') is the area where the choir sits, typically in *choir stalls* ('stalla'), i.e. ornately carved benches. Thus, the nave, the transepts and the chancel form a *cruciform church*, or a *cross church* ('kościół na planie krzyża'), that is, one whose ground plan is in the shape of a cross. The nave is flanked on its either side by an *aisle* ('nawa boczna'), a longitudinal corridor which is bounded by a row of columns or an arcade. An *arcade* ('arkada') is a row of columns surmounted by a series of arches. An *arch* ('łuk') is a curved symmetrical structure which spans an opening and typically supports the weight of a building. The top of an arch is its *crown* ('wierzchołek, nasada'); its base is the *springer* ('wspora, nóżka, kliniec wezgłowiowy, wezgłowie'); its main part is the *haunch* ('pacha'), the inside area of which is the *intrados* ('podłucze'), whereas the masonry area on the outside of an arch is its *spandrel* ('żagielek'). Sometimes an arch is only a decorative element filled up with masonry; it is then called *blind arch* ('łuk ślepy, blenda'). The *column* ('kolumna, podpora') consists of the *base*, ('baza') that is, the part resting on the floor, the *pier* ('trzon'), which is its main

bulk, with vertical *flutes* ('żłobek, profil'), that is distinctly carved ribs running along it, and the capital at its top. The *capital* ('głowica') is a separate block or a thickening at the top of a column, which has both decorative – Gothic especially favoured *vine-leaf capitals* ('głowica liściasta') – and structural functions. Columns are usually round in plan; if they are other than round, they are called *pillars* ('filar'). Another element of structural importance is the *respond* ('służka'), that is, a half-pillar or half-pier (*demi-column*: 'półkolumna') attached to a wall to support an arch. Support is also provided by *corbels* ('kroksztyn'), i.e. ornamental masonry brackets projecting from the face of a wall.

The basic outline of the church's body is completed by some attached structures like chapels, a sacristy or a porch. A *chapel* ('kaplica') is a small space for private worship and it can be located in various places about the church. On the other hand, a *sacristy* ('zakrystia') is always situated near the presbytery and it is a chamber where robes and other utensils are kept and where the priest prepares for the service. Wherever the entrance to the church is, it can be enclosed in a *porch* ('kruchta, przedsionek'), i.e., a covered shelter projecting from the wall. Another structural attachment to the body of a cathedral can be a *chapter house* ('kapitularz'), that is, a chamber originally used by canons of the chapter, i.e. the church governors, for meetings and discussion.

As discussed above, these fundamental features typifying the structure of the church building were developed in the early Middle Ages but it was only the Gothic style that, while drawing upon them, endowed the church building with a sense of overwhelming grandeur and intricate sophistication. With an increased volume of the building, the lateral walls of the nave can now be divided into levels. The ground level is formed by an arcade separating the nave from the aisle; above the isle is an empore; still above it there can be a triforium, and the top of the wall is surmounted by a row of large windows called a *clerestory* ('górne okna, clerestorium'), the AmE spelling being "clearstory". An *empore* ('empora') is a columned gallery above an aisle, whereas a *triforium* ('tryforium, okna trójdzielne') is an inwardly facing open wall passage, usually within the thickness of the wall, typically equipped with triple arcades, just below the clerestory. If the arches of an arcade or of a triforium have been blocked up with *masonry infill* ('kamienne wypełnienie'), the effect is a *blind arcade* ('ślepa arkada') or a *blind triforium* ('ślepe tryforium').

The Gothic church is usually much wider than its Romanesque antecedent and therefore, its volume often needs to be divided into smaller spaces; hence, a *five-aisled church* ('kościół pięcionawowy') with the nave and four symmetrically situated aisles separated with arcades or *colonnades* ('kolumnada'). A colonnade is a row of columns supporting an *architrave* ('architraw'), i.e. a horizontal beam resting on their tops. With as many as five aisles, the transepts become less conspicuous in the floor plan of the building. The increased width of the church's body also offers new solutions in the design of the area east of the crossing. The chancel and the presbytery are now surrounded by an *ambulatory*, ('ambit, obejście'), its other names being *chancel aisle*, and *apse aisle* and, which is a semicircular extension of side aisles forming a walk behind the high altar. Attached to the ambulatory is a *chevet* ('wieniec kaplic'), a kind of a large apse

consisting of a ring of *radiating chapels* ('promieniste kaplice') facing outwards but with entrances from the ambulatory. The central chapel, which is the easternmost part of the church, is the *Lady Chapel* ('kaplica mariacka'). Each chapel is separated from the ambulatory by a *parclose* ('balustrada'), in the form of a railing or a screen. The job of dividing spaces is also performed by the *rood screen* ('ściana teczowa'), which separates the nave and the chancel and is intended to carry a crucifix or rood mounted on a *rood beam* ('belka teczowa'). Near the rood screen, a *lectern* ('lektorium, przegroda chórowa') can be set up, which is an ornamental structure enclosing a stand with a desk from behind which scriptures are read aloud.

Overhead, the walls are spanned by the *ribbed vault* ('sklepienie żebrowe'), a three-dimensional arched ceiling construction which supports the roof. Its basic structural unit is the *rib* ('żebro, łęk'), a protruding line of brick or stone. The whole vault is divided into *bays*, or *traves* ('przęsło'), that is, areas marked out by the adjacent arches or beams. Each bay consists of *cells* ('pole sklepienne') or *severies* ('wysklepka'), that is panels or surfaces between the ribs. The severies are terminated by *haunches* ('grzbiet'), that is, curved parts of arches. The ribs which converge diagonally are called *groins* ('szew') or *ogives* ('ostrołuk') and the point of their intersection is a decorative knob, called a *boss* or *keystone* ('zwornik, klucz, kliniec szczytowy'). The ribs which run horizontally and define individual bays are called *transverse ribs* ('gurt, łęk jarzmowy, żebro jarzmowe'). A more intricate vault structure may contain additional ribs, such as a *tierceron* ('żebro poboczne') or a *lierne* ('żebro dekoracyjne'). Depending on the pattern formed by the ribs, vaults represent the following types: *stellar vault (star vault)* ('sklepienie gwiaździste'), *net vault* ('sklepienie sieciowe'), *fan vault (palm vault)* ('sklepienie wachlarzowe, sklepienie palmowe, sklepienie kielichowe'), *parasol vault* ('sklepienie parasolowe'), *curved net vault* (*swung ribbed vault*) ('sklepienie krzywolinijne'), *loop vault* ('sklepienie pętlicowe'), *loop stellar vault* ('sklepienie wężowe') and *crystal vault* ('sklepienie kryształowe').

While in the Romanesque architecture windows are small and round-topped, in Gothic they are huge and pointed. The early variety is represented by the *lancet window* ('okno lancetowe'), which is slender and sharp-pointed, with a *lancet arch* ('łuk lancetowy, łuk podwyższony') also called *acute arch* ('łuk ostry'). The later variety, the *depressed arch* ('łuk obniżony') also known as the *drop arch*, is less sharp and it is composed of segments whose radii are less than the span of the arch. The *Tudor arch* ('łuk Tudorów') is a four-centered pointed arch, whereas the *ogee arch*, also called *inflected arch* ('łuk w ośli grzbiet'), consists of two mirrored *ogees* ('sima, esownica'), i.e., S-shaped curves, which meet at an apex. In all these large-sized windows, glazing needs support, which is provided by vertical masonry shafts called *mullions* ('laska') and, in more intricate designs, by horizontal bars called *transoms* ('szpros poprzeczny'). They are basic members of the Gothic *tracery* ('maswerk'), which is an ornamental stone and woodwork decoration forming a framework of ribs for the upper parts of openings such as windows or perforated screens. Early Gothic introduced fairly simple forms representing *plate tracery* ('płyta z przezroczem, maswerk negatywowy') consisting of a simply divided arched opening with a solid plate of masonry or a *spandrel* ('pacha'), which

is the area bounded by an arch, into which a *foil* ('liść'), i.e. a leaf motif, or some other shape has been cut. The plate tracery may contain an *oculus* ('okulus'), that is, a decorative circular element. The foil motifs vary depending on the number of lobes, and they include *trefoils* ('trójliść'), *quatrefoils* ('czteroliść'), *cinquefoils* ('pięcioliść'), *sexfoils* ('sześcioliść') and *multifoils* ('wieloliść'). The later, more sophisticated traceries contain a large number of thinner, slender elements and represent the class called *bar tracery* ('maswerk z laskowaniem'); they also exhibit a wide spectrum of patterns. In a *rayonnant tracery* ('maswerk promienisty') all of the ornamental lines seem to radiate from one centre. In an *intersected tracery* ('maswerk z przecinającego się laskowania') also called *flamboyant tracery* ('maswerk płomienisty'), parallel mullions are bent over at their upper ends to form a series of interlaced pointed arches. In a *geometric tracery* ('maswerk geometryczny') slender vertical bars support a pattern of foils and circles. In a *reticulated tracery* ('maswerk sieciowy') vertical members are interlaced in the upper arch of a window with undulating ogee forms. A *curvilinear tracery* also named *flowing tracery* ('maswerk krzywoliniowy') contains free-flowing patterns and ogees. A *panel tracery*, also known as *perpendicular tracery* or *rectilinear tracery* ('maswerk prependykularny') is typified by the use of a lacework of vertical glazing bars. The typical motifs in Gothic traceries are the *dagger* ('sztylet') and the *mouchette* ('rybi pęcherz'), whereas a characteristic small ornament where two small tracery arcs intersect is the *cusp* ('nosek').

The outer face of the church building, the *façade* ('fasada'), often has a round window in its focal point and it is called *wheel window* ('okno okrągłe') or *Catherine wheel window* ('okno w kształcie koła św. Katarzyny'), as its shape is based on the Catherine wheel, a decorative motif consisting of a spiked and burning wheel with radiating spokes, which alludes to an instrument of torture to which St Catherine of Alexandria was bound. A more intricate type of such a round ornamental window is the *rose window*, also named *marigold window* ('rozeta, różyca'), which has a very elaborate tracery.

The Gothic church is usually reached through a door embedded in a *portal* ('portal'), which is a grand, often ornamental arched gateway, called *archway* ('sklepione przejście'). Gothic portals are usually *recessed* ('uskokowy'), that is, located in a depression of a wall in plan. The door is flanked by *jambs* ('ościeże'), i.e. vertical side posts or surfaces on its either side. In a *sculptured portal* ('portal rzeźbiony'), jambs are adorned with human figures, that is, *jamb statues*. If the statues are of kings and queens, their set is referred to as a *royal portal* ('portal królewski'); if the statues represent Mother Mary and saints, the section of the portal is called the *Gate of Heaven* ('Brama Niebios'). The whole structure is secured in the centre by a *trumeau* ('filar międzyościeżowy'), that is, a masonry column which supports the *tympanum* ('tympanon'): a panel or a space enclosed within the arch, usually containing sculptures or reliefs. The arch itself is accentuated by a decorated band called *archivolt* ('archiwolta') and frequently surmounted by a *wimperg* ('wimperga'), that is, an ornamental gable often containing a *blind tracery* ('ślepy maswerk'), which, in fact, is a form of relief ornament.

The tall walls of a Gothic church need to be stabilized and this is the role of *buttresses* ('przypora'), i.e., vertical masses of masonry providing lateral support to the walls. Also, the vault exerts a lateral *thrust* ('parcie') on the wall tops, which need to be secured by flying buttresses. A *flying buttress* ('łuk przyporowy, łęk przyporowy'), then, is a slender bar of masonry which transmits loading to a heavy pier on an outer wall. Buttresses, as well as doorways and roofs, are often adorned with *pinnacles* ('pinakiel, fiala, sterczyna'), i.e., small pointed turrets. Pinnacles as well as spires, gables and wimpergs can be surmounted by *finials* ('kwiaton'), that is, typically Gothic florid decorations. Another characteristic Gothic decoration is the *crocket* ('żabka, czołganka, szpon'), which is a small carved ornament, typically a bud or curled leaf, usually arranged in a series on the inclined side of a pinnacle or gable. A purely decorative element is the *frieze* ('fryz'), that is, a decorated horizontal band adorning a wall, but a *dripstone* ('gzyms okapnikowy'), i.e. a raised protruding moulding above a masonry arch, which is intended to throw off rainwater, is both ornamental and practical. The same applies to another device channeling the rainwater: the *gargoyle* ('rzygacz, gargulec, plwacz'), that is, a projecting stone water-spout at the eaves, which has been carved into the form of a grotesque animal or head.

The tallest part of the church is the *church tower* ('wieża kościelna'), usually located over the crossing or at the west end of the structure. The pointed steep roof of the tower is the *spire* ('iglica, hełm') and it is round, polygonal or square in plan. Some churches have a single tower dominating the whole building, others may have two or four towers situated symmetrically in pairs. The general height of the building depends on whether it is a basilica church or a hall church. In a *basilica church* ('kościół bazylikowy') the isles are much lower than the nave, this leaving room for the clerestory providing profuse light to the central part of the interior. On the other hand, a *hall church* ('kościół halowy'), no matter whether it is aisled or not, has a single roof of relatively uniform height.

The main bulk of the church building is surmounted by the inclined roof extending from the *ridge* ('kalenica') at the top to the *eaves* ('okap') at the bottom, and suspended on *rafters* ('krokwie'), that is, large timber beams, arranged into a complicated structure called *rafter framing* ('więźba dachowa'), where individual rafters are named according to their function. A *collar beam* ('jętka') is a transverse beam between eaves level and ridge connecting two principal rafters. A *brace* ('zastrzał') is the element which stiffens and reinforces the angle between two members. A *purlin* ('płatew pośrednia') is a horizontal beam running parallel to the ridge. A *strut* ('słupek, trempel') is a secondary member carrying the thrust from purlins or otherwise adding support to a rafter. *Andrew's cross* ('krzyż św. Andrzeja, krzyżownica') is a *frame* composed of two *rafters* or poles meeting transversely. A *king post* ('słupek centralny, król') is a central vertical strut carrying a ridge purlin. A *tie beam* ('tram, podciąg') is a beam tying the ends of supporting rafters together. An *arched brace* ('jarzmo, krokiew łukowa, więzar jarzmowy') is a naturally curved timber member for bracing the junction between a post and a beam. A *wind brace* ('wiatrownica') is any structural member designed to maintain the rigidity of the roof against the forces of wind. A *corbel*

('wspornik, konsola') is a bracket projecting from a wall, while a *wall post* ('belka naścienna, murłata') is a beam adhering to a wall and supporting a *hammer beam* ('kroksztyn'), that is, a short horizontal member cantilevered out from a wall top.

Analysis

The analysis to follow is intended to highlight selected aspects of the morphological structure and meaning of chosen architectural terms.

Morphology

The three word-formation processes which play significant roles in creating architectural terms are compounding, derivation and conversion.

Compounding

A technical term relates to a specific type of item, object or method; therefore, its structure often requires a more general concept to be modified by another, more specific one. Hence, many of architectural terms are nominal compounds, and they are typically *endocentric*. This term applies to cases where a compound is a hyponym of its head (Bauer 1983: 30). The head of a nominal compound is a noun but, non-heads in English compounds can be nouns, adjectives or verbs. The lists below exemplify the three patterns:

(1)

N + N

choir stall, cross church, chapter house, masonry infill, chancel isle, Lady Chapel, rood screen, rood beam, keystone, star vault, lancet window, lancet arch, Tudor arch, ogee arch, plate tracery, bar tracery, wheel window, rose window, jamb statue cross church, church tower, basilica church, hall church, collar beam, king post, wind brace, wall post, hammer beam

A + N

Norman style, Decorated style, Perpendicular style, stellar vault, rayonnant tracery, flamboyant tracery, perpendicular tracery, royal portal, blind tracery, lateral thrust

V + N

drop arch, dripstone

The classic type of Polish compounds (*złożenia*) involves the fusion of two elements with a linking vowel inserted in between, as in *śrub-o-kręt*, or *wod-o-wstręt* (Grzegorczykowa 1979: 59). Among architectural terms this type is represented by:

(2) *ostrołuk* (*ostry* 'acute' – *o* – *łuk* 'arch')
     czteroliść (cztery 'four' – *o* – *liść* 'leaf')
     pięcioliść (pięć 'five' – *o* – *liść* 'leaf')

sześcioliść (*sześć* 'six' – *o* – *liść* 'leaf')

wieloliść (*wiele* 'many' – *o* -*liść* 'leaf')

The same type of link occurs in compound adjectives, as shown by the following examples:

(3)   *pięcionawowy* (*pięć* 'five' – *o* – *nawa* 'aisle'- *owy*$_{SufAdj}$)
       wczesnoangielski (*wczesny* 'early' – *o* – *angielski* 'English')
       krzywoliniowy (*krzywy* 'curved' – *o* – *liniowy* 'linear')
       dwupoziomowy (*dwa* 'two' – *u* – *poziom* 'level'- *owy*$_{SufAdj}$)

Polish also contains the so-called *solid compounds*, that is, complex lexemes composed of elements engaged in syntactic relationships, such as *Wielkanoc* 'Easter' or *psubrat* 'varlet' (Grzegorczykowa 1979: 59). The link between *wielk·a* 'great' and *noc* 'night' is based on agreement in gender and number, which predetermines the selection of the suffix -*a,* whereas the Dative-case suffix -*u*, in *ps·u-brat* is a realization of government obtaining between the compound's units. The architectural terms analysed in this study do not include such forms.

What prevails among Polish multi-word architectural terms is *juxtapositions* (*zestawienia*), that is, fixed word combinations, usually of the A+N type. Whether they belong to morphology raises controversy: on the one hand, their elements are combined through syntactic links and should be regarded as "syntactic objects" (Szymanek 2010: 219), but on the other, each such formation corresponds to a fixed concept. Below are some examples of such terms:

(4)   *kaplica mariacka* (*kaplica*$_N$ 'chapel' + *mariacki*$_{Adj}$ 'Mary$_{Attr}$' = 'Lady chapel')
       ściana tęczowa (*ściana*$_N$ 'wall' + *tęczowy*$_{Adj}$ 'rainbow$_{Attr}$')
       belka tęczowa (*belka*$_N$ 'beam' + *tęczowy*$_{Adj}$ 'rainbow$_{Attr}$')
       przegroda chórowa (*przegroda*$_N$ 'screen' + *chórowy*$_{Adj}$ 'choir$_{Attr}$')
       sklepienie żebrowe (*sklepienie*$_N$ 'vault' + *żebrowy*$_{Adj}$ 'ribbed')
       pole sklepienne (*pole*$_N$ 'area' + *sklepienny*$_{Adj}$ 'vault$_{Attr}$' = 'severy')
       kliniec szczytowy (*kliniec*$_N$ 'wedge' + *szczytowy*$_{Adj}$ 'peak$_{Attr}$' = 'keystone')
       łęk jarzmowy (*łuk*$_N$ 'arch' + *jarzmowy*$_{Adj}$ 'yoke$_{Attr}$' = 'transverse rib')
       żebro jarzmowe (*rib*$_N$ 'żebro' + *jarzmowy*$_{Adj}$ 'yoke$_{Attr}$' = 'transverse rib')

Just as the terms above are based on the syntactic link of agreement, those listed below are based on government and they create the same kind of controversy:

(5)   *skrzyżowanie naw* (*skrzyżowanie*$_N$ 'crossing' + *nawa*$_{GenPl}$ 'nave' = 'crossing')
       wieniec kaplic (*wieniec*$_N$ 'wreath, ring' + *kaplica*$_{GenPl}$ 'chapel' = 'chevet')
       łuk Tudorów (*łuk*$_N$ 'arch' + *Tudorów*$_{GenPl}$ 'of Tudors' = 'Tudor arch')
       Brama Niebios (*brama*$_N$ 'gate' + *niebiosa*$_{GenPl}$ 'heaven' = 'Gate of Heaven')

The most complex multi-word terms are *lexicalised phrases*. The glosses in the examples below are literal translations which are intended to render their syntactic structure:

(6) *płyta z przezroczem* ('plate with a transparency')
     maswerk z laskowaniem ('tracery with bars')
     dach z łukowymi wiatrownicami ('roof with arched windbraces')
     dach z łukowymi krokwiami ('roof with arched rafters')
     kościół na planie krzyża ('church according to cross floor-plan')
     okno w kształcie koła św. Katarzyny ('window in the shape of St. Catherine's wheel')
     łuk w ośli grzbiet ('arch like a donkey's back')

An interesting but rare category is the class of *exocentric compounds*. A compound of this type is not a hyponym of its head, as in the classic example, *pickpocket* (A pickpocket is not a kind of pocket). In the context of architecture, the Polish term *rybi pęcherz* ('mouchette') is an exocentric compound, since the combination *rybi$_{Adj}$* 'fish$_{Attr}$' + *pęcherz$_N$* 'bladder' does not denote a special kind of bladder but a particular type of decorative pattern in a gothic tracery.

Derivation

English architectural terms formed through derivation confirm a general tendency whereby native bases are typically married with native affixes, and Latinate bases are matched with Latinate affixes. However, since OE origin prevails among common house-building terms (like *house* (*hūs*), *door* (*duru*), *floor* (*flōr*), *hall* (*hall, heall*), *kitchen* (*cycene*), *roof* (*hrōf*), *etc.*) and they reflect fundamental concepts, such words tend to be monomorphemic. Consequently, there are few derivatives of entirely OE origin among architectural terms. On the other hand, Latinate word-origin stands for sophistication, which is reflected by words of increased morphological complexity, and hence, the combination of the Latinate base with Latinate suffix is quite richly represented. The examples below are typical Latinate suffixes, as used in architectural terms:

(7) *-ian*   (*Carolingian*)
     -esque   (*Romanesque*)
     -ar   (*Perpendicular*)
     -ism   (*Mannerism*)
     -ion   (*elevation*)
     -al   (*finial*)
     -ance   (*Renaissance*)
     -ery   (*tracery*)
     -ade   (*colonnade*)
     -er   (*springer*)
     -el   (*corbel*)
     -ory   (*ambulatory*)
     -tern   (*lectern*)
     -ant   (*flamboyant*)
     -ress   (*buttress*)

Polish exhibits a considerable variety of derivational patterns, which is well reflected by architectural terms. Many of them are denominal nouns, like those in the right-hand column in the cases below:

(8) *głowa* ('head')   →   *głow-ica* ('capital')
     igła ('needle')   →   *igl-ica* ('spire')
     pętla ('loop')   →   *pętl-ica* ('loop ornament')
     róża ('rose')   →   *róż-yca* ('rose window')
     wiatr ('wind')   →   *wiatr-ow-nica* ('wind brace')
     klin ('wedge')   →   *klini-ec* ('arch stone')
     kapituła ('chapter')   →   *kapitul-arz* ('chapter house')
     laska ('bar, mullion') →   *lask-ow-anie* ('bar tracery')
     kolumna ('column')   →   *kolumn-ada* ('colonnade')
     kwiat ('flower')   →   *kwiat-on* ('finial')

These derivatives represent different classes when viewed semantically. Thus, such suffixes as *-ica*, *-nica* and *-ec* typify Polish *nomina instrumenti,* as in the words *głow-ica, klini-ec, pętl-ica, róż-yca* and *igl-ica,* where the derivative signifies a device functioning in the way suggested by the meaning of the base. For instance, *głow-ica* ('capital') is an instrument which behaves like *głowa* ('head'). The suffix *-arz* in *kapitul-arz* is one of those characteristic of *nomina loci,* whereas *-anie* in *laskowanie* puts this noun in the category of *nomina resultativum.*

Another group of denominal nouns are diminutives, with their typical suffixes: *-ek* and *-ka.* These nouns constitute a significant fraction of architectural terms, as shown by the instances below:

(9) *wierzch* ('top')   →   *wierzch-ołek* ('peak, point')
     żagiel ('sail')   →   *żagiel-ek* ('spandrel')
     żłób ('trough')   →   *żłob-ek* ('flute')
     nos ('nose')   →   *nos-ek* ('cusp')
     słup ('post')   →   *słup-ek* ('small post')
     noga ('leg')   →   *nóż-ka* ('springer')
     sługa ('servant')   →   *służ-ka* ('respond')
     żaba ('frog')   →   *żab-ka* ('crocket')
     koleba ('a hollow')   →   *koleb-ka* ('cradle' → 'barrel vault')

Some terms originate from verbs: hence, they are classified as deverbal nouns:

(10) *wypełniać* ('to fill in') →   *wypełni-enie* ('infill')
     obejść ('to bypass')   →   *obejś-cie* ('ambulatory')
     zwierać ('to clench')   →   *zwor-nik* ('boss, keystone')
     sterczeć ('to stick out')→   *stercz-yna* ('pinnacle')
     czołgać się ('to crawl')→   *czołg-anka* ('crocket')
     rzygać ('to puke')   →   *rzyg-acz* ('gargoyle')
     plwać ('to spit')   →   *plw-acz* ('gargoyle')

A more complex kind of structure is displayed by nouns and adjectives derived from phrases, as in the examples below:

(11) *pod łukiem* ('under arch') → *podłucz-e*$_N$ ('[under arch]$_N$' = 'intrados')
przed sienią ('before entrance-hall') → *przedsion-ek*$_N$ ('porch')
między ościeżami ('between jambs') → *międzyoścież-owy*$_{Adj}$ ('[between jambs]$_{Adj}$')
po środku ('in middle') → *pośred-ni*$_{Adj}$ ('medial')
po bokach ('along sides') → *pobocz-ny*$_{Adj}$ ('lateral')

Conversion

Some English terms show effects of the operation of *conversion*. This can be observed in compounds whose non-heads end in the *-ed* suffix but originally come from nouns, such as: *sculptured portal, recessed portal* or *ribbed vault*. On the other hand, the perfect examples of verb-to-noun conversion are: *respond* and *lateral thrust*. With reference to Polish, Szymanek uses the term *paradigmatic derivation*, which he calls "a special form of conversion" (2010: 234). The architectural terms which exemplify this process are *okap* ('eaves') and *podciąg* ('hold-up'). The bases for the process here are the verbs *okap·ać* ('drip') and *podciąg·ać* ('hold up') which have been deprived of their verbal inflectional markers, with no nominalizing suffix having been added.

Semantics

The semantic analysis to follow concerns selected issues connected with lexical relations and some problems related to the notions of polysemy and metaphor.

Relations between lexemes

A useful tool in the examination of word meanings is the study of *lexical relations*. The set of terms under this analysis does not include cases of all lexical relations. For example, there are no instances of *antonymy* here. This is not surprising, considering the nature of the terms, which do not typically reflect processes or states, for which antonyms could be provided. This set of terms, however, exhibits other lexical relations that are dealt with below.

Assuming that words of seemingly identical meaning usually differ in connotations, and therefore, absolute synomymy is rare, the below-listed pairs or clusters of terms should rather be regarded as sets of *near-synonyms*:

(12) *cruciform church: cross church*
ambulatory: chancel aisle: apse aisle
bay: trave boss: keystone
stellar vault: star vault
fan vault: palm vault
curved net vault: swung ribbed vault

depressed arch: drop arch
ogee arch: inflected arch
curvilinear tracery: flowing tracery
panel tracery: perpendicular tracery: rectilinear tracery
wheel window: Catherine wheel window
rose window: marigold window

Architectural terms include many endocentric compounds, where the relationship between the elements is based on *hyponymy*, since each such compound is a hyponym of its head. This, rather intrinsic form of hyponymy can be found dwelling in the examples given below:

(13)
> *Romanesque style, Gothic style, Early English, Decorated style, Perpendicular style, nave-and-chancel church, triconch church, choir stall, cruciform church, cross church, vine-leaf capital, blind arch, chapter house, masonry infill, blind arcade, chancel isle, radiating isle, Lady Chapel, rood screen, rood beam, keystone, star vault, transverse rib, stellar vault, fan vault, parasol vault, lancet window, lancet arch, acute arch, depressed arch, drop arch, Tudor arch, ogee arch, inflected arch, plate tracery, trefoil, quatrefoil, cinquefoil, sexfoil, rayonnant tracery, archivolt, flamboyant tracery, wheel window, rose window, marigold window, sculptured portal, jamb statue, royal portal, lateral thrust, flying buttress, dripstone, basilica church, hall church*

An interesting case is that of *trefoil, quatrefoil, cinquefoil, sexfoil* and *multifoil*. Each of them, in its own right, can be interpreted as an endocentric compound based on hyponymy. But at the same time *multifoil* is a hyponym of *trefoil, quatrefoil, cinquefoil* and *sexfoil*.

The lexical relation which structures the field of architectural terms in a very natural way is *meronymy*. Since the present study focuses on the terms related to church structure, most of them can be regarded as meronyms of *church*, as in *church: nave*. With holonyms other than *church,* other meronymies can be identified, such as those given below:

(14)

arch:	*crown, springer, haunch, intrados, respond*
column:	*base, shaft, pier, capital*
blind arcade:	*masonry infill*
blind arch:	*masonry: infill*
colonnade:	*architrave*
vault:	*rib, trave, cell, severy, bay*
chevet:	*radiating chapel*
chancel:	*rood screen*
rood screen:	*rood beam*
bay:	*boss, keystone, lierne, tierceron*
window:	*mullion, transom, tracery*
tracery:	*trefoil, quatrefoil, cinquefoil, sexfoil, multifoil, mouchette, cusp*
portal:	*Gate of Heaven, wimperg, jamb, trumeau, dripstone, tympanum*

vault:	*arch, bay, rib*
façade	*rose window*
roof:	*ridge, plane*

Transitivity is felt to be inherent in meronymy (If *foot* is part of *leg* and *leg* is part of *body*, then *foot* is also part of *body*), but, in fact, it does not apply to all meronymies. With *functional-component-to-its-hole* type of meronymy, transitivity does not obtain, as it would be bizarre to say that *crocket* is part of a church, whereas regarding *crocket* as part of *wimperg* is correct.

Relations between senses of a lexeme

Many of the terms under this study are *polysemous*. In the examples below, the architectural sense of a lexeme is derived from a more general, non-technical sense:

(15)

> *crossing, presbytery, choir, aisle, crown, springer, haunch, base, pier, shaft, capital, respond, ambulatory, rib, bay, cell, groin, boss, cusp, tympanum, thrust, ridge*

On the other hand, the next list comprises another set of polysemous words, where the primary meaning is rooted in architecture and the derived meanings are its extensions:

(16)

> *arcade, arch, column, pillar, chapel, masonry, colonnade, vault, ogive, tracery, facade, portal, buttress, spire, brace, strut, truss*

Many of the Polish "cathedral terms" are of polysemous nature, too. The list given below comprises lexemes whose primary meanings are not connected with architecture but their derived senses are architectural terms:

(17)

DERIVED SENSE			PRIMARY SENSE
chór	'chancel'	<	'group of singers'
łuk	'arch'	<	'bow'
nóżka	'springer'	<	'small leg'
wezgłowie	'springer'	<	'bedhead'
pacha	'haunch'	<	'armpit'
żagielek	'spandrel'	<	'small sail'
głowica	'capital'	<	'big head'
służka	'respond'	<	'servant'
żebro	'rib in a vault'	<	'rib bone'
grzbiet	'haunch'	<	'back of a human or an animal'
żabka	'crocket'	<	'small frog'
szpon	'crocket'	<	'claw'
rzygacz	'gargoyle'	<	'vomiter'

plwacz	'gargoyle'	<	'spitter'
hełm	'spire'	<	'helmet'
jarzmo	'arched brace'	<	'yoke'

On the other hand, there are few cases of polysemous words whose primary meanings are related to architecture. These can be exemplified by *fasada* ('facade') and *portal* ('portal')*,* but since their English counterparts exhibit exactly the same pattern of polysemy, the words may well be cases of borrowing.

Metaphor

The classical theory of metaphor interprets its operation in terms of a particular type of tension between *Topic, Vehicle* and *Ground*. According to Goatly, the Vehicle (marked in bold) is the conventional referent, the Topic (underlined) is the actual referent whose introduction is unconventional, whereas the Ground (italicised) is a reason for analogy or similarity (1997: 9). In the example below, Goatly's typographic convention is used in order to illustrate metaphor structure:

(18) <u>My home</u> is **my castle**: *I feel secure and independent there.*

On the other hand, in cognitive linguistics, metaphor is viewed either as an effect of *blending* of two mental spaces (Fauconnier), or of *mapping* from a *source category* to a *target category* (Lakoff). For instance, in *haunch* the structure of the source category HAUNCH operating within the domain HUMAN BODY is mapped onto the relevant category in the domain ARCH.

If a metaphor is extended in such a way that correlated images proliferate, an *allegory* is conceived. A good source for allegories is *altar*. Originally, the word denotes a table or a flat-topped block located in the presbytery but its allegoric extensions drift further away towards such images as idealistic offering (as in *sacrifice something at the altar of*), or matrimony (as in *lead someone to the altar*). According to Goatly, an extension occurs when in succeeding metaphors Vehicles belong to the same semantic field, and Topics share a semantic field, as well (1997: 264). This can be exemplified by a piece from Golding's fiction, where the context is a gothic cathedral (here, again, Vehicles are marked in bold and Topics are underlined):

(19) *<u>The model</u> was like **a man lying on his back***. *<u>The nave</u> was **his legs placed together***, *<u>the transepts</u> on either side were **his arms outspread***. *<u>The choir</u> was **his body***; *and <u>the Lady Chapel</u>, where now services would be held, was **his head***. (Goatly 1997: 265)

Like in English, the Polish word *ołtarz* ('altar') participates in forming extended metaphors. It can be found in allegoric descriptions of sacrifice, as in *na ołtarzu ojczyzny* ('at the altar of homeland'), or depictions of wedding ceremonies, as in *zaprowadzić kogoś przed ołtarz* ('lead someone to the altar').

Some of the Polish compounds listed in this paper reveal a considerable degree of *idiomaticity*, or, in other words, are not fully analyzable. These include:

(20) *ściana tęczowa* 'rood screen':   literally 'rainbow wall'
     belka tęczowa 'rood beam':   literally 'rainbow beam'
     wieniec kaplic 'chevet':   literally 'wreath of chapels'
     rybi pęcherz 'mouchette':   literally 'fish swim-bladder'

In the first three cases listed above, only one of the two lexemes in a compound has metaphorical meaning. But the last one, *rybi pęcherz*, is metaphorical in full. From the point of view of morphological classification, it is a case of exocentric compound, as *mouchette* is not a special type of bladder, but a decorative pattern. Similar architectural terms which exhibit the same property are *flyway* and *skylight*, as *flyway* ('length of a log that stands out or extends outwards beyond a notched corner joint') is not a kind of *way* (unless in the ornithological sense), and *skylight* is not a kind of light but a type of window. These two terms, however, are not applicable to Gothic cathedrals. Another interesting case is *łuk w ośli grzbiet* ('ogee arch'), whose literal translation is 'an arch like donkey's back'. It is metaphor-based in full but it has not been included in the list above, as it is not a compound but a lexicalized phrase.

At this point, this study returns to its starting point, with the notion of exocentric compound overlapping with the idea of metaphor, and this is where morphology meets semantics.

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Sztuka gotycka – morfologiczno-semantyczne porównanie terminów architektonicznych w językach polskim i angielskim

Streszczenie

Katedry gotyckie były arcydziełem średniowiecznej sztuki, rzemiosła i myśli. Niniejszy artykuł skupia uwagę na zaledwie małej części tego co niesie w sobie zjawisko katedry. W pierwszej części artykułu typowe terminy z dziedziny architektury sakralnej poddane zostały synchronicznej analizie morfologicznej. Terminy angielskie zestawione są z polskimi odpowiednikami, co umożliwia równoległe prowadzenie dwóch analiz i wyciągnięcie wniosków. Na przykład, angielskie terminy w znacznej mierze stanowią paletę różnych typów złożeń, jak i zawierają przykłady konwersji. Z kolei w języku polskim dominują zestawienia, ale są też złożenia oparte na związku rządu, jak i derywaty niosące w sobie subtelne rozróżnienia semantyczne. Po analizie słowotwórczej następuje semantyczne porównanie angielskiego i polskiego leksykonu architektury. Większość relacji semantycznych przebiega równolegle w obu językach, ale wyraźne różnice widoczne są w dziedzinie polisemii. Dzieje się tak, ponieważ polisemia i idiomatyczność opierają się na powiązaniach metaforycznych, które często podążają innymi ścieżkami w różnych językach. Kolejna część artykułu przywołuje klasyczne i nowe teorie metafory, aby w tym świetle skupić się na terminach architektury. Pojęcie metafory sprowadza artykuł na powrót ku morfologii, a ściślej mówiąc ku złożeniom eksocentrycznym i metaforycznym.

Słowa kluczowe: złożenie, derywat, relacje leksykalne, polisemia, metafora