

# VEXISTAT'S

## A Statistical Overview of the Colours, Symbols and Designs of National Flags in the 20th Century.

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### Abstract :

This paper deals with the statistics pertaining to the colours, symbols and designs used in national flags of independent countries at various times during the 20th Century. A number of trends and patterns are highlighted, culminating in a comprehensive review of the situation as it pertains in 1999.

### 1. INTRODUCTION

This paper deals with the statistics pertaining to the colours, symbols and designs used in national flags of independent countries at various times (1917, 1939, 1958, 1970 and 1999) during this century. A number of trends and patterns are highlighted, culminating in a comprehensive review of the situation as it pertains in 1999 just prior to the end of the century.

National flags, for the purposes of this analysis, are defined as being the civil flag used on land as indicated in the Flag Information Code.<sup>1</sup> In the case of 1917 the merchant flag, as distinct from the ensign, is taken to be the national flag.

Only the flags of independent countries were considered in this analysis. **Table 1** gives the number of independent states in the various years under review while a complete list of the countries whose flags were analyzed for this paper is provided in the **Annex**. **Table 2** gives the current (1999) number of independent states by continent. The flags of many colonies and dependencies, particularly in the first half of the century, were based on the flag of the colonial power and many dependent states did not, and still do not, have distinctive flags of their own and accordingly they have been excluded. Self-proclaimed independent states (such as Northern Cyprus, Somaliland, etc.) are also not included in the study.

In cases where a flag is defaced by a shield or coat of arms, the colour detail from these charges is excluded from the analysis except where two or fewer colours used. Symbols on coats of arms are also excluded from the analysis.

### 2. COLOURS

The analysis of the number of colours used on flags between 1917 and 1999 reveals that the use of three colours is by far the most popular (**Table 3**), although this has declined between 1917 and 1999. The use of a single colour is negligible, the only examples being the plain red flag of Muscat and Oman in 1958 and 1970 and the green banner currently used by Libya. The use of bi-coloured flags increased between 1917 and 1939 but has since declined from the peak of 38% in 1939 to 25% currently. While having three colours is the most popular, this has also declined from a high of 61% in 1917 to 45% in 1999. There was a slight increase from between 1958 (51%) to 1970 (53%), possibly due to the large number of newly independent African countries whose flags use a three-colour combination. The use of more than three colours has increased with four- (23% in 1999), five- (6% in 1999) and even a six-colour flag currently being in use. The increase in the number of colours can be explained by the improvements in flag manufacturing technology together with the cultural preferences of the African, Asian and Caribbean countries which gained independence in the latter half of the century.

**Table 1 : Total Number of Independent States  
(1917-1999)**

Year	Number of Indep. States	Average Increase per year (no. of states)
1917	57	-
1939	68	0.5
1958	96	1.5
1970	142	3.8
1999	192	1.7

**Tables 4 and 5** deal with the number of colours by continent in 1999. **Table 4** gives the percentage of flags in each continent with a given number of colours and shows that over 70% of African flags contain three or four colours, while nearly 60% of the flags in America are three-coloured. Asia, by contrast, has almost an equal number of two-, three- and four-coloured flags. **Table 5** shows where the numbers of colours on flags are located in the world in 1999. It is interesting to note that the only countries using a single-coloured flag (Libya) - the least number of colours currently used on a national flag - and a six-coloured flag (South Africa) - the most colours on a national flag - are both located in Africa.

**Table 2 : Number of Independent States  
by Continent (1999)**

Continent	Year 1999	
	No. of Independent States	%
Africa	53	28
America	35	18
Asia	43	22
Europe	47	25
Oceania	14	7
<b>WORLD</b>	<b>192</b>	<b>100</b>

The majority of bi-coloured flags are in Europe (36%) while there are no flags on that continent or America containing more than four colours. Five-coloured flags are found only in Africa, America (Caribbean) and Oceania (Tuvalu).

**Table 3 : Percentage of Flags with a Given Number of Colours  
(1917-1999)**

Flags with (%)	Year				
	1917	1939	1958	1970	1999
1 colour	-	-	1	1	0.5
2 colours	32	38	32	28	25
3 colours	61	58	51	53	45
4 colours	5	3	15	16	23
5 colours	2	1	1	2	6
6 colours	-	-	-	-	0.5
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 4 : Percentage of Flags in Each Continent with a Given Number of Colours (1999)**

Flags with (%)	Continent					
	Africa	America	Asia	Europe	Oceania	World
1 colour	2	-	-	-	-	0.5
2 colours	13	20	33	36	21	25
3 colours	36	57	33	62	36	45
4 colours	36	11	35	2	36	23
5 colours	11	11	-	-	7	6
6 colours	2	-	-	-	-	0.5
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 5 : Percentage of 1,2,...6-Colour Flags by Continent (1999)**

No. of Colours	% of Flags by Continent					
	Africa	America	Asia	Europe	Oceania	World
1 colour	100	-	-	-	-	100
2 colours	15	15	29	36	6	100
3 colours	22	23	16	33	6	100
4 colours	43	9	34	2	11	100
5 colours	55	36	-	-	9	100
6 colours	100	-	-	-	-	100
<b>Total</b>	<b>28</b>	<b>22</b>	<b>18</b>	<b>24</b>	<b>7</b>	<b>100</b>

The most popular colour used on flags is red (Table 6). Red has been the most popular colour throughout the century. Although it has declined from appearing on 81% of the flags surveyed in 1917 to 74% in 1999, it is still the most popular colour used on flags today. White also remains a popular colour and is found in 71% of all flags, slightly down from a high of 77% in 1917. Yellow has shown an overall increase from 26% in 1917 to 43% currently, while the use of blue has declined steadily from 67% at the beginning of the century to 50% today. The use of both black and green has shown constant increases, green showing the most dramatic increase from appearing on 16% of the flags in 1917 to 42% in 1999. The most obvious explanation for this is the use of green in the flags of Africa, and the Islamic countries of the Middle East and Asia. The use of black is also a feature in nearly a third of African flags.

The use of other colours remains small, with orange being found on 5% of flags. In 1917 no orange was used, while in 1939 it was found on the flags of Ireland and South Africa. Today the number of countries using orange on their flag has grown to nine and includes such diverse countries as India, Armenia, Côte d'Ivoire, Ireland, Turkmenistan and the Marshall Islands.

Other colours found on flags range from pink on the former flag of Persia in 1917, to brown

(Lesotho shield and the tree branch in the flag of Dominica), silver/gray (Malta medal, Vatican keys and in part of the crested crane on the Ugandan flag) and purple (part of the Dominican parrot) in 1999. Maroon is now also found on the flags of Latvia, Qatar, Georgia and Turkmenistan. The point made by Weitman<sup>2</sup> that "national flags make use of only seven outstanding colours: red, blue, green, yellow, orange, black and white ..." remains true in 1999.

**Table 6 : Percentage of Flags Containing Specific Colours (1917-1999)**

% Flags with	Year				
	1917	1939	1958	1970	1999
Yellow	26	24	31	35	43
Blue	67	59	52	45	50
Red	81	74	80	78	74
Black	7	10	11	20	22
White	77	76	74	68	71
Green	16	21	28	39	42
Orange	-	3	4	5	5
Other	2	2	3	3	5

The review of the colours by continent in 1999 (Table 7) shows that the most popular colours used on African flags are green (79%), red (75%) and white (55%). White (74%) is the most popular in the Americas, followed by blue and red. White (84%) and red (81%) are also the most popular colours on Asian flags, while red (74%), white (72%) and blue (53%) are the most popular on European flags. White (86%) and blue (79%) predominate in the flags of Oceania.

**Table 7 : Percentage of Flags in Each Continent Containing Specific Colours (1999)**

% of Flags Containing	Continent					
	Africa	America	Asia	Europe	Oceania	World
Yellow	58	51	28	30	50	43
Blue	40	69	35	53	79	50
Red	75	66	81	74	64	74
Black	32	26	23	11	14	22
White	55	74	84	72	86	71
Green	79	29	42	19	14	42
Orange	6	-	7	4	7	5
Other	4	6	5	8	-	5

As indicated earlier, red is the most popular flag being found on 74% of all the flags of the world today, followed by white on 71% of flags and blue on 50%. It is interesting that these colours are associated with the countries of the Old World (UK, France, Netherlands and Russia) as well as the United States. Yellow is found on 43% of the world's flags, mainly in Africa, South America and Oceania. Green is found on 42%, predominantly in Africa and to a lesser extent in Asia. 22% of flags today contain black, the colour being popular in the flags of Africa and the Caribbean region.

In addition to just highlighting the number and use of colours found in the world's flags, it was considered significant to show what area is taken up by each of the main colours. This calculation was done in a semi-quantitative manner based on the visual impression created by the flag and assumes that the total area of each flag is the same (individual proportions were ignored). The calculation was done for 1917, 1958 and 1999 in order to determine the trend over the century (Table 8 and Figure 1).

Not unexpectedly, red occupies the largest area (29%), although now less than its peak of 36% in 1958. The area covered by blue on the world's flags is 20%, again less than its peak of 25% in 1917 but has remained more or less stable since 1958. White accounts for 18%, which has seen a steady decline since 1917. The area occupied by green has increased sharply, particularly since 1958 while

the yellow area has increased only slightly from 8% in 1917 to 10% in 1999. The area occupied by black has grown but remains quite small at only 5%. Other colours, including multi-coloured charges account for 3%. It is interesting that the area covered by coats of arms has remained constant at 1% for all the years under review.

**Table 8 : Percentage Area of All Flags Covered by Specific Colours (1917, 1958 and 1999)**

% of Area Covered by	Year		
	1917	1958	1999
Yellow	8	9	10
Blue	25	19	20
Red	33	36	29
Black	2	3	5
White	24	22	18
Green	5	9	16
Orange	-	1	1
Other	0.6	0.4	1
Coat of Arms (multi-coloured)	1	1	1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Comparing Tables 6 and 8 reveals that red is the dominant colour both in terms of the number of flags it appears on as well as the area it occupies. Although blue occupies the second largest area on flags, the second most popular colour on the total number of flags is actually white. It appears, therefore, that white appears on more flags but in smaller amounts while blue is on fewer flags but in larger amounts. Yellow appears on more flags in smaller amounts than green, while green occupies the third largest area appearing on fewer flags than yellow but in larger amounts. Similar observations occur for the other main colours used on flags but the undisputed most popular colour remains red.

**Table 9 : Percentage Area of All Flags in Each Continent Covered by Specific Colours (1999)**

% of area Covered by	Continent					
	Africa	America	Asia	Europe	Oceania	World
Yellow	13	12	5	9	6	10
Blue	14	28	11	20	51	20
Red	24	25	38	32	25	29
Black	6	4	5	3	4	5
White	12	17	23	24	7	18
Green	30	12	15	6	6	16
Orange	2	-	1	1	1	1
Other	-	-	2	4	-	1
Coat of Arms (multi-coloured)	-	1	-	1	1	1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 9 and Figure 2 show the area occupied by colour by continent in 1999. This table shows that in Africa, green occupies the largest area at 30%, followed by red (24%) while in the Americas, blue (28%) has the largest area followed closely by red (25%). Red occupies the largest area in Asia (38%) and in Europe (32%), followed by white in both areas. In Oceania, 51% of the flag areas is blue followed by red at 25%.

Table 10 shows the percentage flag area covered by a specific colour by continent in 1999. African flags account for most of the yellow, black, green and orange areas at 37%, 36%, 53% and 39% respectively. Most of the blue area is found in America and Europe (26% and 25%),

respectively). Asia and Europe account for the bulk of the red area at 29% and 27%, respectively, as well as the white area at 29% and 33%, respectively. Other colours, mainly maroon and dark red, are predominantly a feature of European flags (Georgia and Latvia) at 65% and Asia (Qatar and Turkmenistan) at 30%. 84% of the area occupied by multi-coloured coats of arms is found in America and Europe (42% each).

**Table 10 : Percentage Flag Area Covered by a Specific Colour by Continent (1999)**

Year 1999 Colour	% of Flag Area by Continent					
	Africa	America	Asia	Europe	Oceania	World
Yellow	37	23	12	23	4	100
Blue	19	26	12	25	19	100
Red	23	15	29	27	6	100
Black	36	17	26	14	7	100
White	18	17	29	33	3	100
Green	53	14	21	9	3	100
Orange	39	-	24	32	5	100
Other	5	-	30	65	-	100
Coat of Arms (multi-coloured)	3	42	-	42	13	100
<b>Total</b>	<b>28</b>	<b>18</b>	<b>22</b>	<b>24</b>	<b>7</b>	<b>100</b>

### 3. SYMBOLS

The use of symbols on flags was analysed for all the five years considered (Table 11). In 1917 the most popular symbol on flags was a cross. While the overall number of flags with this symbol has remained more or less constant, the relative percentage has declined from 23% to 9% in 1999. The star, either singularly or with others, is the most popular symbol on flags and O'Malley's points out that this was also the case in 1975. Flags containing multiple stars have remained more or less constant at 12% to 15%, while those with a single star have grown from 9% in 1917 to 14% in 1999, peaking at 18% in 1970. Another popular charge throughout the century has been the heraldic shield or full arms on flags. The number of flags with such charges peaked in 1939 with 16% and has declined to 10% today. Caution must be expressed as it is not always easy to determine whether the national flag contains arms (e.g. Spain) but this feature certainly predominates on state flags, where they differ from the corresponding national flag.

While the use of the saltire has declined since 1917, the percentage of flags displaying a crescent has increased from 2% in 1917 to 7% in 1999, as has that containing a sun, both at 8% in 1999. A feature of some more modern flags is the display of weapons, although this has declined in relative terms since 1970, possibly as a result of the removal of communist and revolutionary symbols during the 1980s. Flora and fauna on national flags were non-existent until the 1950s, although it must be noted that they were a feature of a number of badges used on the flags of British colonies prior to this. Fauna appears to have been more popular than flora until 1999 when both are found on 5% of the flags reviewed. Other symbols found on flags in 1999 include discs (8%), writing (3%), crowns (2%), tools or implements (2%), ornaments (1.5%) and a map currently in the single instance on the flag of Cyprus - although the first post-independence flag of Bangladesh also briefly displayed a map of that country.



Co-author Bruce Berry, FIAV Secretary for Congresses, left, with His Excellency, Gard Gardom, Lt.- Governor of B.C. and Mrs. Gardom at a viceregal reception for ICV18 delegates

**Table 11 : Percentage of Flags Charged with Specific Symbols (1917-1999)**

% of Area Covered by	Year .				
	1917	1939	1958	1970	1999
Cross	23	19	14	8	9
Saltire	9	4	5	4	4
Crescent	2	4	8	8	7
Disc	5	3	7	6	8
Fauna	-	-	4	4	5
Flora	-	-	1	1.5	5
Shield/arms	11	16	13	11	10
Single star	9	11	17	18	14
Multiple stars	12	14	15	12	15
Sun	2	3.5	5	5	8
Writing	5	5	2	2	3
Weapons	-	1.5	3	4	4
Ornament	-	-	-	-	1.5
Building	-	-	2	1	1
Crown	2	1.5	2	1	2
Map	-	-	-	1	0.5
Tool/implement	-	1.5	2	1.5	2

The popularity of the use of symbols on flags has changed over the years. The cross was the most popular in 1917 and 1939. In 1958 a single star was the most popular symbol appearing on 17% of flags followed by multiple stars on 15%. The single star was still the most popular in 1970 while multiple stars, followed by a single star are the most popular in 1999. Overall, the star is the most popular symbol on flags this century, followed by a heraldic shield and/or arms. Recently there has been an increased use of the sun and disc, each being found on 8% of flags in 1999.

**Table 12 : Percentage of Flags in Each Continent Charged with Specific Symbols (1999)**

% of Flags Charged by	% of Flags					
	Africa	America	Asia	Europe	Oceania	World
Cross	-	9	-	19	36	9
Saltire	2	3	-	2	29	4
Crescent	8	-	21	2	-	7
Disc	9	9	16	-	7	8
Fauna	6	3	7	2	14	5
Flora	2	6	9	2	7	5
Shield/arms	4	17	9	15	7	10
Single star	32	9	14	2	21	8
Multiple stars	9	20	21	2	50	15
Sun	4	9	14	2	21	8
Writing	4	3	7	-	-	3
Weapons	9	3	5	-	-	4
Ornament	-	-	5	2	-	1.5
Building	-	-	5	-	-	1
Crown	-	-	2	4	-	1.5
Map	-	-	-	2	-	0.5
Tool/implement	4	-	5	-	-	2

**Table 12** shows the use of symbols on the flags per continent in 1999 and reveals that the most popular symbol found on African flags is the single star (32%). Being found on 9% of the flags respectively, the disc, multiple stars and weapons are the next most popular symbols found on African flags. Multiple stars are popular on the flags flown on the American continent, followed by shields or arms while in Europe the cross is the most popular symbol. The shield or arms is the second most popular symbol on European flags.

Half of the flags in Oceania have multiple stars and can be attributed to flags displaying the Southern Cross. The cross and saltire are also popular in this part of the world, due in the main to the number of flags encompassing the Union Jack which contains these elements. The use of flora and fauna is also more popular in this region than elsewhere, with birds being a common feature as found on the flags of Papua New Guinea, Kiribati, etc.

#### 4. PROPORTIONS

The most popular flag proportion in 1999 is 2:3 which accounts for 41% of all national flags, followed by 1:2 at 29% and 3:5 at 11% (**Table 13**). This was also the case in the studies conducted in the 1970s reported on by Weitman and O'Malley<sup>4</sup>. Weitman<sup>5</sup> argues that the trend from 1929 to 1970 was that of increasing towards flags in the proportion of 2:3, with 56% of national flags in 1970 being in this proportion. This appears to have shown a decline recently and can possibly be attributed to the break-up of the USSR and former Yugoslavia during the 1980s, when former constituent parts of these countries adopted flags in proportions other than 2:3. In Africa, 2:3 predominates at only 64% followed by 1:2 at 19%. 2:3 is the most popular on all the continents except Oceania, where 1:2 is predominant at 64%. This can be attributed to many flags in that region following the British pattern.

The second most popular proportion in the world is 1:2, accounting for 26% in America, 28% in Europe and 35% in Asia. The proportion 3:5 is significant in America (20%), Oceania (14%) and Europe (13%). Square flags (1:1) are found only in Europe while Nepal is the only country in the world whose flag is not rectangular and has proportions less than 1:1. Qatar is the only national flag longer than 1:2 having the official proportions of 11:28. The longest flag and the shortest flag are thus found in Asia (**Table 14**).

**Table 13 : Percentage of Flag in Each Continent with Specific Proportions (1999)**

% of Flags with Proportions	Continent					World
	Africa	America	Asia	Europe	Oceania	
Longer than 1:2	-	-	2	-	-	0.5
1:2	19	26	35	28	64	29
1:2-3:5	4	6	5	-	14	4
3:5	6	20	7	13	14	11
3:5-2:3	2	9	-	9	-	4
2:3	64	34	42	32	-	41
2:3-1:1	6	6	7	15	7	8
1:1	-	-	-	4	-	1
Shorter than 1:1	-	-	2	-	-	0.5
Total	-	100	100	100	100	100



## 5. DESIGNS

Table 15a shows that while the actual number of flags with three horizontal stripes has increased from 20 to 50, the percentage of the world's flags having this design has in fact declined from 35% to 26%. The percentage of flags with equal horizontal stripes of three colours (such as Armenia) has steadily declined over the century, although the situation was relatively constant between 1939 and 1970 (20%), followed by a slight decline to 18% by 1999. The percentage of flags having three equal horizontal stripes with only two colours (e.g. Austria) is much less than those of three horizontal stripes having three colours and has declined from 7% in 1917 to only 2% by 1999. The percentage of flags having three unequal horizontal stripes with three colours (e.g. Colombia) has remained more or less constant during the century, initially being 3% in 1917 and ending on 2% in 1999. Finally, flags having three unequal horizontal stripes with two colours (e.g. Latvia) have grown from none in 1917 to 3% in 1939, declining to 1% in 1970 and increasing again to 4% in 1999.

Table 14 : Split of Proportions by Continent (1999)

Year 1999	% of Flags by Continent					
Proportions	Africa	America	Asia	Europe	Oceania	World
Longer than 1:2	-	-	100	-	-	100
1:2	18	16	27	23	16	100
1:2-3:5	25	25	25	-	25	100
3:5	14	33	14	29	10	100
3:5-2:3	13	37	-	50	-	100
2:3	43	15	23	19	-	100
2:3-1:1	19	12	19	44	6	100
1:1	-	-	-	100	-	100
Shorter than 1:1	-	-	100	-	-	100
Total	100	100	100	100	100	100

In analyzing flags having three vertical stripes, we found that like those flags with horizontal stripes, the actual number of flags with vertical stripes has increased since 1917, although flags with this design are less popular than the horizontal variety. In percentage terms the situation has been relatively constant at 11%, peaking at 16% in 1970. The percentage of flags having three equal vertical stripes of three colours (e.g. France) has shown minor peaks and troughs, but overall has decreased from 10% to 8% between 1917 and 1999. Those flags having three equal vertical stripes with only two colours (e.g. Nigeria) has also seen minor peaks and troughs but has overall remained constant at 2%.

Flags having three unequal vertical stripes with two (e.g. Canada) or three colours (e.g. St. Vincent) only appear for the first time in 1970 and remain insignificant overall at 0.5%. Flags with two equal horizontal stripes (e.g. San Marino) have more or less remained constant in percentage terms since 1917, although the actual number has increased from 5 to 18. Only in 1999 is there a flag with two unequal horizontal stripes recorded, that of Belarus. Flags having two vertical stripes show a slight increase from 2% in 1917 to 3.5% in 1999. Unlike those with horizontal stripes, there is more balance between flags having two equal vertical stripes (e.g. Malta) and those having unequal vertical stripes (e.g. Pakistan) at 1.5% and 2% respectively.

Flags having more than three horizontal stripes have increased from 9 to 26 since 1917 although in percentage terms there has been a decrease from 16% to 13%. In 1999 there was more or less an

even split between those with equal stripes (e.g. United States) and those with unequal stripes (e.g. Botswana) at 6% and 7% respectively.

Other features of flag design were also analysed as shown in Table 15b. Overall, the percentage of flags containing cantons has halved from 16% to 8% between 1917 and 1999. Not surprisingly, the most popular cantons in 1917, contained the Union Jack or were blue. By 1999, blue remained the most popular at 4% while those containing a Union Jack had declined to 2%.

**Table 15a : Percentage of Flags with Specific Designs (1917-1999)**  
(Actual number of flags in brackets)

% of Flags with	Year				
	1917	1939	1958	1970	1999
<b>3 horizontal stripes</b>	35 (20)	32 (22)	30 (29)	27 (39)	26 (50)
Equal, 3 colours	25	20	20	20	18
Equal, 2 colours	7	6	4	3	2
Unequal, 3 colours	3	3	3	3	2
Unequal, 2 colours	-	3	3	1	4
<b>3 vertical stripes</b>	12 (7)	14 (10)	11 (11)	16 (22)	11 (22)
Equal, 3 colours	10	11	9	11	8
Equal, 2 colours	2	3	2	4	2
Unequal, 3 colours	-	-	-	0.5	0.5
Unequal, 2 colours	-	-	-	0.5	0.5
<b>2 horizontal stripes</b>	9 (5)	9 (6)	9 (9)	8 (11)	9 (18)
Equal	9	9	9	8	9
Unequal	-	-	-	-	0.5
<b>2 Vertical Stripes</b>	2 (1)	3 (2)	2 (2)	4 (6)	3.5 (7)
Equal	-	1.5	1	3	1.5
Unequal	2	1.5	1	1	2
<b>&gt; 3 horizontal stripes</b>	16 (9)	11 (8)	10 (10)	13 (18)	13 (26)
Equal	12	8	6	6.5	6
Unequal	4	3	4	6.5	7

Flags having triangles at the hoist (e.g. Zimbabwe) have become more popular increasing from 2% to 8% as have those containing a triangle elsewhere in the flag (e.g. St. Lucia). Flags with a vertical stripe at the hoist are a feature only noted in 1970 and 1999, while flags with a diagonal stripe or division (e.g. Tanzania and Bhutan) are noted only after 1958. The percentage of flags having a plain field peaked in 1958 at 20%, but overall increased from 12% to 17% between 1917 and 1999.

Healy points to the identifiable trends in post World War II flag design as being the abandonment of the canton, increased use of discs, angles (triangles, diamonds and diagonals) and an increasing complexity of flag patterns. The more recent design elements, he asserts, is due to the need to distinguish one national flag from another and the recognition of the limitations inherent in the past styles for expressing fully the individualism of emerging states.

Horizontally striped flags are the most popular on all continents (Table 16a). 25% of African flags have more than three horizontal stripes as do 14% of the flags of Oceania. In America, Asia and Europe, three horizontal striped flags are found in the majority of flags. There are no flags with two vertical stripes in America while there are no national flags with either two or three vertical stripes or two horizontal stripes in Oceania.

In analyzing other flag designs found on each continent, it emerges from Table 16b that flags containing cantons predominate in Oceania (43%), particularly flags with the Union Jack in the canton (29%) as found in the flags of Australia, New Zealand, Fiji, etc. A further 7% in Oceania have a blue canton and 7% a white canton while flags with a diagonal stripe or division are also popular on this continent (21%). 15% of African flags have a triangle at the hoist while 14% of

**Table 15b : Percentage of Flags with Specific Designs (1917-1999)**

<b>% of Flags containing</b>	<b>1917</b>	<b>1939</b>	<b>1958</b>	<b>1970</b>	<b>1999</b>
Canton: Blue	7	7	7	6	4
Canton: Red	-	-	-	-	0.5
Canton: White	2	3.5	1	2	1
Canton: White/Black	-	-	-	-	0.5
Canton: Union Jack	7	4	3	1.5	2
Border	-	-	2	1.5	2
Triangle/trapeze (hoist)	2	3	5	6	8
Triangle/rhombus (elsewhere)	2	1.5	3	2	4
Vertical stripe (hoist)	-	-	-	1.5	3
Diagonal stripe/division	-	-	1	3	7
Plain field	12	16	20	16	17

American flags have a triangle elsewhere on the flag, making it the most popular feature of flags on that continent. Flags having plain fields are found on all continents. Not surprisingly given the high proportion of flags with cantons, 57% of the flags of Oceania have plain fields. By contrast, 28% of Asian flags have plain fields as do 15% of African flags while only 9% and 3% of European and American flags, respectively, are in this category.

**Table 16a : Percentage of Flag in Each Continent with Specific Designs (1999)**

<b>% of Flags containing</b>	<b>Continent</b>					<b>World</b>
	<b>Africa</b>	<b>America</b>	<b>Asia</b>	<b>Europe</b>	<b>Oceania</b>	
3 horizontal stripes	17	29	33	34	7	26
3 vertical stripes	15	17	2	15	-	11
2 horizontal stripes	11	6	7	15	-	9
2 vertical stripes	2	-	7	6	-	4
> 3 horizontal stripes	25	14	12	2	14	14

## 6. CONCLUSION

This paper shows the statistics relating to the colours, symbols, designs and proportions of national flags of independent countries at various times during this century. The paper does not attempt to analyze the reasons for various changes or use of colours, symbols or designs, but merely presents the status quo at a given time.

**TABLE 16b : PERCENTAGE OF FLAGS IN EACH CONTINENT WITH SPECIFIC DESIGNS (1999)**

What emerges is that two and three colour flags are the most dominant feature of flags this century. Red is the most popular colour found on flags. Other popular colours are blue and white, and they, along with red, are no longer as popular as previously. The decline in the use of these colours has been compensated by an increase in green and yellow, which are now found more often on flags than earlier in the century.

Stars remain the most popular symbol on flags, the display of the single star on flags increasing during the century while the use of multiple stars has been more or less constant. The use of saltire and cross has declined while that of the crescent, disc and sun has increased.

The most popular national flag proportions in 1999 are 2:3 followed by 1:2. Although the number of flags with three horizontal stripes has increased, the overall percentage of the total has declined

**Table 16b : Percentage of Flags in Each Continent with Specific Designs (1999)**

<b>% of Flags containing</b>	<b>Africa</b>	<b>America</b>	<b>Asia</b>	<b>Europe</b>	<b>Oceania</b>	<b>World</b>
Canton: Blue	2	6	7	2	7	4
Canton: Red	2	-	-	-	-	0.5
Canton: White	-	3	-	-	7	1
Canton: White/Black	-	-	-	2	-	0.5
Canton: Union Jack	-	-	-	-	29	2
Border	-	3	7	-	-	2
Triangle/trapeze (hoist)	15	9	7	2	7	8
Triangle/rhombus (elsewhere)	-	14	5	2	-	4
Vertical stripe (hoist)	6	-	5	2	-	3
Diagonal stripe/division	9	6	5	2	21	7
Plain field	15	3	28	9	57	17

as have those having more than three horizontal stripes. Flags having three vertical stripes have also increased while remaining more or less constant in relative terms. Flags containing cantons have declined in relative terms while the use of triangles, particularly at the hoist, has increased.

The overall impression gained from the analysis is that today flags use more colours and have more complicated designs, a reflection of the greater number and diversity of nation states. However, stripes remain a dominant feature on flags. In general terms, apart from changes in detail and the use of more geometric designs, particularly since 1970, the flags flying at the end of the century are remarkably similar in colour and design to those used earlier in the twentieth century.

## 7. NOTES :

1 The IX International Congress of Vexillology, Ottawa, Canada, in 1981, recognized the Flag Information Code and recommended its use to members of the International Federation of Vexillological Associations (FIAV). The Code adopts standard symbols and letters when describing the colours, colour shades and typology of flags.

2 Weitman (1973), p.341.

3 O'Malley, (1980), p. 257.

4 Weitman, op cit and O'Malley, op cit.

5 Weitman, op cit, p. 338.

6 See Healy (1986) and (1989).

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### Bruce Berry

Bruce was born in Zimbabwe and has been collecting flags since he was 10 years old. He is a founder member, and the current Secretary/Treasurer, of the Southern African Vexillological Association (SAVA) and was elected FIAV Secretary-General for Congresses at the XVII International Congress of Vexillology held in Cape Town in August 1997. Bruce has written a number of articles on flags. His vexillological interests lie with the flags of southern Africa and flags based on the British ensign pattern. He also has a thematic philatelic collection of stamps depicting flags. He is a Development Economist by profession and lives with his wife, Rhoda, and their two sons in Johannesburg, South Africa.

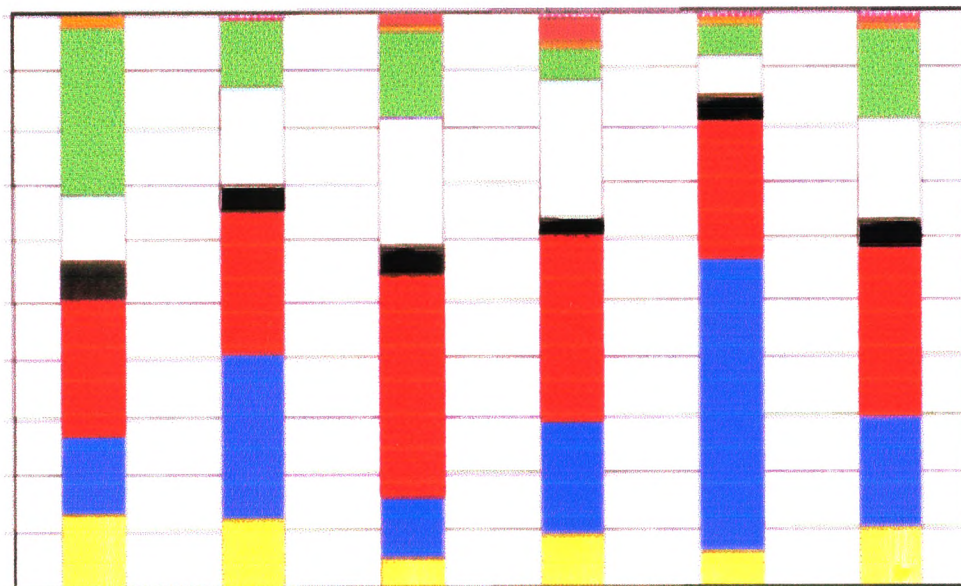
### Theo Stylianides

Theo, originally from Cyprus, came to South Africa in 1969. He is a founder member, and past Vice-Chairman and Chairman, of the Southern African Vexillological Association (SAVA). Theo developed an interest in flags as a child and is interested in all aspects of vexillology, but more specifically national flags and ensigns, past and present, flags of sub-national units and the flags of independence movements. He has a large collection of books and charts as well as copies of numerous vexillological articles and papers published in South Africa. He is a regular contributor to the SAVA *Newsletter* and is an avid reader of numerous vexillological publications and periodicals. He is an Operations Researcher and lives with his wife, Eleanor, in Pretoria, South Africa.



Theo Stylianides

Bruce Berry and Theo Stylianides: Vexistats, Fig. 2



Africa America Asia Europe Oceania World  
Fig. 2 : Percentage Colour Area in Each Continent

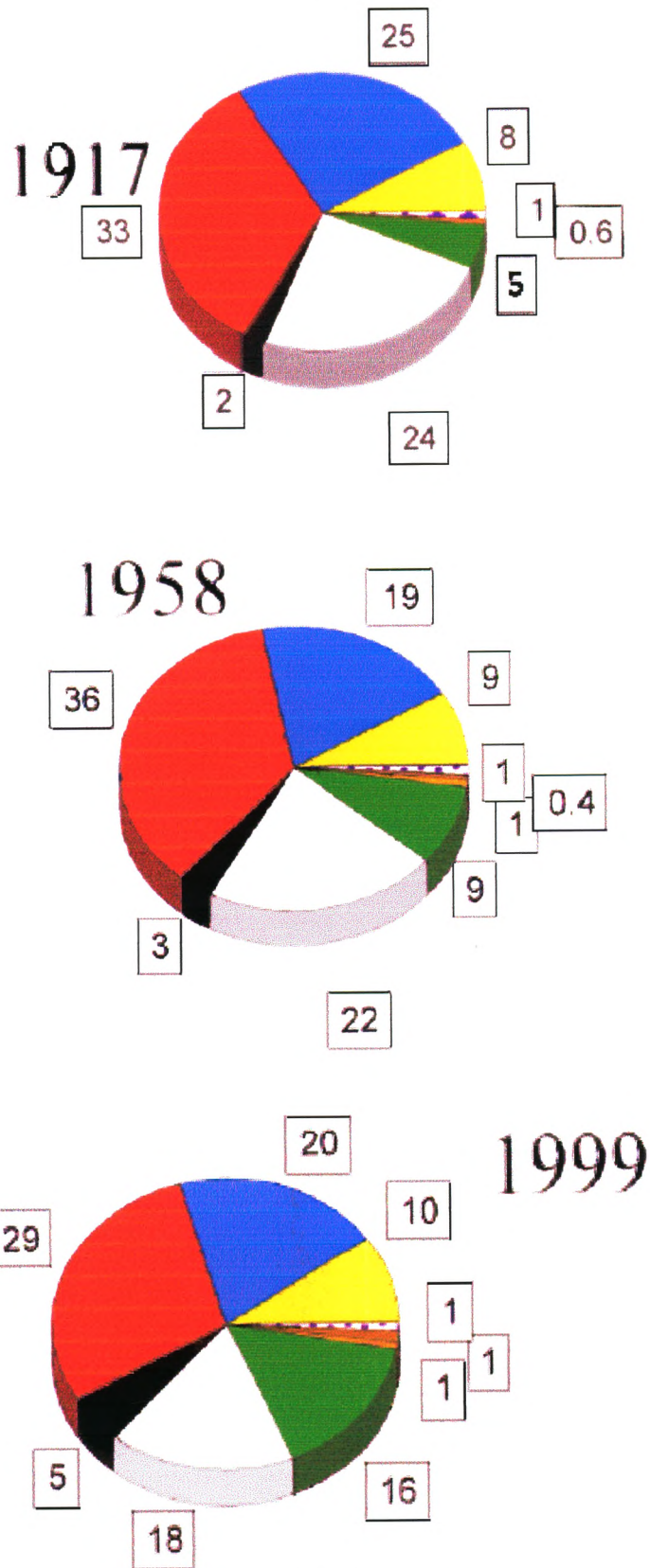


Fig. 1 Percentage colour area in the world (1917-1999)

**Bruce Berry and Theo Stylianides :  
Vexistats, Annex**

**List of Independent States (1917-1999)**

Name of State	1917	1939	1958	1970	1999
Afghanistan		v	v	v	v
Albania	v	v	v	v	v
Algeria				v	v
Andorra	v	v	v	v	v
Angola					v
Antigua and Barbuda					v
Argentina	v	v	v	v	v
Armenia					v
Australia	v	v	v	v	v
Austria			v	v	v
Austria-Hungary	v				
Azerbaijan					v
Bahamas, The					v
Bahrain					v
Bangladesh					v
Barbados				v	v
Belarus					v
Belgium	v	v	v	v	v
Belize					v
Benin (Dahomey)				v	v
Bhutan			v	v	v
Bolivia	v	v	v	v	v
Bosnia and Herzegovina					v
Botswana				v	v
Brazil	v	v	v	v	v
Brunei					v
Bulgaria	v	v	v	v	v
Burkina Faso (Upper Volta)				v	v
Burundi				v	v
Cambodia (Kampuchea)			v	v	v
Cameroon				v	v
Canada	v	v	v	v	v
Cape Verde					v
Central African Republic				v	v
Chad				v	v
Chile	v	v	v	v	v
China	v	v	v	v	v
Colombia	v	v	v	v	v
Comoros					v
Congo (Brazzaville)				v	v
Congo (Kinshasa)				v	v
Costa Rica	v	v	v	v	v
Côte d'Ivoire				v	v
Croatia					v
Cuba	v	v	v	v	v
Cyprus				v	v
Czech Republic					v
Czechoslovakia				v	v
Denmark	v	v	v	v	v

Name of State	1917	1939	1958	1970	1999
Djibouti					v
Dominica					v
Dominican Republic	v	v	v	v	v
Ecuador	v	v	v	v	v
Egypt (United Arab Rep.)		v	v	v	v
El Salvador	v	v	v	v	v
Equatorial Guinea				v	v
Eritrea					v
Estonia		v			v
Ethiopia (Abyssinia)	v		v	v	v
Fiji					v
Finland		v	v	v	v
France	v	v	v	v	v
Gabon					v
Gambia, The				v	v
Georgia					v
Germany	v	v			v
Germany, East			v	v	
Germany, West			v	v	
Ghana			v	v	v
Greece	v	v	v	v	v
Grenada					v
Guatemala	v	v	v	v	v
Guinea			v	v	v
Guinea-Bissau					v
Guyana					v
Haiti	v	v	v	v	v
Honduras	v	v	v	v	v
Hungary		v	v	v	v
Iceland				v	v
India				v	v
Indonesia				v	v
Iran (Persia)	v	v	v	v	v
Iraq			v	v	v
Ireland (Eire)			v	v	v
Israel				v	v
Italy	v	v	v	v	v
Jamaica					v
Japan	v	v	v	v	v
Jordan				v	v
Kazakhstan					v
Kenya					v
Kiribati					v
Korea, North				v	v
Korea, South				v	v
Kuwait					v
Kyrgyzstan					v
Laos				v	v
Latvia		v			v
Lebanon				v	v
Lesotho					v
Liberia	v	v	v	v	v
Libya				v	v
Liechtenstein	v	v	v	v	v

<i>Name of State</i>	1917	1939	1958	1970	1999	<i>Name of State</i>	1917	1939	1958	1970	1999
Lithuania		v			v	Senegal				v	v
Luxembourg	v	v	v	v	v	Serbia		v			
Macedonia (FYROM)					v	Seychelles					v
Madagascar (Malagasy Rep.)				v	v	Sierra Leone				v	v
Malawi				v	v	Singapore				v	v
Malaysia			v	v	v	Slovakia					v
Maldives				v	v	Slovenia					v
Mal				v	v	Solomon Islands					v
Malta				v	v	Somalia				v	v
Manchuria		v				South Africa	v	v	v	v	v
Marshall Islands					v	Spain	v	v	v	v	v
Mauritania				v	v	Sri Lanka (Ceylon)			v	v	v
Mauritius				v	v	Sudan			v	v	v
Mexico	v	v	v	v	v	Suriname					v
Micronesia, F.S. of					v	Swaziland				v	v
Moldova					v	Sweden	v	v	v		
Monaco	v	v	v	v	v	Switzerland	v	v	v	v	v
Mongolia			v	v	v	Syria			v	v	v
Montenegro	v					Taiwan			v	v	v
Morocco			v	v	v	Tajikistan					v
Mozambique					v	Tanzania				v	v
Myanmar (Burma)			v	v	v	Thailand (Siam)	v	v	v	v	v
Namibia					v	Togo				v	v
Nauru					v	Tonga				v	v
Nepal			v	v	v	Trinidad and Tobago				v	v
Netherlands, The	v	v	v	v	v	Tunisia			v	v	v
New Zealand	v	v	v	v	v	Turkey	v	v	v	v	v
Nicaragua	v	v	v	v	v	Turkmenistan					v
Niger				v	v	Tuvalu					v
Nigeria				v	v	Uganda				v	v
Norway	v	v	v	v	v	Ukraine					v
Oman (Muscat and Oman)			v	v	v	USSR			v	v	v
Pakistan			v	v	v	United Arab Emirates					v
Palau					v	United Kingdom	v	v	v	v	v
Panama	v	v	v	v	v	United States	v	v	v	v	v
Papua New Guinea					v	Uruguay	v	v	v	v	v
Paraguay	v	v	v	v	v	Uzbekistan					v
Peru	v	v	v	v	v	Vanuatu					v
Philippines			v	v	v	Vatican City (Holy See)				v	v
Poland		v	v	v	v	Venezuela	v	v	v	v	v
Portugal	v	v	v	v	v	Vietnam				v	v
Qatar					v	Vietnam, North					v
Romania (Rumania)	v	v	v	v	v	Vietnam, South					v
Russia	v				v	Yemen					v
Rwanda				v	v	Yemen, North				v	v
St. Kitts and Nevis					v	Yemen, South					v
St. Lucia					v	Yugoslavia			v	v	v
St. Vincent and the Grenadines					v	Zambia				v	v
Samoa (Western Samoa)				v	v	Zimbabwe (Rhodesia)				v	v
San Marino	v	v	v	v	v						
São Tomé and Príncipe					v						
Saudi Arabia		v	v	v	v						