Article title: Shotguns: the use of rhetorical devices in the adverts of utilitarian and aspirational sporting goods: Ethos, Pathos & Logos in Shotgun Online Adverts

Authors: Gareth White[1]

Affiliations: Cranfield University[1]

Orcid ids: 0000-0002-1406-4983[1]

Contact e-mail: gareth.white@cranfield.ac.uk

License information: This work has been published open access under Creative Commons Attribution License http://creativecommons.org/licenses/by/4.0/, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. Conditions, terms of use and publishing policy can be found at https://www.scienceopen.com/.

Preprint statement: This article is a preprint and has not been peer-reviewed, under consideration and submitted to ScienceOpen Preprints for open peer review.

Funder: None

DOI: 10.14293/S2199-1006.1.SOR-.PPRTIE8.v1

Preprint first posted online: 06 October 2022

Keywords: advertising, ethos, pathos, logos, shotgun, shooting
Shotguns: the use of rhetorical devices in the adverts of utilitarian and aspirational sporting goods

Professor Gareth R.T. White
Cranfield University
Gareth.white@cranfield.ac.uk

PURPOSE
Shooting, in its many different forms, contributes a substantial amount to national economies through the manufacture and consumption of goods and services, as well as through supporting environmental initiatives and providing recreational activities. Despite the considerable global value of sporting shooting, little research has explored the range of products and services that it comprises. This study begins to address this gap by examining the use of Aristotelian rhetorical devices in the digital adverts of shotguns.

METHODOLOGY
An exploratory study is made of the usage of rhetorical devices in the adverts of eighteen shotguns, spanning five manufacturers and four countries of origin, using multiple regression and descriptive analyses.

FINDINGS
The analyses reveal clear relationships between the characteristics of the product and their manufacturers with the use of ethos, pathos and logos. The findings have implications for both manufacturers and retailers of shotguns and the ways in which they utilise these rhetorical devices in their adverts.

ORIGINALITY
This study contributes to the limited research that explores this commercially, environmentally and socially important pastime.

Keywords: advertising, ethos, pathos, logos, shotgun, shooting

Funding: There is no funding associated with this research.
1.0 INTRODUCTION

The shotgun has evolved from its earliest roots as the ‘scattergun’ of the 17th century into what is arguably the most versatile hand-held munition available today. They are available in a wide range of gauges (barrel diameters), may possess one, two or occasionally several barrels, they are used for recreational purposes including hunting and competition shooting, they find application within law enforcement and the military, and they may be plain utilitarian tools or highly decorated objects of desire.

The UK has strict laws that restrict the ownership of firearms such as rifles, and civilians cannot own handguns. In 2021, around 150,000 people in the UK possess a firearms certificate but over half a million possess a shotgun certificate (approximately 0.7% of the population) (Gov, 2021). There are over 3,000 registered firearm dealers in England and Wales, and around 1.5 million shotguns are owned by civilians (GunPolicy, 2021). In other countries, gun ownership and sport shooting are far more common, for instance, around 30% of Americans own a gun of whom 54% own a shotgun (PEW, 2021).

The global value of sport shooting and its associated products and services is substantial, worth an estimated $6.2 billion in 2020 and this is expected to grow at 6.38% per annum (GlobeNewswire, 2021). Shooting, in its many forms, is worth over £2 billion to the UK economy (BASC, 2021). It also provides around 350,000 jobs, contributes over £7 million per annum to national conservation initiatives and comprises around 10% of the total UK annual spend on outdoor recreation. For comparison, the UK’s fisheries industry, which receives considerably higher national and political attention, contributes around £1.4 billion and employs 12,000 people (UK Sea Fisheries Statistics, 2020; The Fishing Daily, 2020). It is evident that shooting comprises a substantial proportion of the UK economy and is not an inconsiderable contributor to other global economies. It is therefore deserving of concerted academic attention, yet to date precious little scholarly literature has explored this sector from a ‘business and management’ perspective.

This study aims to gain deeper understanding of this sector through exploring the ways in which shotgun manufacturers advertise their products. This is achieved through the examination of the Aristotelian rhetorical devices that are utilised in the adverts of a sample of eighteen guns, spanning five manufacturers and four countries of origin. It finds clear relationships between the country of origin, manufacturer, type, grade and price of gun with the discussions of ethos, pathos and logos within digital adverts. The results have implications for scholars, policy-makers, manufacturers and retailers.

2.0 OVERVIEW

The long history of the development of the shotgun has produced a number of companies whose names are synonymous with their manufacture. Some of these have significant military connections, such as Browning and Beretta. Others are considered among the ‘elite’ of the craft, none more so than the ‘London’ manufacturers that include Holland & Holland, Churchill and Purdey. Shotguns, like most munitions, are manufactured globally but several countries stand out as areas of excellence for this particular armament. Turkey has a great number of manufacturers that are known for their workmanlike products and the Spanish manufacturers have a similar reputation. Italian companies such as Caeser Guerini, Beretta and Perazzi offer exquisitely detailed guns, while American companies such as Browning and Mossberg make a wide range of utilitarian products.

Some gun owners exhibit strong preferences for particular manufacturers. This may be due to the fact that some manufacturers produce off-the-shelf shotguns with stocks that provide a better ‘fit’: the fit of a shotgun stock to the shooter is critical for its accuracy since
they do not use ‘sights’ with which to aim. For instance, Browning stocks generally suit people with high cheekbones, whereas Berettas do not. Also, some owners pay allegiance to manufacturers due to their nationalism, or by virtue of the fact that they possess other arms from that manufacturer: Browning for example produce an extensive range of pistols and rifles as well as shotguns.

The world of shotgun design and production is highly complex and each manufacturer offers a wide range of types of guns for different purposes. Shotguns typically fall into two broad categories of ‘game’ for hunting, and ‘sporting’ for target shooting and each type is often available in a range of ‘grades’ indicating their final finish, the quality of wood used, and the degree of decoration and embellishment. For those that are unfamiliar, the concept is somewhat analogous to the way that models of cars are produced in a range of levels of luxury. Figure 1 shows the differences that may be found in the colouring of the metalwork, the degree and quality of engraving, and finishes such as gold-plated triggers.
To the average observer what is interesting to note here is that the cheapest off-the-shelf shotgun, providing it ‘fits’ the user, is equally as capable of shooting a target as the most expensive hand-made example. In fact, many high-end shotguns use the same barrels and trigger mechanisms as other ‘lesser’ models in the range. Consequently, the owners of low-end, off-the-shelf guns may have the wooden stocks of their guns modified (literally bent) to suit their physique and there is a thriving market in stock alteration, adjustable stocks and custom manufacture.

Some companies offer a custom fitting service whereby the dimensions and shape of the wooden stock are made to suit the individual customer. Often this will be done according to a set of measurements that are taken by the gun retailer and are then sent to the factory to guide the automated manufacture of the stock. Some manufacturers offer an even more intimate service whereby the customer travels to the gun manufacturer to have their measurements taken and then participates in the subtle adjustment and refinement of the finished article to suit their individual physique. These guns are evidently unique and being predominantly hand-made they command a significant premium above ‘off the shelf’ models, often costing tens of thousands of pounds. It is this curious mix of utilitarian and aspirational attributes that inspires this research into a sector of the economy that has received little academic attention.

3.0 LITERATURE

There is an old and substantial body of literature that is related to shotguns and their usage. Much of this examines the types of injuries that they may deliver and how they may be treated (Coley, 1888; Yoon and Sul, 2021). Other research focuses upon the ballistics of shotguns (Crossman, 1916; Multan, Moore, Forest-Allard and Orde, 2021), the legal aspects of shotgun ownership (Zimring, 1975; Ryan, 2020) and gun crime (Harrison, 1907; Broadhurst, Foye, Jiang and Ball, 2021). Most recently, Crifasi, Ward, McGinty, Webster and Barry’s (2021) investigation found that gun purchases in the United States increased during the early phases of the Covid-19 pandemic.

Despite the ubiquity of the shotgun as a tool for self-defence, pest control and for sport, there is a surprising dearth of literature that examines it as a product whose production and consumption along with allied products such as clothing and ammunition, and services
such as gunsmiths and sporting grounds, comprises a substantial proportion of global spend. It is only very recently that explorations of the commercial dimensions of firearms and shotguns have been made. For instance, Callcut, Robles, Kornblith, Plevin and Mell (2019) made an interesting study of the link between mass shootings and gun sales, finding that sales increased following such events. Yamane, Yamane and Ivory’s (2020) valuable exploration of gun adverts in one of America’s leading shooting magazines revealed the substantial rise in adverts for guns for home defence over the period 1955-2019 while adverts for hunting and sport shooting declined. Jordan, Kalin and Dabrowski’s (2020) examination of gun advertisements that were posted on social media found that some streaming services subsidised gun manufacturer’s adverts and leveraged ‘influencers’ in order to promote gun sales.

3.1 Ethos, Pathos & Logos

Many different theoretical lenses may be used to explore the marketing, production and consumption of goods and services, a review of which is beyond both the scope and need of this study. Among these, Aristotle’s three rhetorical appeals, consisting of ethos, pathos and logos, is a widely used approach within studies of advertising: ethos refers to the trustworthiness or credibility of the communicator, pathos appeals to the emotions of the recipient, and logos comprises facts and reasoning. For instance, Quesenberry, Garland and Sykes (2006) used this device to explore website persuasiveness, conceptualising them as “logos (price, variety, product information, effort); pathos (playfulness, tangibility, empathy); and, ethos (product quality, compatibility, assurance, reliability)” (p81). Similarly, they were used by Panagopoulos, Kanellopoulos, Karachinidis and Konstantinidis (2011) to explore the content of hotel websites, Auger (2014) to examine the content of charitable organizations’ ‘tweets’, Mangio, Pedeliento and Andreini (2021) to examine the ‘tweets’ of leading brands that were crafted during the Covid-19 pandemic, and Amos, Zhang, King and Allred (2021) in their examination of online reviews.

This study adopts this approach for the study of the advertising of shotguns whereby a range of manufacturers’ adverts was examined for the content that makes rhetorical appeals to the reader. Informed by the extant literature that adopts a similar approach and the characteristics of shotguns described above, ethos is conceptualized as the ‘product quality, reliability and history’, pathos refers to the ‘finish, decoration and embellishment’, and logos to the ‘price, variety and fit/customizability’ (Figure 2). Through this, the study endeavours to understand the relationship between the use of rhetorical devices and the advertising of shotguns.
This exploratory study is based upon the examination of a selection of shotgun adverts of leading manufacturers. First, two of the UK’s largest online gun retailers’ websites were reviewed to identify the most common manufacturers. Table 1 provides the list of manufacturers that were chosen, along with other pertinent company information, and following the approach of other research that explores ‘luxury goods’ (Sharma, Pradhan and Srivastava, 2021; Jain, 2020) was purposively sampled in order to reflect the global distribution of gun manufacture. It was not possible to review every manufacturer due to an absence of digital adverts (notably Russian manufacturers) or a lack of shotguns of comparable types (some manufacturers produce predominantly pump-action guns).

For each manufacturer, one model of ‘game’ gun and one ‘sporting’ gun were randomly selected from their range: for consistency, only 12-gauge shotguns were selected. The online retailers’ websites were then reviewed to identify the lowest and highest ‘grade’ versions of each model of gun along with their respective recommended retail price. The manufacturers’ adverts for each of these models of guns were then captured as digital

Table 1, Manufacturer Details

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Formation of Company</th>
<th>Revenue</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATA</td>
<td>1934</td>
<td>$26 million</td>
<td>580</td>
</tr>
<tr>
<td>Beretta</td>
<td>1526</td>
<td>$797.5 million</td>
<td>2962</td>
</tr>
<tr>
<td>Benelli</td>
<td>1967</td>
<td>$123.9 million</td>
<td>282</td>
</tr>
<tr>
<td>Browning</td>
<td>1878</td>
<td>$44.9 million</td>
<td>330</td>
</tr>
<tr>
<td>Webley &amp; Scott</td>
<td>1834-2005</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>
screenshots. This process generated a data set that comprised the advertising content of a range of types of shotguns, of differing ‘grades’, from a globally representative selection of manufacturers (Table 2). The written content of the digitally captured adverts provided the text upon which the analysis for Aristotelian rhetorical devices was made. From this, the study was able to explore differences between the use of rhetorical devices in the adverts of different grades of gun, between ‘game’ and ‘sporting’ types of guns, between different manufacturers, and between manufacturers from different countries.

Table 2, Data Set

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Manufacturer</th>
<th>Type</th>
<th>Grade</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>ATA</td>
<td>Sporting</td>
<td>1</td>
<td>£899</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>£1199</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Game</td>
<td>1</td>
<td>£899</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>£1199</td>
</tr>
<tr>
<td>Italy</td>
<td>Beretta</td>
<td>Game</td>
<td>1</td>
<td>£1849.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>£2299.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sporting</td>
<td>1</td>
<td>£1714.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>£2499.99</td>
</tr>
<tr>
<td></td>
<td>Benelli</td>
<td>Sporting</td>
<td>1</td>
<td>£1954.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>£2194.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Game</td>
<td>1</td>
<td>£1765</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>£1855</td>
</tr>
<tr>
<td>USA</td>
<td>Browning</td>
<td>Game</td>
<td>2</td>
<td>£2668.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>£4759.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sporting</td>
<td>2</td>
<td>£2926.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>£3437.99</td>
</tr>
<tr>
<td>UK</td>
<td>Webley &amp; Scott</td>
<td>Game</td>
<td>1</td>
<td>£999.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sporting</td>
<td>1</td>
<td>£999.99</td>
</tr>
</tbody>
</table>

Data analysis, following other textual analyses of advertisement materials (Blasco, 2021), comprised the inspection of the written text of the adverts to identify the proportion of content that pertained to ethos (product quality, reliability and history), pathos (finish, decoration and embellishment) and logos (price, variety and fit/customizability). Following similar textual analyses (Corina and Potor, 2017; Buckner and Gillham, 1998) the space devoted to each rhetorical device was measured as a percentage of the total wordcount of the advert (not including footnotes or copyright information).

Following the approach of similar studies of rhetorical devices (Sanchez, Garcia and Bustos, 2017; Tapper and Boulton, 2004), the effect of gun grade, gun type, manufacturer and country of origin was examined using Pearson’s r and multiple regression analysis (MRA) (Trivredi and Sama, 2019; Ngoma, Ntale and Wright, 2018): analyses were performed using IBM SPSS Statistics ver. 28.0.0.0. Descriptive analyses are presented in the form of polar diagrams to facilitate visual comparison (Shahabuddin, Ahsan, Javaid and Khan, 2015; Balacić, Bogdan, Feleaga and Popa, 2014).

5.0 ANALYSIS & DISCUSSION
Only one statistically significant relationship was found within the data set: grade and price of the gun ($r = .702, p < .01$). This is a logical relationship since guns with greater levels of decoration and embellishment command higher prices. Notwithstanding the lack of statistically significant relationships, the MRA analyses are presented here for completeness:

MRA to predict the proportion of words dedicated to Ethos (%Ethos) from price, type, country, grade and manufacturer predicted %Ethos $F(5, 11) = 2.291, p < .117, R^2 = .51$. The significance of each variable was reported as price = .097, grade = .335, type = .085, manufacturer = .063, and country = .072.

MRA to predict the proportion of words dedicated to Pathos (%Pathos) from price, type, country, grade, manufacturer predicted %Pathos $F(5, 11) = .638, p < .676, R^2 = .225$. The significance of each variable was reported as price = .98, grade = .693, type = .177, manufacturer = .491, and country = .473.

MRA to predict the proportion of words dedicated to Logos (%Logos) from price, type, country, grade and manufacturer predicted %Logos $F(5, 11) = .838, p < .549, R^2 = .276$. The significance of each variable was reported as price = .476, grade = .339, type = .2, manufacturer = .441 and country = .394.

These analyses suggest that there is a moderate relationship between the variables country, manufacturer, type, grade and price, and the proportion of words in the adverts that are devoted to discussing ethos, and a further possible relationship between the model and discussions of pathos, and which are explored further in the descriptive analyses presented next.

5.1 Analysis by Country

Figure 3 presents the percentage of words that are dedicated to discussing ethos, pathos and logos according to the country of origin of the manufacturer. It shows that Italian and USA manufacturers devote a greater proportion of their gun adverts to ethos (48% and 49% respectively) than Turkish and British manufacturers (34% and 34%). It also shows that Turkish and USA manufacturers emphasise logos within their adverts (44% and 40%) and that Italian and UK manufacturers emphasise pathos (29% and 28%).

There is a logic to these findings that would be familiar to most shotgun owners. Both Italy and the USA have long traditions of armament manufacture, as is reflected in the founding dates of Beretta and Browning, both of which also have distinguished histories as producers of armaments for the military. It is therefore somewhat surprising that the UK, in light of its similar heritage of armament manufacture, does not feature so highly in this respect. However, the small sample of UK guns that were selected, along with the fact that Webley & Scott are not a renowned manufacturer of military armaments may have affected this. Furthermore, the emphasis placed upon logos by USA and Turkish manufacturers (40% and 44%) is in accord with the knowledge that these countries are generally purveyors of utilitarian arms. Similarly, the emphasis that is placed upon pathos by UK and Italian manufacturers (28% and 29%) reflects the perception of these countries as the homes of some of the world’s finest gunsmiths.
5.2 Analysis by Manufacturer

ATA, Browning and Benelli are renowned for their utilitarian products and this is reflected in their emphasis of logos in their adverts (44%, 40% and 37%), whereas both Beretta and Webley & Scott tend to emphasise pathos (30% and 28%) (Figure 4).

The predilection for Beretta and Browning to emphasise ethos (50% and 49%), in the form of their historical roots is in accord with the dates that their respective manufacturers were founded. The Italian firm Beretta is the oldest firm in this analysis, founded in 1526, and Browning was founded in 1878. The inclusion of the Italian firm Benelli, founded comparatively recently in 1967, has moderated the results of the Italian firms: two of its adverts contained no words that discussed ethos whereas the remaining two adverts devoted 60% and 30% of their words to ethos. If the two adverts that contained no content pertaining to ethos are removed from the analysis then the overall proportion of Italian manufacturers adverts that discuss ethos would increase. This adds weight to the statistical model and the argument that the content of shotgun adverts that are dedicated to discussing the rhetorical devices are influenced by the country of origin of the manufacturer.
5.3 Analysis by Type

There is an indication that the type of gun is also reflected within the wording of adverts in a manner that is consistent with knowledge of the sport (Figure 5). The tendency to emphasis ethos when advertising ‘game’ guns is in keeping with the contexts within which these guns are used. For instance, in the UK, game shooting conjures images of pheasant or grouse shooting and has historically been the reserve of the upper classes. While this is largely not true today, there is a logic to perpetuating this imagery with the adverts of guns that are designed for hunting.

It could reasonably be expected that game guns would also incorporate more description that draws upon such imagery within the gun adverts for similar reasons. However, the analysis indicates that the adverts for ‘sporting’ guns tend to devote more wordspace to pathos. This may be due to the peculiarities of the sample that was selected or may be a deliberate attempt by manufacturers to gain some of the perceived ‘prestige’ of game hunting within their sporting range.
5.4 Analysis by Grade

There is a less clear distinction in the use of rhetorical devices between guns of different grades. A few guns were identified that were grade 2, 4 or 5 and due to the low numbers were excluded from this particular analysis, and this analysis is therefore based upon Grade 1 and 3 guns only. Since the ‘grade’ of gun refers explicitly to the level of decoration and embellishment this should be evidenced in the proportion of words in the adverts that are devoted to pathos. Figure 6 does show a marginal difference between grade 1 and grade 3 guns in this respect (24% and 29%). A larger sample may provide greater insight into the differences between grades of gun and indicate if this also has some influence upon the use of ethos and logos in adverts.
5.5 Analysis by Price

In this analysis, the sample has been categorised according to the price bands of ‘sub £1000’, ‘between £1000 and £2000’ and ‘over £2000’. There are clear and logical results of this analysis that indicate that there is a relationship between price and the use of rhetorical devices in gun adverts (Figure 7). The greater the cost of a gun, the greater the proportion of the advert is devoted to discussing ethos. This is logically coherent since manufacturers with a longer and more esteemed history may be able to charge a premium for their products and in this analysis Browning and Beretta were the manufacturers with the longest history and the highest average price. Similarly, the most expensive guns were found to have the largest proportion of the advert devoted to pathos. Contrastingly, the cheapest guns adverts focussed upon logos whereas the most expensive gun adverts gave this the least amount of attention.
Figure 7, ‘Price’ Level Analysis

6.0 CONCLUSION

Shooting comprises a range of sports and activities that are ‘big business’, historically significant and which contribute greatly to economies around the world. Yet, despite its importance it has received comparatively little academic attention.

Shotguns are one of the most popular forms of gun that are owned and used by civilians, and which are available in many different types that suit specific purposes and may be of utilitarian design or highly decorated objects of desire. In order to foster deeper understanding of this sector this study sought to examine the ways in which shotgun manufacturers advertise their different products. This is achieved through an exploratory study of the use of Aristotelian rhetorical devices within the adverts of a sample of eighteen guns, spanning five manufacturers and four countries of origin. The study finds clear relationships between the country of origin, manufacturer, type, grade and price of gun and the discussions of ethos, pathos and logos within digital adverts. Some of these relationships are statistically verified but future research is required, using larger data sets, to confirm the results of the multiple regression analyses.

The scholarly implications of this study are twofold. First, shooting is a sector of the global economy that has received little examination from a ‘business and management’ perspective. Future research should endeavour to characterise this collection of sporting activities that comprises a wide variety of goods and services. Second, this study contributes to the substantial corpus of literature that utilizes the concept of Aristotelian rhetorical devices in the analysis of adverts and communications. A fourth rhetorical device, kairos, which appeals to timeliness and context, has been less widely adopted for the study of
communications, possibly due to the difficulties in providing a singular accurate definition (see for example Sipiora and Baumlin, 2002). Many products, like shotguns and their manufacturers often have deep historical roots that may be explored effectively using this additional construct.

The practical implications of this study are threefold. First, policy-makers need to pay greater attention to this sector of the economy that is of economic, environmental and social importance. Second, shotgun manufacturers and the advertising agencies that they employ should pay close attention to the meaning that is derived from their adverts. By examining the content of such materials in terms of ethos, pathos and logos, along with kairos, adverts may more accurately convey the intended message. In particular, the production of ‘generic’ adverts for ranges of guns of different types or grades, which was observed among some manufacturers, may appear to be cost-effective but fails to capitalize upon the potential that may be gained from emphasising the manufacturers’ and the products’ distinctive characteristics. Third, online retailers of shotguns frequently substitute the manufacturers’ adverts with their own summary descriptions of products. While this may be necessitated by the confines of website space, both retailers and manufacturers must be aware of the impact that this may have upon the content of the adverts that pertain to ethos, pathos and logos (and kairos). Manufacturers should review the way in which their products are ‘sub-advertised’ by retailers. This issue could be partly resolved by at least insisting that links to the manufacturers’ own ‘full’ adverts are provided within the retailers’ descriptions.

7.0 REFERENCES


