Displaying Heraldic Blazons

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Acknowledgements

Declaration

I declare that this thesis was composed by myself, that the work contained herein is my own except where explicitly stated otherwise in the text, and that this work has not been submitted for any other degree or professional qualification except as specified.

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INTRODUCTION

1.1 Motivation

In 1874 — 4 years after his death — John Papworth's *Ordinary of British Armorials* was published.[1] In this work, he recorded approximately 50,000 entries of descriptions of families' coats of arms, none annotated.

[1] S. M. Collins. 'Papworth and his Ordinary'. In: *The Antiquaries Journal* 22.1 (1942). Accessed: January 2018, pp. 6–7. DOI: 10.1017/S0003581500003668.

This honours project would make it possible to have these descriptions, or *blazons* as they are termed in heraldry (see 2.1), drawn freely for people to view. This has potential application for ancestry companies that build family trees for people. Given the blazon, they would be able to construct the shields visually.

1.2 Contributions

In this honours project, my contributions included:

- Drawing the charges and quarters used on the shield, *escutcheon*,
- Writing the base web server and
- Writing the quarter and charge drawing algorithm

2

BACKGROUND

2.1 *Heraldry*

Many families, countries and organisations — primarily in Europe — have coats of arms. At the centre of a coat of arms is a shield known as an *escutcheon*. The language used to describe how the escutcheon is to be drawn is known as a *blazon*. Blazons have been used since the Norman conquest and have been refined to a regular language in the process,[1] although, as John Brooke-Little said, "many of the supposedly hard and fast rules laid down in heraldic manuals [including those by heralds] are often ignored."[2] This flagrant disregard for the rules introduces difficulty in parsing the blazons as the language loses some of its regularity.

[1] Charles Boutell. *Heraldry, historical and popular*. Third edition. Accessed: January 2018. London, Bentley, 1864, pp. 8–9.

[2] J. P. Brooke-Little. *An Heraldic Alphabet*. New and revised edition. Accessed: January 2018. London, Robson Books, 1985.

Blazons have a few key attributes:

- The *field*, which is the background of the shield;
- *Variations*, which describe how the field or charge are patterned. Variations can indicate patterns such as chequered or coloured lines (an example can be seen in Figure 2.1);
- *Ordinaries*, which are geometric shapes (an example of which can be seen in Figure 2.3);
- *Charges*, which are small emblems, such as fleur-de-lis and lions; and
- *Tinctures*, which are the colours and patterns for charges, ordinaries and fields.

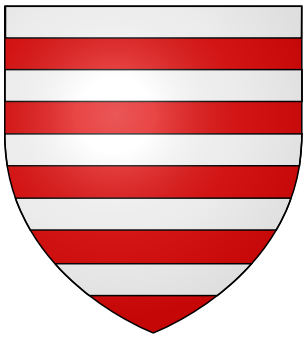


Figure 2.1: The shield of the town of Albert, France. *Barry of ten argent and gules.* Source: `https://en.wikipedia.org/wiki/File:Blason_Albert.svg`

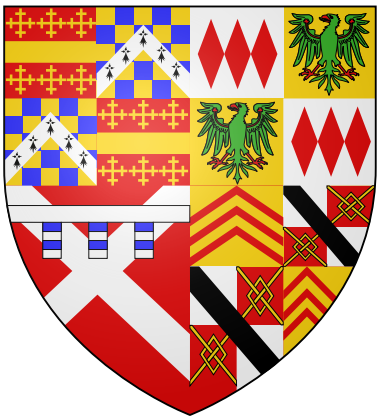
The tinctures are derived from Norman French and are divided into 3 groups, typically known as *metals*, *colours* and *furs*. In British heraldry, the colours are derived from Norman French and so the names appear archaic. In heraldry, blue is *azure* and red is *gules* for instance. The metals are *or* and *argent* for gold and silver respectively. Whilst the tinctures are linked to colours, the College of Arms does

not which shade of that colour is required for the tinctures, leaving it to the artist to decide.[3]

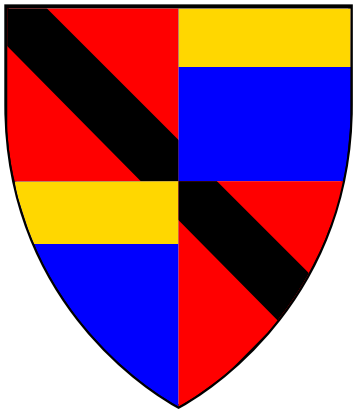
Blazons conventionally follow a form of starting with the *tincture* or *variation* of the field. After the description of the field, *ordinaries* and *charges* are named with their tinctures. An example of this is "*Purpure, a chief Gules*". This blazon describes an escutcheon with a field of *purpure* (purple), with a *Chief ordinary* — a bar across the top of the shield — of *gules* (red). This can be seen drawn by the web app in Figure 2.2.

A simple — but notable — blazon is that of the Scrope family. In the 14th century, the Baron Scrope brought a case action against Sir Roberts Grosvenor when he noticed that they both had the same coat of arms. Many witnesses gave evidence in the case, including Geoffrey Chaucer.[4] The case was ultimately decided in Scrope's favour. The Scrope coat of arms has a blazon of *Azure, a bend Or*; a depiction of this as drawn by the web app written for this project can be seen in Figure 2.3.

Whilst the Scrope arms are prominent in heraldry, they are simplistic and indicative of mediæval arms. Coats of arms became more complex as they developed through the centuries, with instances of *quarterly* shields, *grand-quarterlies* — quarterlies within quarterlies — and *differenced* arms. *Differenced* arms involve adding an *ordinary* over an existing coat of arms. This was typically used to differentiate similar looking coats of arms, especially between father and sons. Common examples of differentiated shields are seen in duchies' coats of arms, particularly those which were given to Charles II's illegitimate children. Examples of more complex shields can be seen in Figure 2.4.



(a) Neville, 16th Earl of Warwick's coat of arms. An example of grand-quarterlies and differenced arms. Source: `https://en.wikipedia.org/wiki/File:Neville_Warwick_Arms.svg`.



(b) A quarterly shield drawn by the web app. *Quarterly: 1st and 4th: Gules, a bend Sable; 2nd and 3rd: Azure, a chief Or.*

Figure 2.4: Some examples of more complex coats of arms.

For a time, it was considered bad form to repeat a *tincture* in a blazon, and use a reference to the tincture's previous use. The Heraldic Society gives an example as such: "'*Azure on a fess argent three billets azure*' [would have been written as] '*Azure on a fess argent three*

[3] *FAQs: heraldry - College of Arms*. Accessed: January 2018. College of Arms. URL: `http://www.college-of-arms.gov.uk/resources/faqs`.

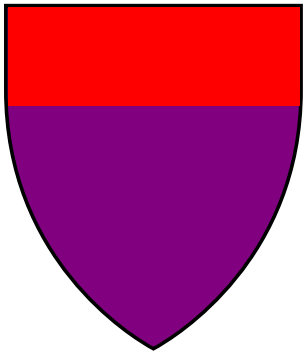


Figure 2.2: *Purpure, a chief Gules*.

[4] Sir N. Harris Nicolas. *The Controversy between Sir Richard Scrope and Sir Robert Grosvenor in the Court of Chivalry*. Accessed: January 2018. London, Bentley, 1832, p. 404.

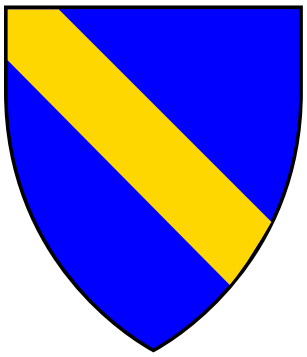


Figure 2.3: The Scrope escutcheon; *Azure, a bend Or*.

billets of the first'". The '*of the first*' refers to the field's tincture of azure. This blazon describes a blue shield, with a white bar horizontally across the middle with 3 white rectangles arranged along the bar. The Heraldic Society advocates repeating tinctures to reduce ambiguity.[5]

[5] *Blazon in CoA | The Coat of Arms*. Accessed: January 2018. The Heraldic Society. URL: http://www.the-coat-of-arms.co.uk/blazon-in-coa/.

2.2 *Related Works*

Whilst many escutcheons have been drawn and uploaded to Wiki-Media in SVG format (some of which have been used in this report), all appear to have been drawn by hand in programmes such as Inkscape.

2.3 *Summary*

3

IMPLEMENTATION

3.1 Initial Design

3.2 Initial Approach

3.3 Adding Quarterly Rendering

3.4 Refactoring Charge Rendering

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RESULTS AND DISCUSSION

4.1 Automated Testing

4.2 Rendering Testing

5

CONCLUSION

5.1 Overview

5.2 Further Work

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