Content Analysis of Media (Print)

Coverage of Biotechnology Issues in Kenya

(April 2006 to April 2007)

December 2008

CHAPTER ONE

1.0 Background and Objectives

1.1. Background

This is a report on the Content Analysis of the coverage of biotechnology by the *Daily Nation*, *The East African* and *The Standard* covering the period of April 1, 2006 to April 30, 2007.

Criteria for selecting the period to study:

This is the period where there was heightened interest in biotechnology issues because of the impeding Biosafety Bill

The media shape public opinion by the way they select and present information to their audiences. Through the Gate keeper and agenda setting theories, the media themselves decide what to cover and what not to cover; what to emphasize and what to down play. In other words they assign value to issues, and the public always assign the same value because the media have said so.

In short, the media set the agenda for the public. This has lead to a conclusion that the world is mass media mediated. If so, then, it is important to know how they shape the biotechnology agenda to the Kenyan public. Is it for good or for worse? What are the strengths, weaknesses, opportunities and threats with regard to media coverage of biotechnology in Kenya? This study sheds some light on these questions by analysing biotechnology-related contents of two major local daily newspapers, that is, *Daily Nation* and *The Standard*, and one regional weekly newspaper, *The East African.*

The media are bound by their own codes of ethics and conduct to behave responsibility and to uphold professional integrity while covering issues, especially emotive ones, more so an emerging but polarising science, such as modern biotechnology.

This report is divided into four chapters. Chapter one covers the background and objectives of the study. Chapter two highlights data collection methods. Chapters three and four discuss findings of the study, conclusions and recommendations respectively.

1.2. Objectives of the Study

The following were the objectives of the study.

1. Determine the quality and quantity of print media coverage of biotechnology issues in Kenya
2. Compare and contrast coverage of the same by The Standard (Daily, Saturday and Sunday Standard) and the Nation (Nation, Saturday Nation and Sunday Nation) and The East African
3. Determine key sources of biotechnology stories

4. Identify key biotech reporters in Kenya
5. Compile a comprehensive report on the coverage to guide implementation of the IDRC project on Utilisation of Radio for Communicating Biotech issues.

This report presents and discusses the findings of the Content Analysis of print media coverage of biotechnology issues in Kenya.

CHAPTER TWO

2.0. Data collection and analysis methods

This comparative Content Analysis quantitatively and qualitatively analysed the coverage of biotechnology issues by the *Daily Nation, Saturday Nation, Sunday Nation* and the *EastAfrican from the Nation Media Group* and *The Standard, Saturday Standard* and *Sunday Standard* newspapers of the Standard Media Group. One year period: November1, 2006 to November 30, 2007, was selected for study.

The contents of entire 365 issues of each of the daily newspapers and the entire 52 editions of the *EastAfrican* were examined for the coverage of biotechnology issues. A standardized data collection sheet was used (*see appendix1*). Biotechnology articles were identified, counted, measured, read and categorized.

Under this study, an article refers to news, features, commentary/opinion, an analysis, editorial and letters to the editor. It is notable that advertorials were excluded from the study because they are paid for by the source and may not reflect or prove an own initiative by the paper. Besides, they may not necessarily reflect the editorial policy of the paper.

The unit of observation and analysis was the published article in the papers. The articles were analysed for prominence (area and placement), kind of story (whether hard news, features, commentary, opinion, analysis) and content of the story (balanced, fairness, and accuracy). Latest model of the statistical package for social sciences (SPSS) was used to analyse data.

CHAPTER THREE

3.0. Findings and discussions

3.1. Frequency of coverage of biotechnology

A total of 140 articles were published by the three newspapers between November 1, 2006 and November 30, 2007. The *Daily Nation, Saturday Nation, Sunday Nation combined* published a total of 30 articles on biotechnology only. Their sister weekly Newspaper aimed at regional readers, the *EastAfrican* publishing a total of 15 articles on biotechnology. This compares very poorly with the *The Standard* (including Saturday and Sunday editions), which published a total of 95 articles on biotechnology over the same period. (*See table 1*).

In terms of area per square centimetres allocated to biotechnology articles by the two mainstream newspapers, the Standard lead by a big margin as it gave 41,127.6 cm^2, which was more than three times the 13,935.2 cm^2 dedicated for such articles by the Nation. It is instructive to note that the Nation newspapers have higher pagination on average than The Standard newspapers. Over the same period, the Nation Newspapers (Daily, Saturday and Sunday) had combined total volume of 24,557,200 cm^2, with the *East African* commanding additional 2,654,080 cm^2. Comparatively *The Standard* had only 18,502,580 cm^2 (*Table 1 and Figure 1*).

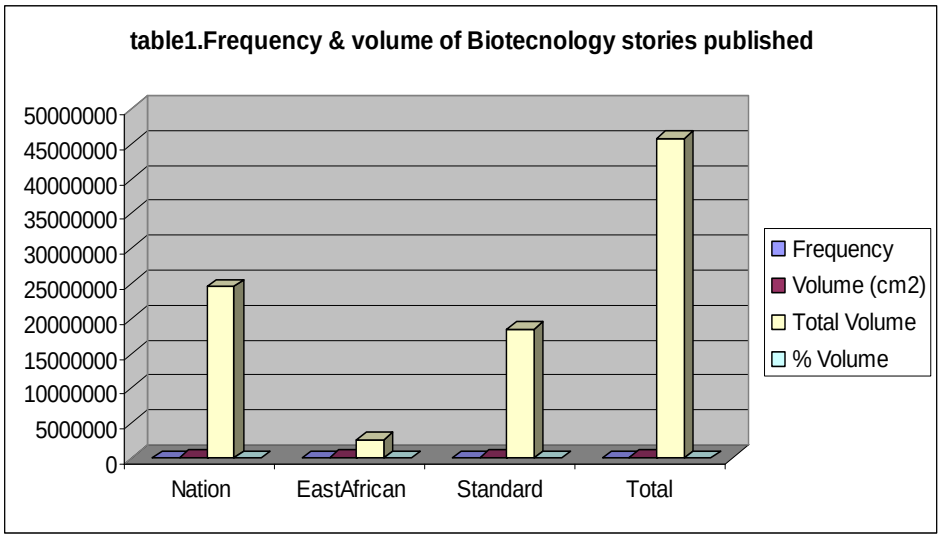
Table1. Frequency & volume of Biotechnology stories published

	Frequency	**Volume (cm^2)**	**Total Volume***	**% Volume**
Nation	30	13,935.2	24,557,200	0.1
EastAfrican	15	8,116	2,654,080	0.3
Standard	95	41,127.6	18,502,580	0.2
Total	**140**	**63,178.8**	**45,713,860**	**0.14**

*(Biotech & non-biotech stories over the period)

The frequency of biotechnology articles in general was much lower, almost negligible compared to non-biotech articles. Biotechnology articles only accounted for a paltry 0.14 % editorial space for the 12 months under study as clearly depicted in the figure 1 below.

Fig 1. Frequency and volume of biotechnology articles



Frequency of media coverage of an issue is generally determined by various factors key among them being news values, ability of the reporters to comprehend and make news out of the issue, easy access to information, ability to drive sales and whims of the editor. It is difficult to argue that biotechnology stories receive such negligible coverage because there isn't much going in the field of biotechnology, for indeed there is a lot going on - from research to develop biotechnology products, to policy and legislation formulation, the politics and the lobbying, to funding issues.

3.2. Sources of biotechnology articles

Only four journalists accounted for the bulk of articles published by the newspapers under review. In the Nation Media, Gatonye Gathura, Boniface Mwangi and John Mbaria wrote most of the articles while in the The Standard Wandera Ojanji accounted for most of the articles(*See table 2 below*). For instance, Wandera accounted for 48.4 per cent of all articles on biotechnology published by the Standard newspapers over the study period. Mbaria penned 66.7 per cent of all artciles published in the *EasAFrican*. Gatonye Gathura and Boniface Mwangi account for 16.2 and 19.4 per cent respectively of all stories published in the Nation over the study period.

Table 2: Writers who published more than one article over the study period

	Author	**Publication**	**No. of Published articles**	**% of total articles published**
1.	Wandera Ojanji	Standard	46	48.4
2.	Samuel Otieno	Standard	4	4.2
3.	Elizabeth Mwai	Standard	3	3.2
4.	Judy Oguttu	Standard	3	3.2
5.	Dann Okoth	Standard	2	2.1
6.	Maore Ithula	Standard	2	2.1
7.	Author Not Mentioned	Standard	15	15.8
8.	Foreign/Agencies	Standard	7	7.4
9.	Boniface Mwangi	Nation	6	20
10.	Gatonye Gathura	Nation	5	16.7
11.	Isaiah Esipisu	Nation	3	10
12.	Bob Odalo	Nation	3	10
13.	Kennedy Senelwa	Nation	2	6.7
14.	Foreign/Agencies	Nation	6	20
15.	John Mbaria	EastAfrican	10	66.7
16.	Esther Nakkazi	EastAfrican	2	13.3
17.	Foreign/Agencies	EastAfrican	2	13.3

Of sources, most of the articles published were locally sourced or by local writers as opposed to foreign media or agencies for articles on biotechnology (see *table 2 above*). Foreign articles or by foreign correspondents on biotechnology accounted for only 7.4, 19.4 and 13.3% of articles published by the Standard, Nation and *EastAfrican* respectively over the one year of study. Despite having more resources, the Nation depended more on wire articles than *The Standard*.

In the period under review, only the *Sunday Standard* had a regular column on biotechnology. This may show the low opinion the editors of those newspapers have

of biotechnology compared to other themes like politics; business, finance, health, and shipping have regular columns and or weekly pullouts.

3.3. Type stories published

News features were the most published articles accounting for 51.1 % *(see table 2 and figure 2 below)*, followed by hard news articles that accounted for 40.4% of all the biotechnology articles published by the three newspapers in the study period.

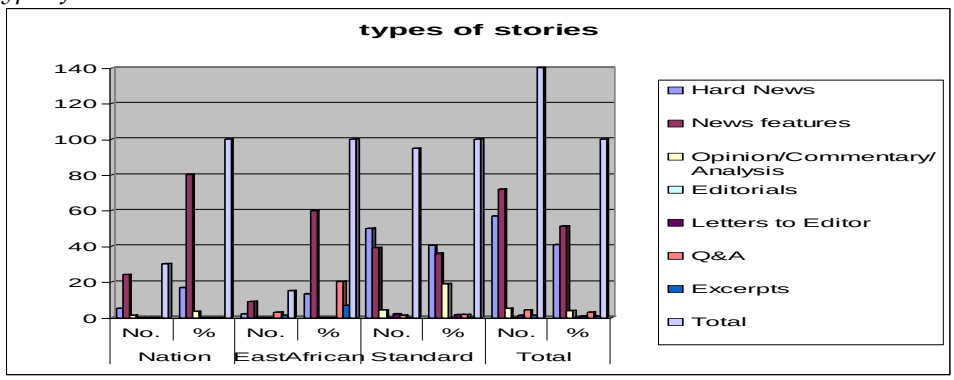
Table 2. Type of Stories

Type of Article	Nation		EastAfrican		Standard		Total	
	No.	%	No.	%	No.	%	No.	%
Hard News	5	16.6	2	13.3	50	40.6	57	40.7
News features	24	80	9	60.0	39	35.9	72	51.4
Opinion/Commentary/ Analysis	1	3.3	0	0	4	18.8	5	3.6
Editorials	0	0	0	0	0	0	0	0
Letters to Editor	0	0	0	0	2	1.6	1	0.7
Q&A	0	0	3	20	1	1.6	4	2.9
Excerpts	0	0	1	6.7	0	0	1	0.7
Total	30	100	15	100	95	100	140	100

It can be argued that the editorials and feature articles are the best persuasive, educational and informative tools of newspapers since issues are best articulated through them. Features have more room to develop why and how something is occurring, explaining in more detail what is happening and how it is happening or even why it is happening. They provide more perspective. Even so, the study found out that none of the newspapers wrote an editorial on biotechnology.

Equally less covered were Letters-to-the-editor, through which the public express their views on a topic. While The Standard published just two letters, the Nation group of newspapers did not carry any letters to the editor on biotechnology.

Fig2: Type of Stories



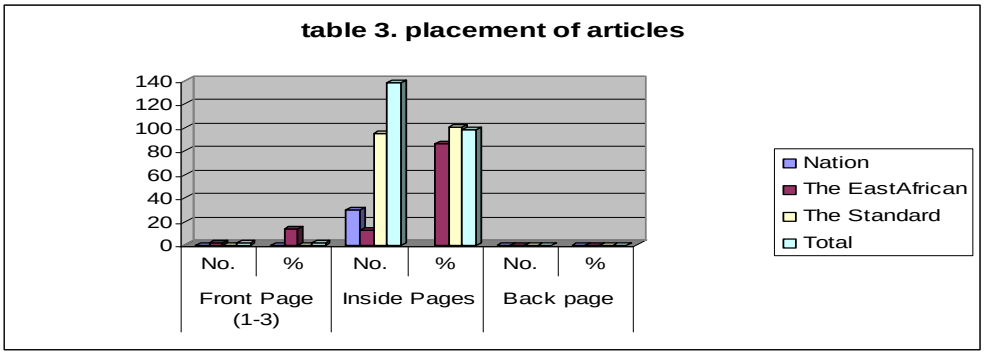
3.4. Prominence of biotechnology stories

Length and placement of stories are indicators of prominence placed on a story. An article placed on the front page, and pages two, three and back of a newspaper are considered to be prominent. Positioning of an article in the newspapers depends mainly how the editor perceives it in terms of importance or newsworthiness. But placement may also be determined by unavailability of good articles from the editors' preferred themes, the editorial policy and advertising interests of the newspaper.

In the period under review, only the east African placed two stories in pages 1-3. The other newspapers placed their articles in the inside pages. No paper placed a biotechnology article in the back page (*Table 3 and Figure 3 below*).

Table 3. Placement of articles

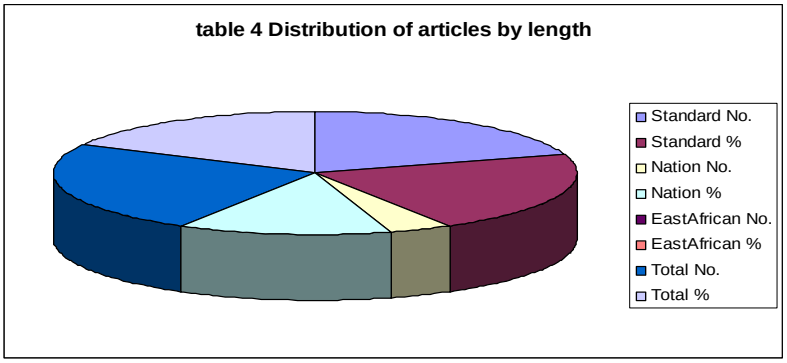
Placement	**Front Page (1-3)**		**Inside Pages**		**Back page**	
	No.	%	No.	%	No.	%
Nation	0	0	30		0	0
EastAfrican	2	13.3	13	86.7	0	0
Standard	0	0	95	100	0	0
Total	2	1.4	138	98.6	0	0



On individual story treatment, editors of the publication tended to give big space to the biotechnology stories, whenever they were published. For instance, of the 140 stories, only 40 stories (35%) were allocated space below 300 cm^2. Six of the stories were allocated an average of 700 square centimeters. This shows that whereas the percentage of biotechnology stories is low (table 4 and Figure 4), individual stories received a much higher prominence in terms of space allocation.

Table 4. Distribution of articles by length (cm^2)

	Standard		**Nation**		**EastAfrican**		**Total**	
	No.	%	No.	%	No.	%	No.	%
Less than 100	5	5.3	1	3.3	0	0	6	4.3
101-300	35	36.8	6	19.4	2	13.3	43	30.5
301-600	28	29.5	18	61.3	8	53.3	55	39.0
Over 600	27	28.4	5	16.1	5	33.3	37	26.2
Total	95	100	30	100	15	100	140	100



3.5. Accuracy, Fairness and Balance of published biotechnology articles

A balanced article is one that gives both sides of an issue and especially so if the issue is controversial in nature. 93.6% of all articles on biotechnology published by the three newspapers were found to be balanced, fair and accurate. The East African had the highest number of unbalanced stories as shown in table 5 below. The weekly newspaper carried 15 biotechnology stories over the period out of which 11 were found to be accurate while four were inaccurate.

Table 5. Accuracy/Balance/Fairness of articles

	No. of articles Accurate/Balanced/Fair		**No. of articles Not Accurate/Balanced/Fair**	
	No.	%	No.	%
Nation	29	96.7	1	3.3
EastAfrican	11	73.3	4	26.7
Standard	91	85.8	4	4.2
Total	131	93.6	9	6.4

CHAPTER FOUR

4.0. Conclusions and recommendations

From the findings, biotechnology is not adequately covered by the media in Kenya to enable appropriate public intervention and participation in the biotechnology development process. This minimum coverage has been demonstrated by the inadequate treatment given to three of the four variables of effective news reporting such as number of items, space allocation, and placement of the stories.

That only two out the 140 of the biotechnology stories made headlines, shows that editors accord biotechnology articles little prominence. Measures should be taken to improve both quantity and quality of coverage of biotechnology issues by the two

leading media houses. A good starting point could be improvement of relationship between journalists and scientists, so that the former could have access to accurate biotechnology information from the latter, if that is found to be part of the problem. Biotechnology stakeholders could also improve relationship with the media through incentives such as establishment of annual awards, capacity building trainings production of a local guide to biotechnology writing in the form a manual, and also developing rapports through informal meetings where biotechnology issues are discussed informally without formal presentations.

Journalists' training needs to be enhanced to increase accuracy of articles as well as promote investigative journalism. Trained biotechnology journalists should be monitored to ascertain their effectiveness and the impact of their articles and/or programmes. Strengthening of journalists' peer associations on science matters should be given serious attention by various organizations in biotechnology, so that they may attract and maintain talented and competent writers and hence continue to write high quality articles on biotechnology. At the same time, editors should be targeted with biotechnology information so that they can appreciate the technology and give it priority in terms of coverage.

Scientists, as sources of biotechnology information, need to be trained in communication skills so that they can be more forthcoming with information. Through such training they may also learn how to package complex scientific information into a more accessible language. They should also be trained on effective media relations. There is also need to see more biotechnology experts coming out to announce major projects being implemented, activities plan and who the beneficiaries are. Such kind of initiative could start by scientists organizing science cafes to talk in ordinary language about some critical and beneficial research and science projects being carried out to being planned.

There is need to create biotechnology desks by media houses where all biotechnology issues could be channelled in a creative, sustainable and effective manner. Biotechnology spokespersons need to be identified so that there is constant flow of daily or frequent flow of biotechnology information to these desks. The communication channels and the spokespersons could also be used for verification of facts, reporting of upcoming events and releases.

More such studies needs to be conducted so that a trend on the coverage of biotechnology stories can be determined and appropriate longer term actions can be taken to address challenges that may be observed.

5.0. APPENDICES

APPENDIX I: Data Collection Sheet

CODE SHEET (INSTRUMENT OF ANALYSIS)

Situation Analysis survey on reporting of biotechnology in the *Daily Nation and The Standard covering the period of November 1, 2006 to November 30, 2007*

Indicators of Analysis

1. Name of Researcher ……
2. Name of Publication _____
3. Date of Publication _____
4. Actual headline of the story and **page** number of story ……
5. Category/type of Story
    a. Hard news
    b. Investigative
    c. News feature
    d. Editorials/Analysis/Opinions/commentary
    e. Press release/conference/workshop
    f. Advertorial/supplement
    g. Letters to the editor
    h. Q&A
    i. Others (specify)
6. Issues covered in the article ie policy on GMOs, health concerns of Tissue Culture etc
7. Placement of Story
    a. Front page (pages 1-3)
    b. Inside pages
    c. Back page
8. Article Size (cm^2) _____
9. Name of author(s) of article.
10. Is author local/foreign/agency?
11. Comment on the story ie fair, balanced and fair, not balanced, accurate, not accurate, tone, subjective etc.
12. Use of jargons – simple, technical (give examples of technical phrases, or words used that connote technicality
13. Quoted sources of information