A Statistical Approach to the Study of the Incidental Iconography of Early Goose Games of Traditional Vertical Format

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1. Introduction

The traditional Game of the Goose has been remarkably stable over its 450-year history, both in its underlying rules and in the iconography of those cells of the 63-cell track that have special playing significance. However, the incidental decoration - relating to the corners and central areas or to the non-special track cells - is much more varied. Having no significance for the playing characteristics, this 'incidental iconography' is apt to be ignored by board game historians except for purposes such as stylistic dating.

This paper attempts to redress this neglect by studying, using a new statistical approach, the iconography of the incidental decoration in a restricted class of Goose games, namely those of the particular vertical format that characterises the earliest English games and also characterises some early examples from Italy and the Netherlands. Many of the images involved in the incidental decoration are closely shared, leaving little doubt that the iconography of the later games is largely copied from the earlier games, rather than being taken from common external sources such as printers' pattern books. Some surprising conclusions regarding international transfer of these games are offered.

2. When are two games 'alike'?

One of the difficulties in studying these games is that to a non-specialised eye they all look much the same. It is often hard to decide whether such differences as there are between games arise just from the selection of images by the designers from those conveniently available in their studios; or whether there is a more fundamental difference, arising because the images do not come from a similar iconographic background.

Consider, for example, a comparison between the Italian Lucchino Gargano 1598) and British (John Overton c1660), games IT1 and BR1 of figure 1. These two games are of particular importance. The Lucchino Gargano game is the earliest surviving printed game to have the goose iconography (two earlier printed spiral race games, also in the British Museum, are dated 1588 but neither has goose iconography). The John Overton game is the earliest surviving English goose game. The imprint of John Overton (concealed in figure 1(b) by a later label) reads "..sould by John Overton over against St. Sepulcher's Church in London": an imprint dated to 1665-1666 [Worms and Baynton-Williams , 2011].
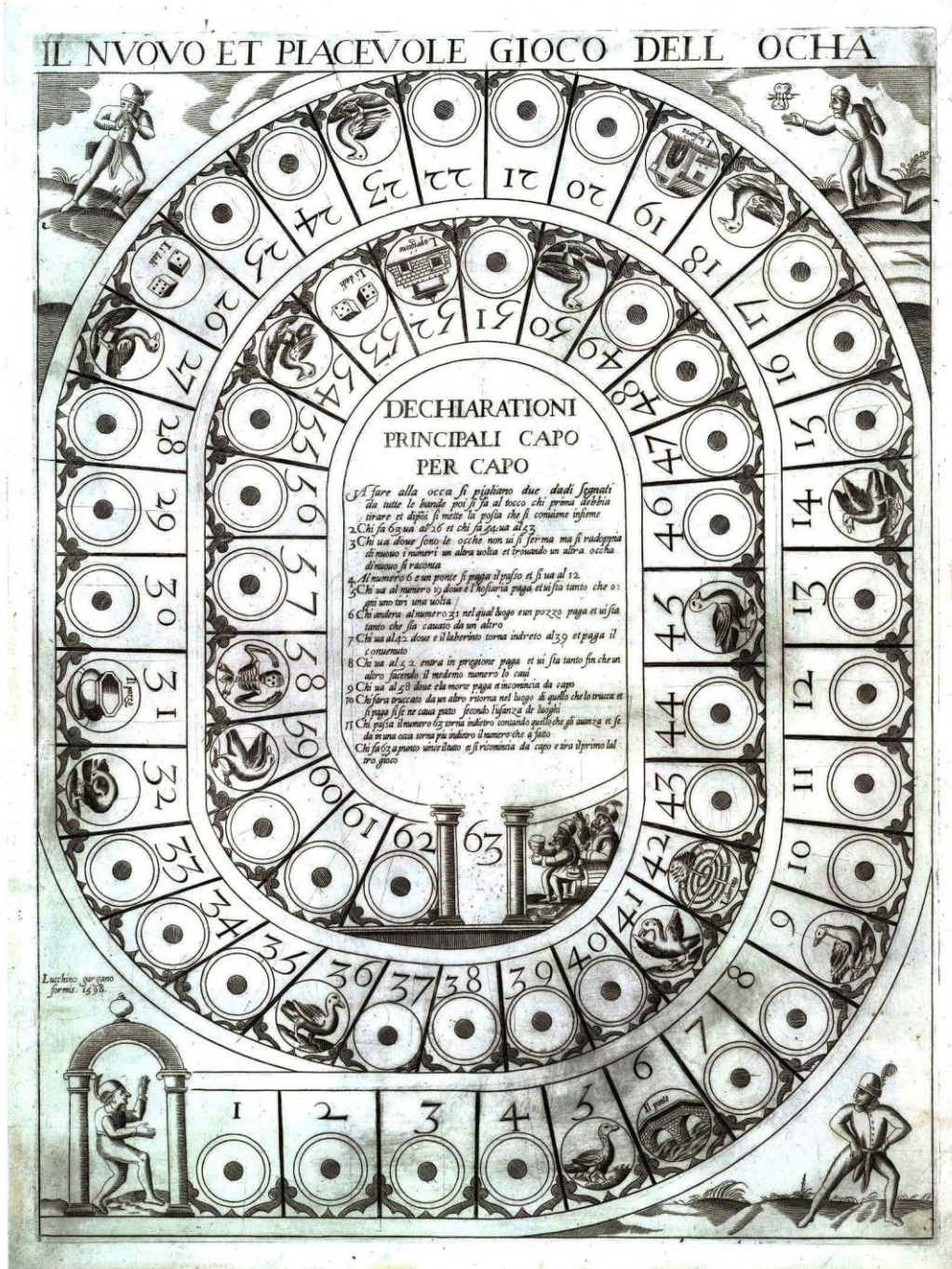
Figure 1(a): Game IT1, Lucchino Gargano, 1598, © Trustees of the British Museum
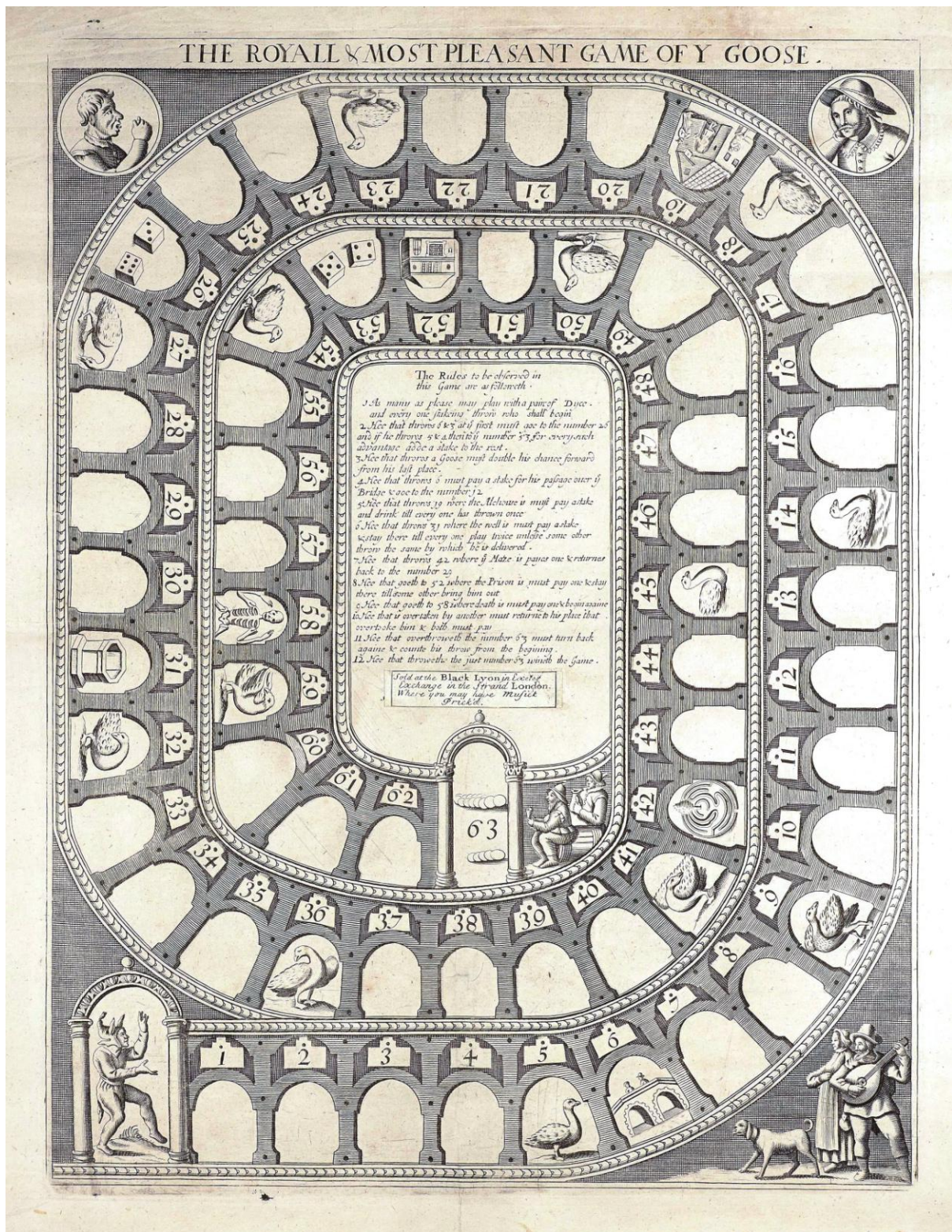
Figure 1(b): Game BR1, John Overton, a little before 1660, © The Morgan Library, New York

An immediate and obvious similarity is that the arches at the start of the track each contain a 'jester' figure. An even more striking similarity is found in the iconography of the decoration at the end of the track, this being in both cases an image of two men sitting on a barrel holding drinking goblets. Given these compelling similarities, it would be tempting to conclude that the Overton game was copied directly from the Lucchino Gargano game. But in fact, when all the iconographic features are considered together, there are many differences between the games: for example, the coins in the end cell of the John Overton game have no counterpart in the Gargano game, and the same is true for the portrait medallions at the top corners. Likewise, the track cell shape and decoration are completely different. The decorations in the bottom right corner likewise do not correspond – though the style of both is clearly Italianate. The conclusion must be that, while the incidental iconography of the Overton game shows very obvious Italian influence, both in terms of individual images and stylistically, the sources from which that iconography ultimately derives are more various than the single Lucchino Gargano game. The word 'ultimately' is relevant because it is entirely possible and indeed likely that John Overton copied much of his iconography from an earlier English version of the game.

That there was indeed at least one earlier version of the goose game in England (the game itself has not survived) is evidenced by the record of Stationers' Hall, London, where in 1597 John Wolfe, Printer to the City of London, registered a printed sheet as '*The Newe and Most Pleasant Game of the Goose'*. Wolfe had trained as a printer in Florence, so it is quite credible that he should have brought the game from Italy, so importing many of the iconographic elements found in the John Overton game. Significantly, the Overton game bears in its centre panel the legend: 'Invented at the Consistory in Rome', a claim (possibly true) repeated in some of the later British games. [Seville A.H. and Spear, J., 2010]

However, simply by comparing the two games, we can say little about the transfer of the iconography from Italy to Britain. For example, it is not clear how typical the John Overton game is of Italian games: could the presumed Wolfe import account for all its iconography, or are there distinctive British elements? Are other, later, British games linear descendants of the John Overton game or do they show traces of descent from other exemplars?

Questions such as this can only be addressed by considering the iconography of groups of games. It is here that the utility of statistical methods becomes apparent.

3.   Aims of the Study

The present paper uses statistics to compare the incidental iconography of samples of games from the three countries - Italy, Britain and the Netherlands - with the aim of determining:

- What differences in iconography of different countries are significant?
- Where iconography is significantly similar, how was it transmitted between countries?
- Did the iconography change significantly after the initial transmission?

Underlying the use of comparative statistics is the supposition that, within a particular culture (such as any one of the countries in the study at a particular period), the incidental iconography of popular prints such as these games will usually be drawn from a repertoire of images or copied or adapted from the images used in similar material circulating within that culture: only rarely are busy printer/publishers going to commission wholly original art work for ephemeral publications such as these. As we shall see, similar images occur sufficiently frequently in the work of different publishers within a given culture that we may have some confidence in the supposition. There are counter-examples, such as the beautiful game by Valerio Spada in the Rothschild National Trust collection at Waddesdon Manor, which was obviously engraved to order and with considerable care – but this was a special vehicle for an enigma in the form of a poem, not part of the general run of popular prints.

The use of comparative statistics gives definite meaning to the word 'significant' in the aims, replacing by a more objective methodology what would otherwise be a subjective 'stylistic' judgment.. However, the statistical methodology cannot by itself answer all the questions that the transfer of iconography raises: it will need to be supplemented by the more familiar methods of historical study of board games.

4.   Statistical Methodology

The first step in the statistical methodology was to choose a set of three samples, each of six games of comparable vertical format, taken from the early games of Italy, Britain and the Netherlands respectively. The games chosen are listed in table 1, Italian games being labelled IT1 to IT6, British games BR1 to BR6 and Netherlands games NE1 to NE6

Table 1: List of games in the three samples of six

Code	Publisher	Place	Date	Source
ITALIAN GAMES				
IT1	Lucchino Gargano	Rome	d1598	British Museum
IT2	unknown		17thC	Negri Vercelloni G
IT3	unknown		17thC	Negri Vercelloni I
IT4	unknown		17thC	Negri Vercelloni L
IT5	unknown		17thC	Negri Vercelloni N
IT6	unknown		17thC	British Museum
BRITISH GAMES				
BR1	John Overton	London	1665-1666	Morgan Library New York
BR2	H Overton	London	c1717	Whitehouse
BR3	John Bowles & Son	London	c1730	Bell Board & Table Games
BR4	Robert Sayer	London	c1750	Author's collection
BR5	Carington Bowles	London	c1762	Author's collection
BR6	James Lumsden & Son	Glasgow	1800-1820	British Museum
NETHERLANDS GAMES				
NE1	Jan Loot	Amsterdam	d1710	Van Bost plate 2

NE2	R & J Ottens	Amsterdam	c1750	Atlas van Stolk 5756
NE3	Egmont van Zoon	Amsterdam	d1748	Buijnsters p91
NE4	Adriaen Walpot	Dordrecht	1760 to 1793	Atlas van Stolk 3051
NE5	Scholten Gortman	Amsterdam	1825 to 1833	Atlas van Stolk 5757
NE6	Erve Wijsmuller	Amsterdam	c1850	Author's collection

The Italian games all date from the 17th C or in one case a very little earlier. The British games cover a wider time period, from about 1660 to 1820, and include all the vertical format games known to the present author. The Netherlands games are from the approximate period 1750 to 1870 and represent a selection from a considerably larger number of games of this format.

The sample size of 6 was chosen because, as will be explained below, if an iconographic attribute occurs in all games of a particular sample and in none of the games of another sample, then, on the basis of the well- known t-test for significance, the two samples are very unlikely to be drawn from the same population, i.e. the differences are not likely to be explicable by the exercise of random choice of images from the same iconographic background. Larger samples could of course be used with benefit and there is no requirement of the test that they should be equal in size.

The next step was to determine a set of iconographic features for comparison, as in figure 2.

INCIDENTAL ICONOGRAPHIC FEATURES

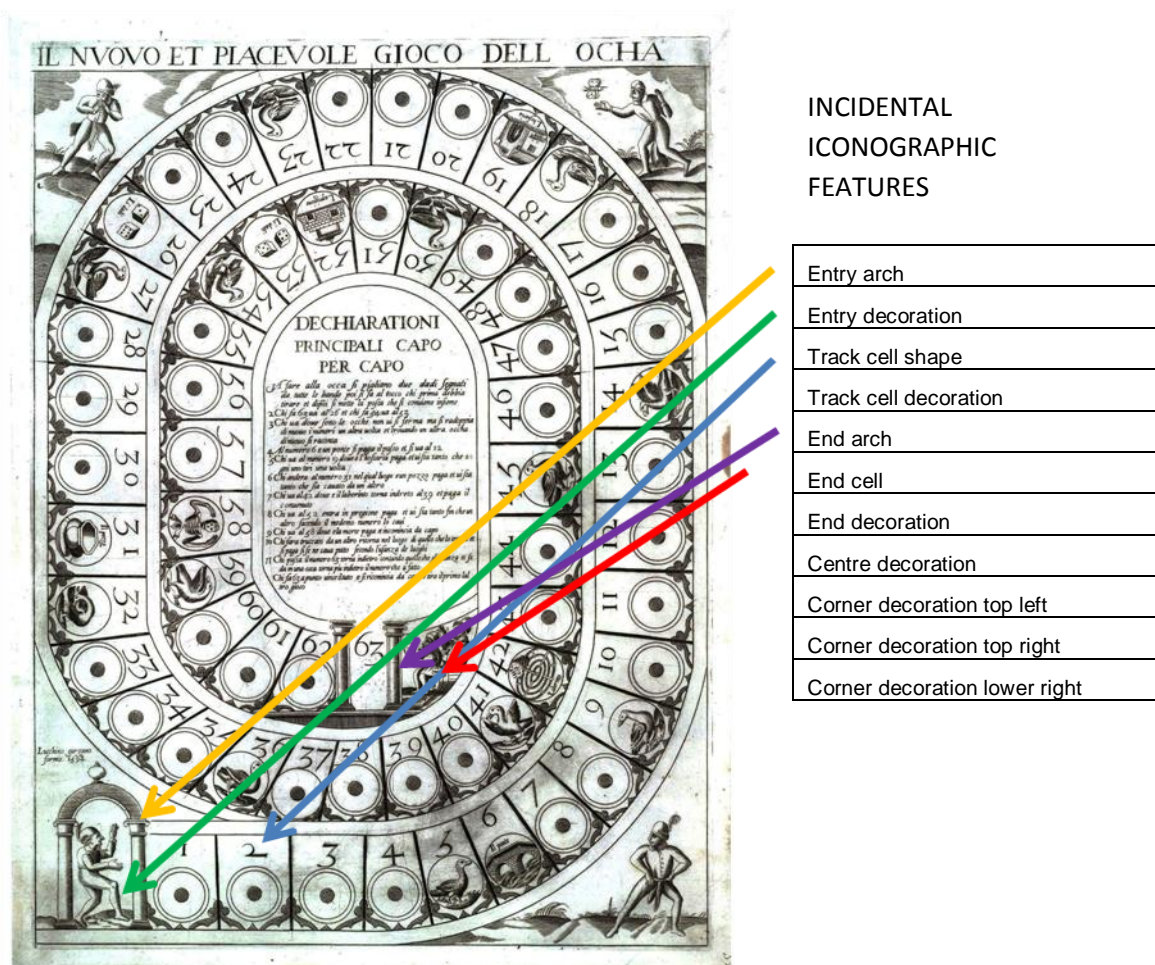| Entry arch |
| Entry decoration |
| Track cell shape |
| Track cell decoration |
| End arch |
| End cell |
| End decoration |
| Centre decoration |
| Corner decoration top left |
| Corner decoration top right |
| Corner decoration lower right |

Figure 2 Incidental iconographic features for comparison.

In any particular game, each feature will be associated with a certain iconographic element, unless it happens to be blank. Judgment is required in comparing iconographic elements appearing in different games: the elements will rarely if ever be perfectly identical. To aid the judgment process, the descriptions of the elements are deliberately expressed in simple words or phrases. These descriptions are called *attributes,* in accordance with the usual statistical parlance. If the description of the iconographic elements associated with a particular feature applies to two or more games, then those games are said to share the same attribute. For example, in both the games in figure 1, the feature 'entry decoration' shows a jester: though these jesters are not identical, they are regarded as sufficiently similar for both games to be recorded as possessing the attribute 'jester' within that feature, even though the detail differs somewhat.

5. Variability of incidental iconography within the sample of Italian games.

Figure 3: Italian Games IT1 to IT6

In order to assess the variability of incidental iconography within the sample of Italian games, we tabulate the attributes of each game for each of the iconographic features. The results are shown in table 2.

Table 2: Iconographic attributes of the sample of Italian games

ITALIAN GAMES						
	IT 1 1598	IT2 early 1600s	IT3 1600s	IT4 1600s	IT5 1600s	IT6 1600s
	Lucchino Gargano					
FEATURE						
Entry arch	arch	arch	arch	arch	arch	no
Entry dec.	jester	goose maid	figural columns	floral sprig	man short spear	season figure
Track cell shape	plain square	square baluster	square baluster	square baluster	plain square	oval
Track cell dec	bullseye	solid circle	blank	blank	starred circle	bullseye
End arch	open columns	arch	arch	arch	arch	doorway
End cell	blank	words	blank	figure on sphere	man in hat	entering door
End dec	goblets two men	floral swag	sprig	floral sprig	blank	blank
Centre dec	rules	couple with goose	man & goose	goose tree	goose garden	feast
Corner dec top left	hands to mouth	goose upright	sprig	floral sprig	goose stretched	season figure
Corner dec top right	butterfly man	goose upright	sprig	floral sprig	goose stretched	season figure
Corner dec lower rt	man legs apart	three geese	sprig	floral sprig	man sloping stick	season figure

In the table, similar attributes within a given feature have been coloured identically. It is at once evident that the similarities are relatively few: in fact, only some 27% of the attributes are self-similar. Another way of expressing this diversity of attributes is to note that the sample includes 37 different iconographic attributes, spread over 12 iconographic features. When we come in the next sections to analyse the British and Netherlands games, these figures will fall into perspective as representing a considerable diversity of incidental iconography within the Italian games.

6. Variability of incidental iconography within the sample of British games.

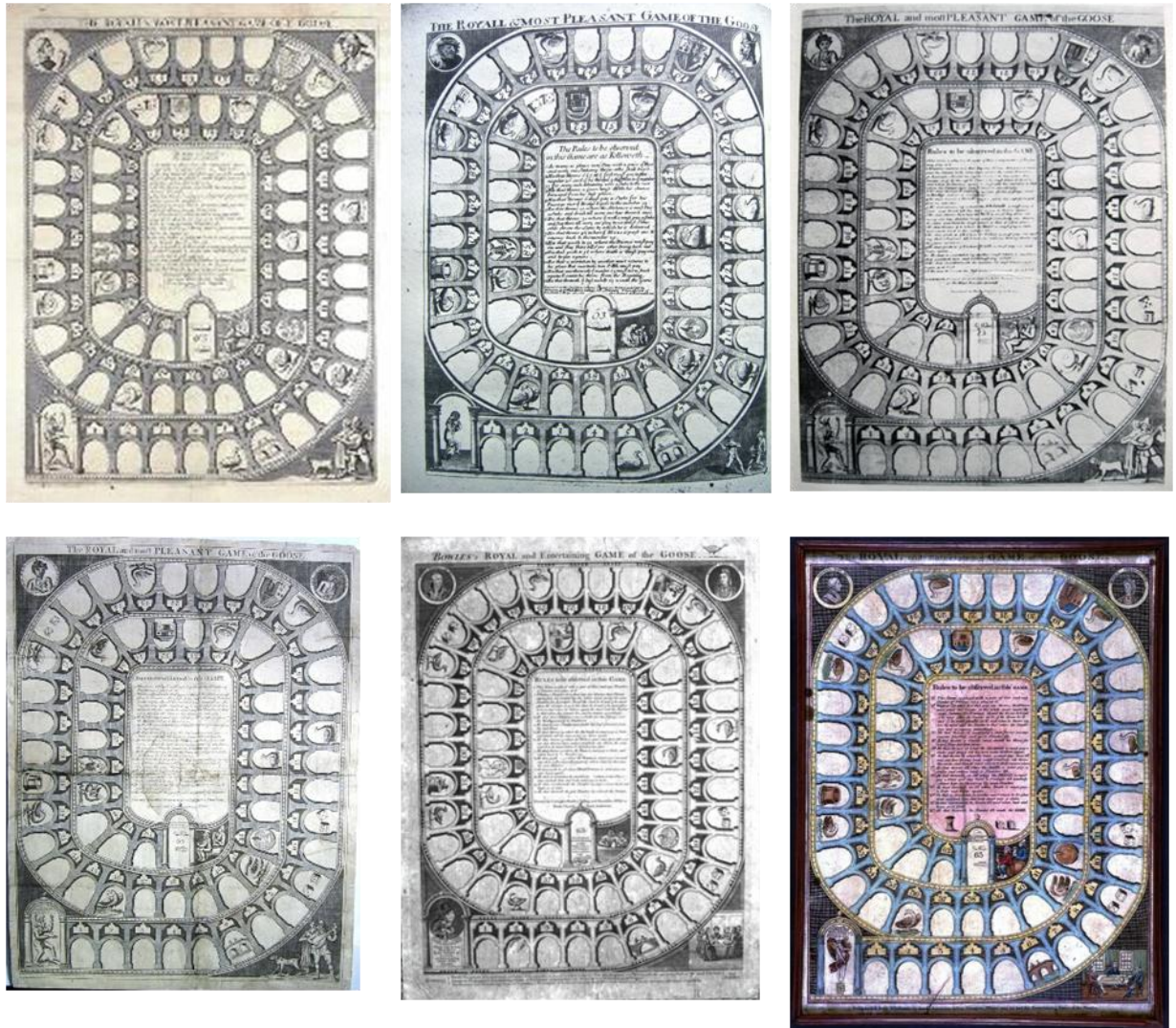By contrast, the British games 'all look the same', as can be seen from figure 4:

Figure 4: British games BR1 to BR6

We can give numerical force to this impression by making a corresponding tabulation for the British games, as shown in table 3.

Table 3: Iconographic attributes of the sample of British games

BRITISH GAMES						
	BR1 1660	BR2 1717	BR3 1725	BR4 1750	BR5 1762	BR6 1825
	John Overton	H Overton	Bowles and Son	Bowles/Sayer	Bowles	Lumsden
FEATURE			Wilde Shepherd	Wilde Shepherd	George III	George III
Entry arch	arch	arch	arch	arch	arch	arch
Entry dec	jester	carrying sphere	jester	jester	cheeky boy	riding wheel
Track cell shape	double arch	double arch	double arch	double arch	double arch	double arch
Track cell dec	blank	blank	blank	blank	blank	blank
End arch	arch	arch	arch	arch	arch	arch
End cell	coins	coins	coins	coins	coins	coins
End dec	goblets two men	men barrels	goblets two men	goblets two men	two drinkers	goblets two men
Centre dec	rules	rules	rules	rules	rules	rules
Corner dec top left	medallion	medallion	medallion	medallion	medallion	medallion
Corner dec top right	medallion	medallion	medallion	medallion	medallion	medallion
Corner dec lower rt	couple lute dog	men instruments	couple lute dog	couple lute dog	playing the game	playing the game

Again, similar attributes have been coloured identically. It is at once evident that the British games are much more self-similar than are the Italian. Ignoring the entirely blank 'track decoration' row, and treating the two medallion rows as one, the British games are no less than 89% self-similar within rows; and only 16 different iconographic attributes are necessary to describe them all fully.

This is consistent with a model in which, following the initial import of a game or games from Italy, British publishers have largely been content to copy from British games, thereby availing themselves of a restricted set of iconographic exemplars. Of course, there is nothing in this model to prevent a British publisher inventing an attribute or applying an iconographic attribute from a different set of sources.

As will be seen in the next section, the statistical method allows us to identify those attributes that are distinctive to the British games.

7.   Distinctive attributes of British games as compared with Italian games

There are several attributes listed in the British games table 3 that do not appear in the Italian games table 2. For example, the 'entry decoration' feature in table 3 shows attributes 'carrying sphere', cheeky boy' and 'riding wheel' that do not appear in table 2. This could mean that these are attributes introduced by British publishers or it could simply be a chance effect, in that the Italian games sample is not sufficiently large and comprehensive to pick up these attributes in other Italian games. Here, the t-test is of value. The significance table of probabilities below shows what occurrences are unlikely to be due to chance.

Table 4: t-test significance table for comparison of two samples of six

	0	1	2	3	4	5	6
0					0.03	0.02	0.01
1						0.05	0.02
2							0.03
3							
4	0.03						
5	0.02	0.05					
6	0.01	0.02	0.03				

The rows are numbered according to the number of occurrences of a particular attribute in one sample, say, sample A, while the columns are numbered according to the number of occurrences of that attribute in the other sample, say, sample B. The figures in the cells represent the probability of the combination of occurrences: for example, in row 5, the number 0.05 is the probability of five occurrences in sample A and one occurrence in sample B. A blank entry in the table shows that the probability of the corresponding combination of occurrences exceeds 0.05, so that it is not significant at the 5% level and could well be due to chance.

From the table, we see that the occurrence only once of a particular attribute in one sample, with the attribute not occurring at all in the other sample, is not significant. If it occurred four, five or six times in one sample and not in the other, then that would indeed be significant, with probabilities of 0.03, 0.02 and 0.01 respectively.

Comparing the attributes of Italian and British games shown in tables 2 and 3 respectively, we see that only the following attributes are very distinctive of British games, i.e. have patterns of occurrence that are highly significant, at or below the 1% level of probability:

    Track cell shape: double arch
    End cell: coins
    Corner decoration top right and top left: medallions

Each of these features occurs in every game within the British sample and not at all within the Italian sample. Also, the following attributes occur significantly more frequently in the British games than in the Italian:

        Centre decoration: rules (6 occurrences as against 1, probability 2%)
        End decoration: men with two goblets (4 occurrences as against 1, probability 5%)

The other differences in occurrence of attributes between samples could well be a chance effect. We shall now consider these distinctive attributes in turn, trying to determine whether they are the legacy of the original import or whether they are later additions by British publishers.

7.1 The British Portrait Medallions

In the case of the medallions, the answer given by the historical evidence is unequivocal: they are indeed later additions by British publishers, as explained below.

Figure 5: British Portrait Medallions from games BR1, BR4 and BR5

In the earliest British game (BR1 John Overton), the left hand medallion shows a plainly dressed male figure, clean shaven and with cropped hair, evidently sticking out his tongue and making an insulting gesture towards the right hand medallion, which shows an elaborately dressed man, bearded and with a large hat, pressing his hand to his face as if it has just been slapped. The supposition is that these figures represent respectively a Parliamentarian and a Royalist, these figures having been introduced shortly before the restoration of the monarchy in 1660. On this interpretation, they could not have been introduced by John Wolfe at the time of the original import in 1597, before the Royalist/Parliamentarian conflict. Whether they were introduced by John Overton himself is doubtful, in that he did not become a Freeman of the Stationers' Company until 1663 and his imprint at St. Sepulchre's Church in London is not known before 1665 (nor after 1666) [Worms and Baynton-Williams, 2011]. It seems more likely that John Overton added his imprint to an earlier plate.

Later British publishers updated these medallions to maintain topicality. Thus, game BR2 (H. Overton, 1717) has rustic figures of unknown significance, BR3 (Bowles and Son c1730) has 'Jonathan Wilde Thief-taker General of Great Britain' on the left and 'Jack Shepherd drawn from the life) on the right. Jack Shepherd was a notorious thief, arrested by Wilde and hanged in 1724; Wilde was subsequently found to have been organising and profiting from many of the robberies and was himself executed in 1725. Their notoriety lasted well: when Robert Sayer re-engraved the BR4 game soon after 1750, the same figures were re-drawn. In game BR5, dating from about 1762, Carington Bowles showed instead the recently-crowned George III and Queen Charlotte. This game is of special interest in the social history of the Goose game because the lower right decoration shows a game of goose being played in respectable mixed company. However, when in about 1800 James Lumsden of Glasgow used the same royal personages for the medallions, he evidently thought it inappropriate for a Scottish audience to show mixed company and the corresponding corner decoration shows the game transferred to an ale-house, being played by men only.

There is thus clear evidence that, in respect of the medallions at least, British publishers did not always copy what had gone before, though they sometimes did. Whether the original Wolfe game had medallions (not containing Parliamentary/Royalist iconography) is a matter of speculation. Circular medallions are not a feature of any of the games in the Italian sample, nor are they found in any of the 17thC Italian games known to the present author. A game of horizontal format by Pietro Agnelli of Milan, c1790, (Civica Raccolta di Stampe "Achille Bertarelli", cart.m.3.12) does have portrait medallions of female figures in the four corners, probably representing the four seasons. However, circular medallions in the top corners showing a goose are an attribute of some later Italian games and it may be that there were earlier Italian versions that could possibly have been used as an exemplar by Wolfe.

7.2 The 'double arch' track and the 'coins' end cell in the British iconography

Apart from the portrait medallions, there are two other very distinctive attributes of the British iconography. One of these is the double arch form of the track cell shape; the other is the distinctive string of coins found in the end cell of all the games. These attributes are not found in any of the games in the Italian sample. The statistics say that this implies that the pattern of occurrence of these attributes in the two samples is very unlikely to be the result of random choice from the same background iconographic pool. However, if (as we suspect) the British games all derive from a single source, presumed to be Wolfe, then the pattern becomes understandable at once.

The question then arises as to where - if he did not invent them - Wolfe obtained these distinctive attributes? It is possible of course that he copied them from an unknown Italian exemplar. If so, one might hope to find traces of these attributes in later Italian games – though there is no guarantee that a new iconographic idea will propagate. None of the considerable number of traditional Italian goose games on the www.*giochidelloca.it* web site shows any such traces. It may be, then, that the 'double arch' is in fact the invention of Wolfe and that the coins were added by him as a device to show the wining cell, but this must remain a matter of speculation.

7.3 The 'rules' centre decoration and the 'men with two goblets' end decoration

These attributes of the British games are also found in the Italian sample. The 'men with two goblets' decoration is highly distinctive and clearly was copied from an Italian exemplar, if not directly from the IT1 Game. By contrast, the appearance of the rules in the centre is obviously not distinctive evidence of copying and might have been adopted purely on practical grounds. Again, this is entirely consistent with the design by Wolfe of a game or games based on Italian exemplars and introduced by him to England in 1597, this in turn serving as the exemplar for later British publishers.

8.   Variability of incidental iconography within the sample of Netherlands games

We now turn to the third sample, that of Netherlands games. Again, the first impression is of near-uniformity – but, very strikingly, this extends to near-uniformity with the British games, not just across the Netherlands sample.
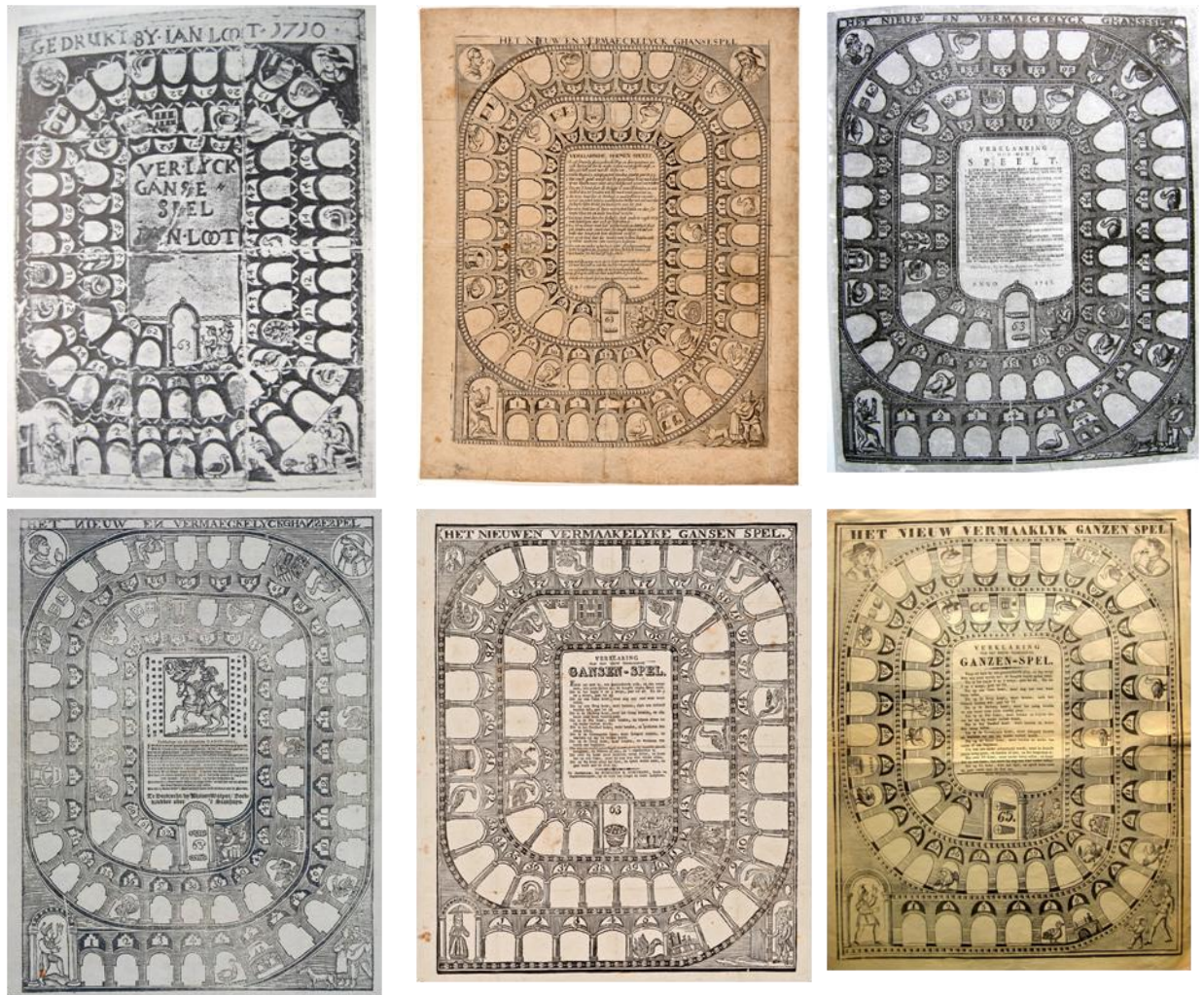
Figure 6: Netherlands games NE1 to NE6

This impression is confirmed by the statistics. Using the same approach as for the other samples, we obtain table 5.

Table 5: Comparison of the iconographic attributes of the sample of Netherlands games

NETHERLANDS GAMES						
	NE1 1710	NE2 1750c	NE3 1748	NE4 1760-1793	NE5 1825-1833	NE6 1850c
	Loot	Ottens	Egmont van Zoon	Walpot	Scholten Gortmans	Erve Wijsmuller
FEATURE						
Entry arch	arch	arch	arch	arch	arch	arch
Entry dec	musician	jester	jester	jester	rain woman	jester
Track cell shape	double arch	double arch	double arch	double arch	double arch	double arch
Track cell dec	blank	blank	blank	blank	blank	blank
End arch	arch	arch	arch	arch	arch	arch
End cell	blank	coins	coins	coins	urn	coins
End dec	goblets two men	goblets two men	goblets two men	goblets two men	feast	goblets two men
Centre dec	blank	rules	rules	knight and rules	rules	rules
Corner dec top left	medallion	medallion	medallion	medallion	medallion	medallion
Corner dec top right	medallion	medallion	medallion	medallion	medallion	medallion
Corner dec lower rt	drink & pipe	couple lute dog	couple lute dog	couple lute dog	sunshine man	man and dwarf

The frequency of coloured entries, showing corresponding attributes, leaves no doubt that the iconography of these vertical-format Netherlands games is, like that of the British, very restricted. Ignoring the entirely blank 'track decoration' row, and treating the two medallion rows as one, 81% of the 54 attributes are self-similar and only 17 different iconographic attributes are necessary to describe the set: these are figures almost identical to those for Britain. When one compares table 3 and table 5, noting corresponding colours, this result becomes unsurprising. The iconography of the 18th C Netherlands games is largely identical to that of the John Overton game. In fact, only in the 19th C (and not always then) do the Netherlands publishers break free of the John Overton exemplar. This identity of iconography is highly significant. Even where the similarity of attributes is not so strictly observed, as in game NE1 by Jan Loos of Amsterdam, dated 1710 on the heading, [Van Bost, 1990: plate 2], the influence of almost all the attributes of the John Overton game is still apparent, despite the fact that the Loos game has quite evidently been drawn so as to appear more north European and less Italian in style. The highly characteristic double arches are present, as are the portrait medallions with their usual figures. The track end decoration is similar in concept: two men with goblets sitting on a barrel. The decoration in the lower right corner differs from the Overton exemplar, but that feature commonly supports a variety of attributes, in both British and Netherlands games. However, the entry decoration has become a seated musician rather than a jester.

It seems reasonable to conclude that John Overton's game, or a forerunner with near-identical iconography, was indeed the main initial exemplar for Netherlands games in the traditional vertical format, though of course there were other formats [Buijnsters,2005].

Perhaps the most surprising aspect of the Netherlands iconography in the vertical format games is the persistence of the British portrait medallions as 'Parliamentarian' versus 'Royalist' – not a conflict that has a parallel in the Netherlands historical scene. Probably these images were just interpreted as 'poor man gets the better of rich man' and so were felt to have a more universal application. Even after some publishers had changed the iconography for something more up to date – see figure 7 below – the original medallions were being produced at least as late the middle of the 19th C.

Figure 7: Netherlands portrait medallions for games NE2 (R & I Ottens c1750); NE5 (Scholten & Gortmans c1830); and NE6 (Erve Wijsmuller c1850), showing the remarkable persistence of the British 'Parliamentarian v. Royalist' iconography

The interpretation of the gestures made by the man on the left in NE1 deserves some attention. The finger gesture is obviously impolite and is known in the Netherlands as 'giving the flick'. The mouth gesture is also offensive, though it is not clear whether the man is putting out his tongue or whether he is biting a coin at the man opposite, also considered an offensive gesture in the Netherlands.

The remarkable persistence of the portrait medallions in the Netherlands is confirmed by an examination of the vertical-format games whose images are on the HONG website of Rob Van Linden.

9. A suggested model for the spread of incidental iconography of the vertical format games

We are now in a position to bring the various strands together and formulate a suggested model for the spread of the iconography from Italy to Britain and then to the Netherlands. The model is shown in diagrammatic form in table 6. It should not be taken too literally: for example, the publishing history of the Game of Goose in England between 1597 and 1660 is altogether unknown and introductions here tentatively associated with Wolfe could have been the work of some intermediate unknown publisher. Nevertheless, the model may be of use in summarising a quite complex set of observations.

Table 6: A suggested model for spread of the incidental iconography
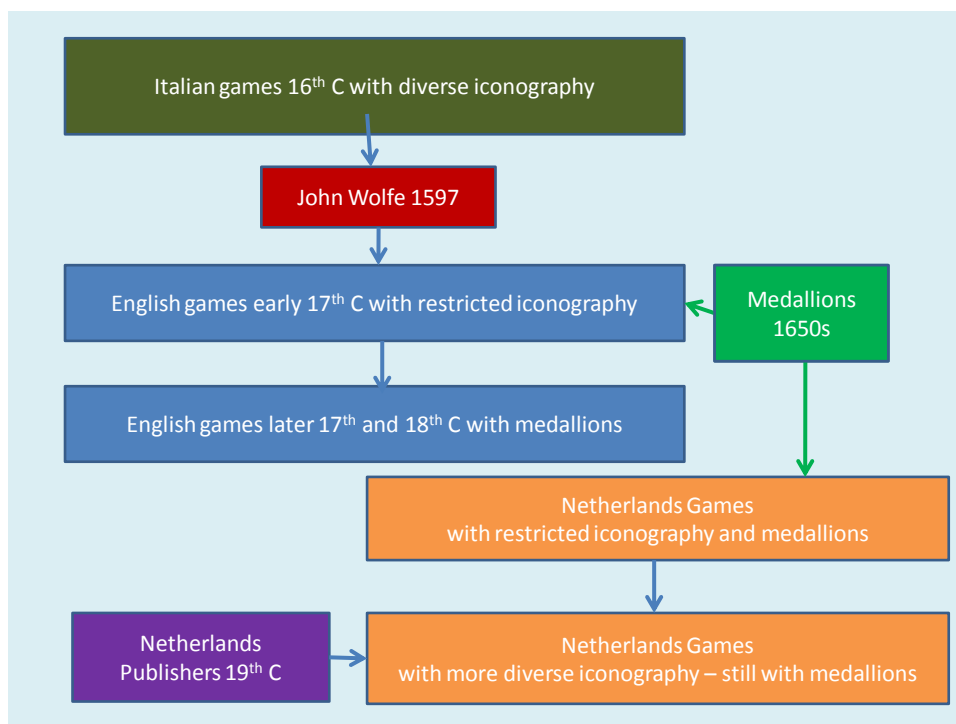
We can summarise the above discussion in the following terms, as pictured in the model shown in Table 6. The iconography of Italian games in at the end of the 16th C was diverse, as judged by the few surviving examples and by the slightly later examples from the early 17th C. This was John Wolfe's source material when he introduced the Game of Goose into England in 1597. Some time before 1660, the 'Parliamentarian versus Royalist' medallions were introduced, persisting as an attribute of the John Overton game. Later British publishers retained portrait medallions in their re-designed games but updated the subjects of the portraits, presumably for topicality, though once a change had been made the subjects could be repeated years later. The iconography of Netherlands games of vertical format is well explained by assuming that they were initially copied largely from the John Overton game (BR1, c1660) or an immediate forerunner. Later publishers simply copied the game sheets over the years, with very minor changes until well into the 19th C. Even then, the old forms persisted in some versions of the game.

10. A note on Flemish games

Interestingly, the iconography of Flemish games differs considerably from that of the Netherlands games discussed above. Van Bost [1990] helpfully gives a list of these games classified by iconographic type. His types A, B C and D are all of horizontal (landscape) format. However, his type E is indeed of vertical format and may usefully be compared with the games in our samples. It includes the familiar forms of the game made in Turnhout, notably by Brepols. These games do have a form of the double arch, as shown in figure 8, but not in such an architectural guise as do the Netherlands games.
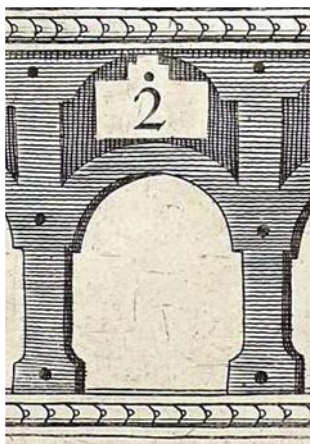
Figure 8: The double arch, seen in games BR1, NE1 and a game by Brepols of Turnhout from the beginning of the 20thC.

Otherwise, the incidental iconography is quite distinct. It is not clear whether these games have been derived by very free interpretation of a Netherlands counterpart or whether some other distinctive exemplar represents their origin.

An interesting and different set of iconographic features is found in a dual-language game (figure 9, left) published by L. Lazare, (in kantoorbehoeften, 's Hage, no date): it includes a lion as track-end decoration, suggesting that this game was produced for the part of the Netherlands now known as Belgium, and including Flanders. The game also has a snake as entry decoration, suggesting that the iconographic derivation is from the games of that name, dating back as far as Visscher's example of 1640, *Het Nieuw Slange Spel Anders Genaemt Koninclycke Tytkorting Van Cupido* (HONG index number 13153). The lower right decoration is of a man sticking out his tongue and pointing a finger. This game is in Fred Horn's collection, now in the Flemish Games Archive, KHBO, Bruges. A second game from that collection (figure 9, right) demonstrates much of the iconography of the Brepols games.
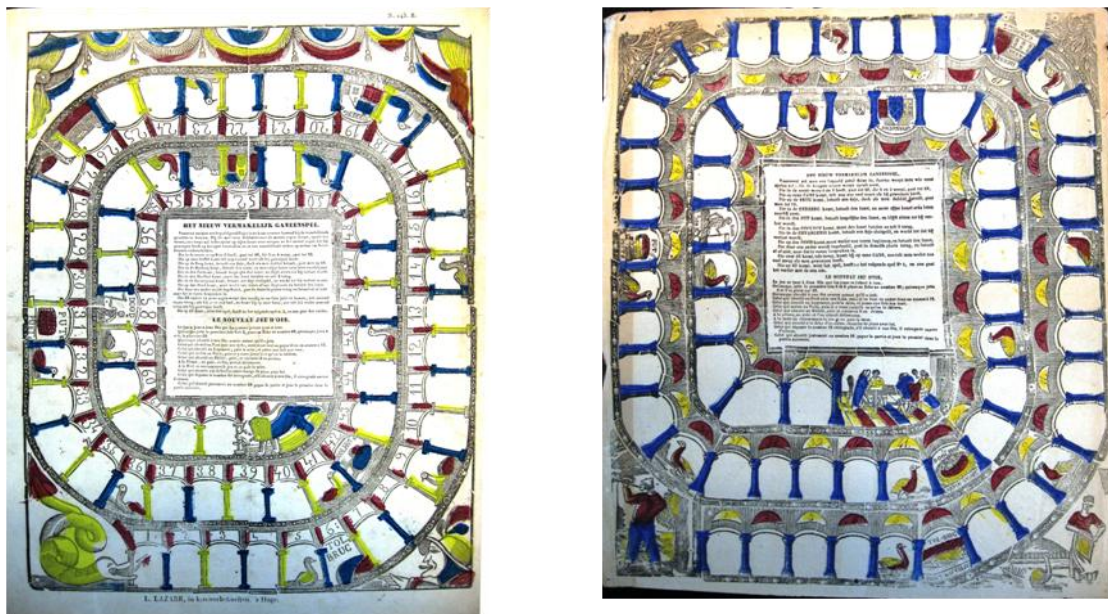

Figure 9 Distinctive iconography of Flemish games (Fred Horn collection, Flemish Games Archive, KHBO, Bruges).

The fact that there are such large iconographic differences between the Netherlands and Flemish games, despite the geographical proximity of their countries, is of considerable interest and is indeed supportive of the idea that the vertical-format Netherlands games derived from a quite specific importation, rather than from the operation of general stylistic influences in the Low Countries.

11. Discussion

The comparative statistical approach to the study of iconography of the popular print appears to be new. Its application depends on there being sufficiently large sets of prints of the same subject (at least five or six in each sample set) for the comparisons to have statistical validity. It also depends on there being a sufficient degree of regularity in the format for a set of iconographic features to be defined, such that these features can be identified consistently across the samples for comparison. Finally, it depends on the possibility of defining the attributes of each feature in such a way that similarities and differences of attributes can be identified with some confidence.

Given that these conditions are satisfied, the usefulness of the method is that it enables the researcher (a) to identify where differences between two sample sets of prints could have occurred through chance selection of images from a shared background; and conversely (b) to identify where those differences are so significant that another mechanism is at work, for example, copying of the set of prints largely from an earlier exemplar.

One thing it cannot do of itself is to determine which of two sets of prints came first in date. In the ordinary way of development of popular prints, one would expect a set of prints whose iconography was significantly less diverse that that of another set to be the older of the two sets: the diversity would be expected to increase with time, as fresh artists and publishers contributed their decorative ideas, whether original or from freshly-applied sources. Yet we have seen that the iconographic diversity of the early Italian games was significantly greater than that of the later British games, this being due to the restrictive effect of a discrete act of importing a particular example or examples, at a time when free international circulation of popular prints between Britain and Italy was not usual. Likewise, the iconography of the Netherlands games is restricted because of a (presumed) act of importing a game with the iconography of the John Overton game, serving as a model. In both these cases, historical evidence exists to date the sets of games concerned, independently of the statistical method.

The discussion up to this point has been in general terms, applicable to any kind of popular print satisfying the conditions set out. However, there are certain special considerations that relate to the study of printed board games and, in particular, to the Game of the Goose. In such games, there are numerous elements that are almost totally formalised: the numbered track; the various hazards; the 'goose' cells or their equivalent. The existence of these formal elements makes it highly likely that a publisher called on to produce such a game will base his or her design on something that has gone before and – in all probability – upon an earlier game sheet that can be copied, at least in part, so that the essentials of the game can be got right. This means that it is quite likely that other, non-essential, elements of the design, such

as the incidental iconography, will also be copied, unless there is a conscious decision to bring in new elements. By contrast, with less formalised subject, the printer might work without an exemplar in front of him, or might bring in decorative elements from sources such as a printer's pattern book. This may account for the astonishing persistence of particular iconographic attributes in these games over several centuries.

12. Conclusion

Art Historians may contend that there is nothing in the present article that is not achievable using the conventional methods of connoisseurship: identification of stylistic elements and so on. There is force in that contention. Nevertheless, it is hoped that they will allow that the application of statistical methods in this area is at least interesting: and perhaps an aspect of this interest may be the promise of increased objectivity that these methods can bring.

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