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Folklore and History as Twin Rivers of World Heritage: A Personal Narrative

Reachability and Uptake of Modern Contraceptives among Spouses in Kogi State, North-Central Nigeria

By

Edward Ukwubile Egwuaba and Sunday Blessing Adeyi

Abstract

This study investigated the reachability and uptake of modern contraceptives among spouses in Kogi State, North-Central, Nigeria. Specifically, amongst others, it determined how the level of reachability of modern contraceptives affect the use among spouses in Kogi State, and identified those factors that affect the use of modern contraceptives among spouses in Kogi State. The study made use of five theories, but relied on the rational choice theory in explaining the social phenomena studied. The study adopted cross-sectional survey design. Kogi State has a 2016 projected population of 4,473,490. However, the population for the study consisted of all spouses of age 18-49. The study has a sample size of 1067. The instruments for data collection were questionnaire, in-depth interviews (IDIs) schedules and Focus Group Discussion (FGD) guide. Multi-stage sampling techniques, entailing simple random sampling, systematic and purposive sampling techniques, were adopted in the study. The data analysis was based on 1,064 questionnaires that were correctly filled and returned by the respondents out of the 1067 distributed. A total of 6 IDIs and 12 FGDs were conducted in the study. Descriptive statistics like frequencies and percentages were employed in interpreting the data, while chi square was used in testing the hypotheses. Results revealed that 50.3% of the respondents report non availability of modern contraceptives in their locality which affects contraceptives use among spouses in Kogi State. 75.2% of the study respondents report that lack of education amongst majority of spouses as well as several other determinants like non-accessibility, cost, proximity or distance of clinics from their homes and religion and culture of the people account for poor and low use of modern contraceptives in Kogi State. Based on the above findings, the study recommends that sociologists should educate and create more awareness about the need of spouses to use modern contraceptives by organizing programmes that educate and keep spouses and reproductive persons well informed. Government should collaborate with international bodies and organizations that are capable of providing the required healthcare needed by spouses that can provide these services at subsidized rate for spouses. If possible, government should incorporate and implement already formulated policies that promote free family planning services to rural dwellers.

Keywords: reachability, modern contraceptives, Kogi State, healthcare, family planning

Introduction

The growing use of modern contraceptives around the world has given spouses the opportunity to control the number of children they give birth to, in addition to other tremendous lifesaving benefits. The availability of family planning services allows individuals to achieve desired birth spacing and family size, and contributes to improved health outcomes for infants, children, women, and families (Center for Disease Control and Prevention [CDCP, 1999]; Gipson, Koening & Hindin, 2008; Sonfield, Hasstedt & Gold, 2014). Access to safe, voluntary family planning is a human right. Family planning is central to gender equality and women's empowerment, and it is a key factor in reducing poverty (Guttmacher Institute, 2014; Gavin & Pazol, 2016; Lawrence & Mia, 2016). Yet in developing regions, an estimated 218 million women who want to avoid pregnancy are not using safe and effective family planning methods, for reasons ranging from inadequate access to information or services to lack of support from their partners or communities (Gavin, Moskosky & Cater, 2014). This threatens their ability to build a better future for themselves, their families and their communities (Berghella, Buchanan & Pereira, 2010). However, despite the campaign on the usefulness of family planning in having smaller and healthier family, studies by National Population Commission (2009) and Adeleye, Akoria, Shuaib, & Ogholoh (2010) indicate that contraceptive use is still low in many developing countries, including Nigeria and Kogi State, where only 24 percent and 8.5 percent of currently married women had used one method of contraceptive.

Different factors such as culture, low education, poverty and poor access to contraceptives, among others, have been identified by scholars as issues militating against the use of contraceptive methods (Bankole, 2008). Monjok, Andrea, John, & Essien (2010) argue that the rate is very low, despite high rate of sexual activity and wide spread knowledge of contraceptive methods particularly among young couples, leading to unintended pregnancies and illegal abortions. Though a number of studies have been done in some other parts of Nigeria on access and use of modern contraceptives among couples of reproductive ages, none has been on the availability and use of modern contraceptives among spouses in Kogi State. Although the state boasts of about 247 family planning clinics, it has the lowest adoption rate within the middle belt region – about 11 percent for any contraceptive method, 8.5 percent for modern methods. This necessitated the present study in other to fill this gap.

Statement of the Problem

The present population of the world is about 7.9 billion people with four-fifth of them living in the developing societies and keeps increasing by 90 million annually, with 90 percent of the increase occurring in developing societies. This is because population growth rate in developed societies is considerably lower than in developing societies. In the past, the need for family planning had been rationalised by a significant number of women who state a desire to stop childbearing. However, because of unmet needs for contraceptives, very little has been achieved in aggregate fertility reduction. This trend in the uptake of family planning services has not spared Kogi State in general where there is large estimated number of births per household (Kogi State Economic Empowerment and Development Strategy[KOSEEDS], 2015). Standards of living tend to worsen when the rate of population growth exceeds the rate of economic growth. At the household level, the high fertility rate may be contributing towards depletion of productive resources in the society, rising cost of living, ill health, poor nutrition and limited educational opportunities, ultimately trapping women and families in poverty cycle. Moreover, considering the young age structure of West African, the number of women of reproductive age is expected to increase population growth and challenges to meet the different needs of these people (Nabila, 2014; Adensi-Pipim, Kwafo, & Garchiner, 2016). The combination of high fertility and a growing number of women of reproductive age sets the stage for continued rapid population growth.

Objectives of the Study

Specifically, this study was undertaken to:

1. Determine the reachability of family planning services in Kogi State.

2. Find out the level of use of modern contraceptives among spouses in Kogi State.

3. Identify factors influencing spouses' utilisation of family planning services in Kogi State.

Review of Related Literature

The concept of family planning

Family planning has attracted attention all over the world due to its relevance in decision making, population control and development. Samuel (2010) defined family planning as the practice that helps

individuals or couples to attain certain objectives such as avoiding unwanted pregnancies, bringing about wanted babies at the right time, regulating the interval between pregnancies, controlling the time at which birth occurs in relation to the ages of parents and determining the number of children in the family. Family planning is defined as the ability for individuals and couples to attain their desired number of children and plan the spacing and timing of their births through use of contraceptive methods (WHO, 2013).

Family planning utilisation across the globe

Several studies have been carried out throughout the world to examine family planning and use among couples and groups. A study carried out by Rugendo and Maseno (2015) on assessing utilisation of family planning services among women of reproductive age in North Kanyabala revealed low usage of contraceptives compared to the national level (53 percent), and use of services varied in terms of level of education and sources of income. Pascal and Ghana Health Services (2014) studied factors influencing the uptake of family planning services in the Talensi District, Ghana, and the results revealed that 89 percent of respondents were aware of family planning services, 18 percent of respondents have used family planning services in the past. Similarly, World Health Organisation Report (2010) on the statistics of contraceptive prevalence in 53 African countries showed that Nigeria has 14.1 percent contraceptive prevalence rate, unlike other African countries like Mauritius with 75.8 percent, Morocco 63.0 percent, Algeria 61.4 percent, Cape Verde 61.3 percent, Egypt 60.3 percent, South Africa 60.3 percent, Tunisia 60.2 percent, Zimbabwe 60.2 percent, Namibia and Swaziland with 55.1 percent and 50.6 percent respectively.

Another study by Adinan (2013) on awareness and practices of family planning in Wa Municipality of Ghana revealed that 88 percent of respondents were generally aware of family planning even though family planning practices remained as low as 12 percent. Also, a study by RoumiDeb (2010) on knowledge, attitude and practices related to family planning methods among the Khasi tribes of East Khasi hills Meghalaya, India, showed that the awareness level among Khasi tribe was very high but only half of the women adopted family planning.

Reachability and utilisation of family planning services across Africa

Many sub-Saharan Africa countries have high rates of unmet need for family planning (FP) (Westoff, 2011; Bongaart, & Bruce, 2012) and low rates of contraceptive use (Bongaart, & Bruce, 2012). Individuals and

couples who want to limit their fertility are often unable to obtain the Family Planning methods they need due to numerous barriers (Campbell, Nuriye, & Malcolm, 2006). These barriers include high cost, long distances, poor distribution, medical restrictions and fear of side effects, or even misinformation.

Although much of the available literature assumes that financial cost is the primary factor inhibiting contraceptive use, various studies around the world suggest that fear of side effects of FP are more influential in decision-making (Campbell, Nuriye, & Malcolm, 2006; Darroch, Gilda, & Haley, 2011; Colombia Demographic and Health Survey, 2005; Uganda Bureau of Statistics and ORC Marco, 2001; Sedgh, Rubina., Akinrinola, & Susheela, 2007). It is estimated that 59 percent of unintended pregnancies could be eliminated if method-related reasons for non-use were overcome; and fear of side effects is the most commonly cited reason for such non-use (Darroch, Gilda, & Haley, 2011).

The fear of side-effects is also a commonly cited reason for contraceptive discontinuation (Bradley, Hilary, & Shane, 2009). Many studies have found that while some of these are based on actual health related side effects, many fears are based on rumours, rather than personal experience (Campbell, Nuriye, & Malcolm, 2006; Schuler, Maria, & Susanna, 1994; Cstle, 2003; Rutenberg & Watkins, 1997; Keesera, 2009; Hall, Stephenson, & Juveker, 2008; Plummer, Wight, Wamoyi, Hayes, & Ross, 2006). A study in Nepal found that side effects were the main reasons cited for discontinuing the use of FP and that most people received information about FP from mass media (Tuladhar & Marahatta, 2008). In Nigeria, knowledge of FP is generally high; however, use remains low. The main reasons for this lack of FP use include fear of complications, lack of understanding of methods and fear of opposition from the husband (Obisesan, Adeyemo, & Fakokunde, 1998). Nadia, Campbell, & Seema (2012) identified evidence of fear of FP side effects among females and males from India, Nepal and Nigeria.

Furthermore, fear of side effects from hormonal methods among male partners has also been found to impact females FP decision-making and their fear to use FP (Raine, Jennifer, Cherrie, Sadia, Beth, Hernandez, & Harper, 2010). Generally, researches show that spousal communication can increase contraceptive uptake and continuation (Bawah, 2002; Nzioka, 2002; Sharan & Valente, 2002; Miriam, Kate, Dominik, Brad, & Greg, 2012). Moreover, it is clear that spousal discussion and partner approval are significant in inducing a woman to use modern contraceptives in the Central Terai region of Nepal (Kang, O' Donnel, & Sparks, 2010).

Utilization of Modern Contraceptives/Family Planning Services in Nigeria

Several studies have also been conducted to explore family planning services utilisation in Nigeria. Lasisi, Bassey, Ita, & Awoyemi (2014) carried out a study on the awareness and utilisation of family planning among married women in the traditional core areas of Ibadan, Oyo State. Result showed that the utilisation of family planning methods was low among married women in OpoYiosa (9 percent) and Ayeye (11.2 percent), but high in Mapo, Oja-Oba and Inalende with utilisation rates of 31.5 percent, 29.2 percent and 19.1 percent respectively. Also, Obisessan, Adeyemo, & Takokude (1998) studied the level of awareness and the rate of family planning method use among women of reproductive age in Ibadan, Nigeria, on 1188 married women. Result revealed that 94.3 percent were aware of family planning methods, but only 12 percent had visited a family planning clinic. Specifically, the study found that the awareness of specific method was 82.6 percent for condoms, 75.7 percent for oral contraceptives, 75.5 percent for injectable contraceptives and 65.5 percent for IUDs, while current use of family planning methods was low, with 10 percent using withdrawal, 8.1 percent using oral contraceptives, 5.2 percent using IUDs and 4.7 percent using condoms.

In another study by Clifford (1999) on family planning attitudes and use in Nigeria, a factor analysis found out that majority of respondents reported knowing a contraceptive method (76 percent), only 28 percent were currently using one, and fewer than half (47 percent) reported ever having used one. Eko, Osonwa, Osuchukwu, & Offiong (2013) in a study in Calabar, Southern Nigeria, on prevalence of contraceptive use among women of reproductive age pointed out a low prevalence rate of contraceptive use of about 21.6 percent.

Theoretical Thrust

Rational choice theory was propounded by Adam Smith in the 1700s and refers to a set of guidelines that help understand economic and social behaviour (Blume & David, 2008). Rational choice theory (RCT) theorists believe that most human decisions are based on maximizing a person's own benefits, while minimizing that which can hurt the individual. Rational choice theory proposes that there are two outcomes of two choices regarding human action. Firstly, the feasible region will be chosen within all the possible and related action. Second, after the preferred option has been chosen, the feasible region that has been selected was picked based on restriction of financial, legal, social,

physical or emotional restrictions that the agent is facing. After that, a choice will be made based on the preference order (De-Jonge, 2012).

The theory postulates that an individual will perform a cost-benefit analysis to determine whether an option is right for them (Gary, Abigail, Frank, 2000). It also suggests that an individual's self-driven rational actions will help better the overall economy. Rational choice theory looks at three concepts: rational actors, self-interest and the invisible hand (Levin & Milgrom, 2004). The basic premise of rational choice theory is that the decisions made by individual actors will collectively produce aggregate social behaviour. The theory also assumes that individuals have preferences out of available choice alternatives. These preferences are assumed to be complete and transitive. Completeness refers to the individual being able to say which of the options they prefer (i.e. individual prefers IUD over vaginal rings, vaginal rings over IUDs or are indifferent to both). Alternatively, transitivity is where the individual weakly prefers option IUDs over vaginal rings and weakly prefers option vaginal rings over oral contraceptive pills, leading to the conclusion that the individual weakly prefers IUDs over oral contraceptive pills. The rational agent will then perform their own cost-benefit analysis using a variety of criteria to perform their self-determined best choice of action.

Rational choice theory does not claim to describe the choice process, but rather it helps predict the outcome and pattern of choice. It is consequently assumed that the individual is self-interested or being homo economicus. Here, the individual comes to a decision that maximizes personal advantage by balancing costs and benefits (Grune-Yanoff, 2012). Rational choice theory can be viewed in different contexts. At an individual level, the theory suggests that the agent (spouses) will decide on the action (or outcome) they most prefer. If the actions (or outcomes) are evaluated in terms of costs and benefits, the choice with the maximum net benefit will be chosen by the rational individual. Rational behaviour is not solely driven by monetary gain, but can also be driven by emotional motives.

It is important that in promoting spouses' access and use of modern contraceptives, medical/health sociologists as well as service providers need to identify such barriers and work with spouses to reduce them. Family planning service providers should help spouses to identify these barriers and help them to reduce it through counselling and prompt use of modern contraceptives. Since every spouse would want to live a healthy life, have healthy babies and a balanced family they are likely to take action that will help them to avoid the risk of unplanned pregnancies and to take necessary intervention so as to manage, plan, and provide for their

families adequately, if the benefits are adequately explained to them. The above-mentioned model is selected because it best explains the behaviour and actions taken by spouses towards accessing and using reachable modern contraceptives and its implications on their health.

Study hypotheses

The following hypotheses were guide to this study:

1. Spouses with higher level of education are more likely to utilise family planning services than those with lower level of education.

2. Spouses with higher level of income are more likely to utilise modern family planning services than those with lower income level.

Methodology

This study adopted a multi-stage cluster sampling procedure. This entails successive random sampling, systematic and purposive sampling techniques for the selection of respondents from communities, wards, villages, streets, households and respondents that were involved at the services centres in the study.

In the first stage, Kogi State was purposively divided into three in line with the three geo-political senatorial districts. The local governments found in the state represents urban and rural. 14 LGAs to be studied were then randomly selected in the proportion of 3:6:5 from Kogi Central, Kogi-East and Kogi-West senatorial districts respectively based on the 2006 population census result which reflected the population proportion as such. Given a sample size of 1067 respondents, each were assigned respectively to urban and rural areas. To achieve this, the researcher used a list of the enumerated areas (EAs) in each of the fourteen LGAs obtained from the National Population Commission (NPC, 2016), Kogi State, alongside with the population result of 2016 projection. In each of the LGAs, five percent of the EAs were selected using systematic random sampling. Three streets were picked randomly from the EAs from where every 5th household was selected for further sampling. Samples drawn from each of the fourteen LGAs were determined by the proportion of the population of each of the LGA to the overall population of the LGAs selected with a view to ensuring evenness of the samples drawn.

The sample size was 1067 drawn from fourteen local government areas out of the twenty-one (21) LGAs in Kogi State and from the total number of households (495,786) that made up each local government from the

selected ones. Due to the scattered habitation arrangement in the rural communities, the researcher and his assistants twirled a bottle at the market square and whichever direction the neck of the bottle faced served as the starting point. Two eligible members in each household were purposively selected in each unit taking into account the age variable, and any household that did not have persons (respondents) with the required characteristics were substituted with another household until the desired number of the respondents was achieved. For clearer demonstration, the household that had three or more persons within the age range, two of them were selected using SRS (balloting).

Qualitative data was also collected with the use of both In-Depth Interview (IDI) guide and Focus Group Discussion (FGD) guide. The IDI and FGD helped to explore information on availability and use of modern contraceptives among spouses as were expressed by the participants in IDI and FGD sessions. The information derived from IDI and FGD helped to complement the data collected from questionnaire. For the qualitative data, six FGD sessions were conducted in the selected wards and villages of urban communities and rural communities. Each session was made up of between 6-12 participants, aged 18 to 49 years. To achieve this, there were six FGD sessions (one male and one female) in the urban and rural communities of Kogi-Central, Kogi-East and Kogi-West. To select the respondents for the FGD from the two wards that represented urban communities, the researcher liaised with the research assistants who were residents/indigenes of the selected wards to help in selecting the participants for the discussion. Also, to select the respondents for the FGD from the villages that represented rural communities, the researcher liaised with the research assistants who were residents/indigenes of the selected villages to help in selecting the participants for the discussion. The participants for the FGD were purposively selected putting into consideration their age and sex. The researcher facilitated the six IDIs while two of the research assistants served as note takers. The six IDI sessions were conducted in locations, days, and time chosen by the interviewees.

Findings/Results

Table 1: Distribution of Respondents' Socio-Demographic Characteristics

Variable	Frequency (N= 1064)	Percentage (%)
Sex		
Male	434	40.8
Female	630	59.2
Age		
18-25 years	292	27.4
26-33 years	512	48.1
34-41 years	105	9.9
42-49 years	155	14.6
Marital status		
Married	729	68.5
Divorced	84	7.9
Separated	143	13.4
Widowed	108	10.2
Level of education		
No formal education	181	17.0
Primary education	223	21.0
Secondary education	390	36.7
Tertiary education	270	25.4
Occupation		
Unemployed	290	27.3
Civil Service	462	43.4
Trading	130	12.2
Farming	89	8.4
Artisan	93	8.7
Monthly income		
Less than 20, 000 naira	110	10.3
21,000-40,000 naira	183	17.2
41,000-60,000 naira	258	24.2
61,000-80,000 naira	238	22.4
81,000-100,000 naira	210	19.7
Above 100, 000 naira	65	6.1
Religion		
Christianity	629	59.1
Islam	435	40.9
Family Type		
Monogamy	729	68.5
Polygamy	335	31.5
Household size		
1-3	560	52.6
4-6	298	28.0
7-10	116	10.9
11 and above	90	8.5
Total	1064	100.0

Source: Author's Field Survey, 2022

This current study was carried out in Kogi state, Nigeria. Questionnaires were distributed among three regional districts to elicit information for this study. Data in Table 1 showed that more than half of the respondents were women (59.2%) while men were 40.8%. The reason for this finding can be traced to the fact that most often women are readily available and easily accessible. The study area is highly populated with the women folk, they actively participate in health, community, and religious activities; their readiness to participate fully in this study is shown in their large representation. Respondents' age intervals indicated that those aged 26 – 33 years were 48.1%, those aged 18-25 years were 27.4%, those aged 42-49 years were 14.6% while those aged 34-41 years were the least sampled (9.9%). The relevance of this finding showed that those within the age interval of 26-33 years are young, are busy occupied with the happenings of life and are always ready to partake in activities that bring about change and development. Hence, their willingness to participate in this study.

In terms of respondents' marital status, the information displayed in Table 1 showed that those who were married (68.5%) were the highest; this is followed by those separated (13.4%). Also, those who were widowed were 10.2% while those divorced were 7.9%. The displayed data in Table 1 revealed that respondents who had their secondary education were 36.7%, those who had obtained their tertiary education were 25.4, and those who had their primary education were 21.0% while those who had no formal education were 17.0%. This finding revealed that citizens of Kogi state have value for education as more than half of the respondents either had their primary, secondary or tertiary education.

Furthermore, results on Table 1 showed that civil servants (43.4%) were more in this study. The next to them were those who were unemployed (27.3%). Those who were into trading were 12.2%, those who were artisans were 8.7% while those into farming were 8.4%. The relevance of this finding to this study showed that even if majority of the respondents had obtained their primary, secondary or tertiary education, most of them still struggled with unemployment.

Respondents' monthly income showed that majority (24.2%) of them earned between 41,000-60,000 naira. This is followed by those who earned 61,000-80,000 naira (22.4%). Those who earned 81,000-100,000 naira were 19.7%, those who earned 21,000-40,000 naira were 17.2%, and those who earned less than 20, 000 naira were 10.3% while those who earned above 100, 000 naira were only 6.1%. Two major religions

exist in the study area. Results in Table 1 showed the religious affiliation of the respondents. The result revealed that respondents who were Christians accounted for 59.1% while Islam accounted for 40.9%. On family type of the respondents, the results indicated that 68.5% of the respondents were involved in monogamy while only about 31.5% practised polygamy. This finding showed that most persons in the study area are only married to one wife or one husband.

The study further enquired about the number of children respondents' intended or would love to have. Data in Table 4, 13 showed that slightly above half (50.9%) of the respondents desired to have 4 children, 17.1% mentioned that they would love to have 3 children, 16.5% said they would love to have 6 children and above, 12.8% said they would love to have 5 children while only 2.6% of the respondents indicated that they would love to have just 2 children.
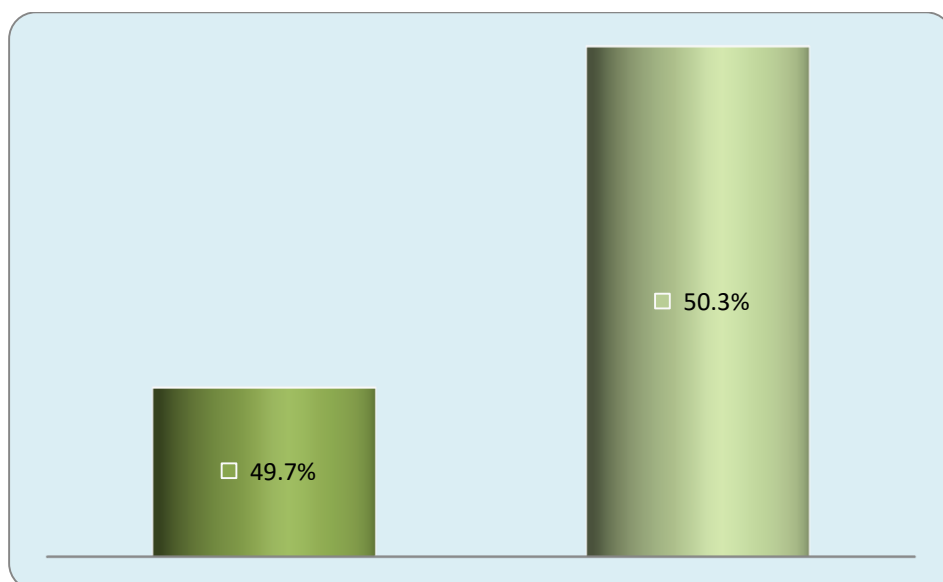
Figure 1: Distribution of Respondents on reachability of family planning services in their locality

Source: Author's Field Survey, 2022

The information portrayed in Figure 1 showed responses of the respondents on the availability of family planning services in their locality. Out of the 1064 respondents utilised for this study, 50.3% of the study respondents indicated that their area of location had no available family planning services while 49.7% said that they had available family planning services in their area. This finding implies that despite the high level of knowledge of family planning, majority of the respondents do not enjoy these services since it is not available in their locality.
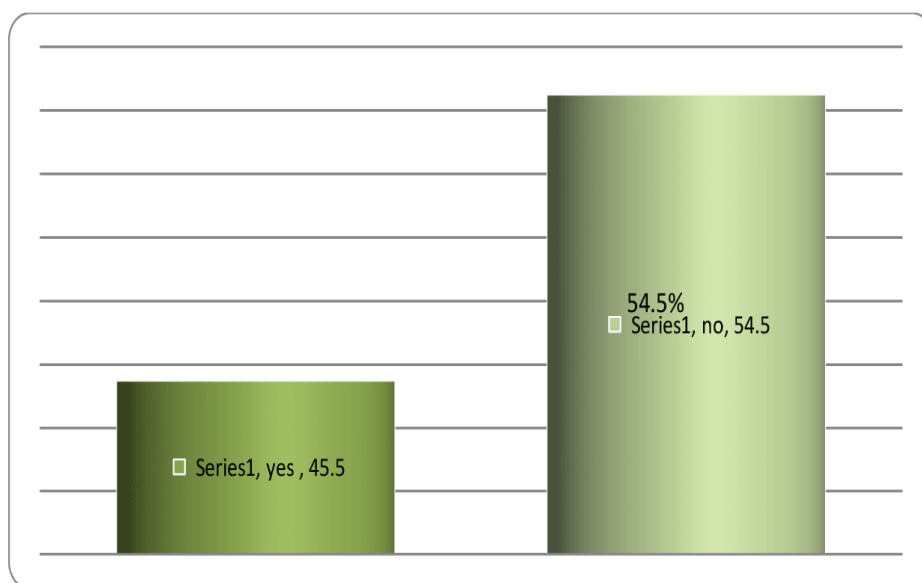
Figure 2: Distribution of Respondents on access to family planning services

Source: Author's Field Survey, 2022

Data in Figure 2 showed that out of the 1064 respondents used for this study, 54.5% of the study respondents indicated that they had no access to family planning services while 45.5% said they had access to family planning services. This finding implies that not everyone in Kogi state has access to family planning. The problem with accessing family planning services can be traced to distance and locality of the respondents. Data from the qualitative study supports this. According to a female participant: "The family planning centre is quite far from my place of residence and coupled with the hard economic state of things in our state, I find it hard making it to the family planning centre for the use of the services therein" [Participant: FGD; Female, Kogi-East]. Another participant also opined thus: "My place of residence is really far from the family planning clinic but I still manage to go there to get and use the available services to help in planning and spacing my children so as to enjoy good health as well." [Participant: FGD; Female, Kogi-Central].
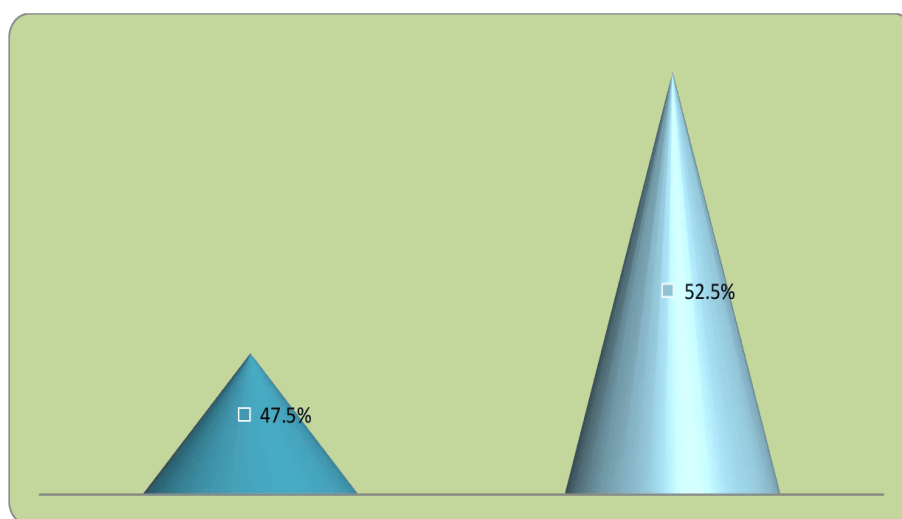
Figure 3: Distribution of respondents on current use of modern contraceptive method (n=1064)

Source: Author's Field Survey, 2022

The study sought to find out if respondents were currently utilizing modern family planning method. Data displayed in Figure 3 showed that majority (52.5%) said they were not currently utilizing family planning methods while 47.5% said they were currently utilizing family planning methods.

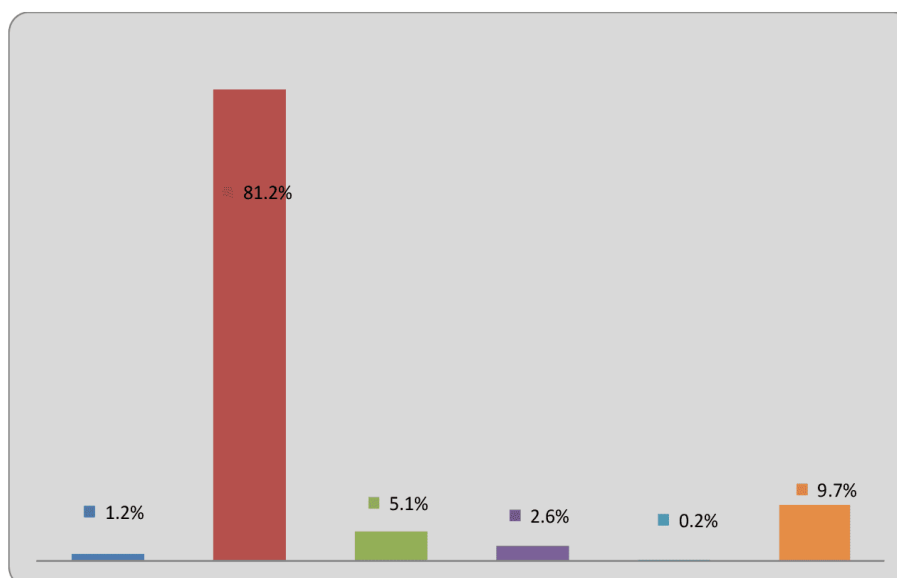**Figure 4: Distribution of respondents on current modern contraceptives been used (n=505)**

Source: Author's Field Survey, 2022

Data in Figure 4 showed the percentage distribution of respondents' answers to the type of family planning they were currently using. Majority (81.2%) of the respondents mentioned that they were currently using oral contraceptives, 9.7% said they were using condoms, 5.1% said they were using withdrawal method, 2.6% said they were doing periodic abstinence, 1.2% said they were using Billings ovulation method while 0.2% mentioned cervical cap. This finding implies that the commonest type of family planning method employed is the oral contraceptives and this may be as a result of its high level of safety and its accessibility/cost.

Table 2: Distribution of Respondents on reasons for choice of family planning method

Reasons for the choice of family planning method	Frequency	Percentage (%)
It's affordable	50	4.7
It is available	32	3.0
It has little or no side effect	40	3.8
Suitable, effective/reliable	909	85.4
No reason	8	.8
Partner involvement	25	2.3
Total	1064	100.0

Source: Author's Field Survey, 2022

Respondents were asked the reasons for their choice of the type of family planning method they are using. Data in Table 2 showed that majority (85.4%) of the respondents said the method was suitable and effective/reliable, 4.7% said it was affordable, 3.85 said it has little side or no side effect, 3.0% said it is readily available, 2.3% said it involves their partner's usage and .8% had no reason for using the family planning method they are currently using.
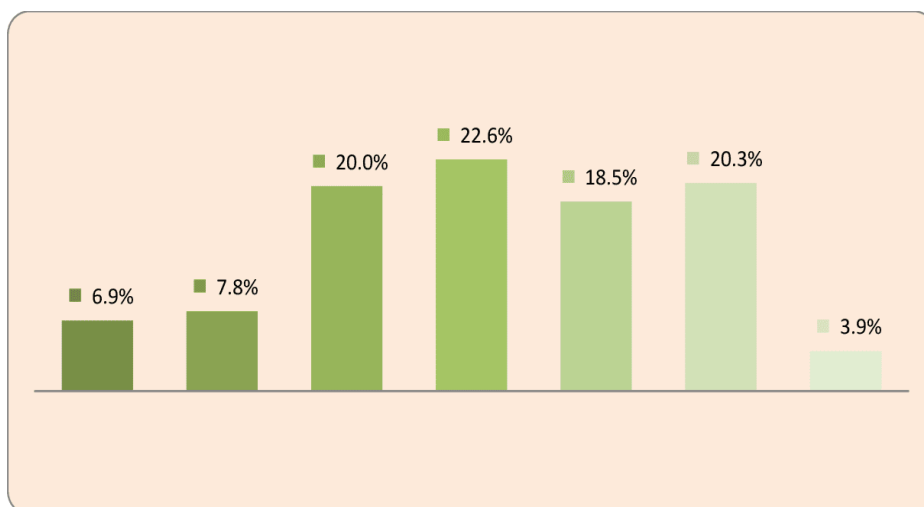
Figure 5: Distribution of Respondents on reasons for non-use of contraceptive methods

Source: Author's Field Survey, 2018

In Figure 5, respondents were asked their reasons for not using family planning. Majority (22.6%) of the respondents said it is not easily accessible, 20.3% indicated fear, 20.0% said it is expensive, 18.5% said it encourages promiscuity, 7.8% said it is against their culture, 6.9% mentioned that it is against their religion and 3.9% said it diminishes their sexual activity.
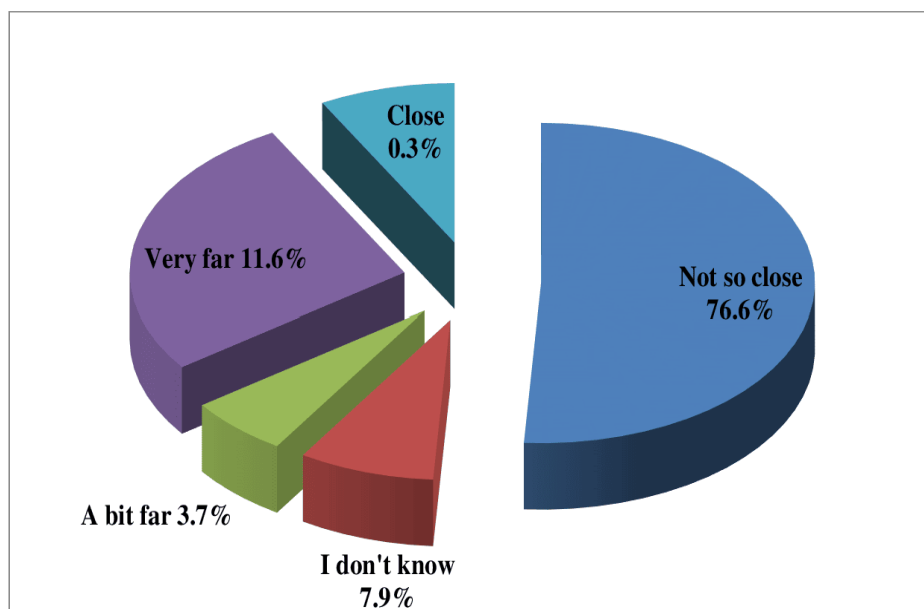

Figure 6: Distribution of Respondents on proximity to family planning centre from their house

Source: Author's Field Survey, 2022

In Figure 6, respondents were asked the proximity of their family planning centres from their houses. Majority (76.6%) of the respondents said their family planning centres were not so or very close to their place of residences, 11.6% said it was very far from their houses, 7.9% said they don't know, 3.7% said it was far from their house and 0.3% said it was very close to their house. These findings imply that since most of the spouses live quite far away from where the very few available family planning clinics are located, it makes it cumbersome for spouses and/ or couples to access such services.

Table 3: Distribution of respondents on factors inhibiting the use of contraceptives

Challenges inhibiting the use of family planning	Frequency	Percentage
Age of couples	30	2.8
Cost of services	96	9.0
Culture and customs of the people	12	1.1
Attitude of health workers towards clients	123	11.6
Lack of education of couple(s)	800	75.2
Disapproval from husband/Religious reason	3	.3
Total	**1064**	**100.0**

Source: Author's Field Survey, 2022

Entries displayed in Table 3 revealed the challenges inhibiting the utilization of family planning services by respondents. Out of the 1064 respondents who were sampled for this study, majority (75.2%) said lack of education of spouse(s) inhibits the use of family planning, 11.6% mentioned attitude of health workers towards clients, 9.0% said cost of services, 2.8% mentioned the age of spouses, 1.1% mentioned culture and customs of the people and 0.3% said disapproval from husband/religious reason. This finding implies that amidst the numerous challenges inhibiting the use of family planning methods, lack of education of spouses' poses more threat.

Decision Rule:

In the application of Chi-square (χ^2) for the test of hypotheses, the following rule was applied: Reject the null hypotheses if the calculated value of the test statistics is greater than the table value.

Hypothesis one

Null hypothesis (H₀): Spouses with higher level of education are not more likely to utilize family planning services than those with lower level of education.

Substantive hypothesis (H₁): Spouses with higher level of education are more likely to utilize family planning services than those with lower level of education.

Table 4: Percentage distribution of respondents on utilization of family planning by level of education

Level of education	Utilization of family planning		Total
	Utilize	Do not utilize	
Lower level of education	381(48.0%)	413(52.0%)	794(100.0%)
Higher level of education	65(24.1%)	205(75.9%)	270(100.0%)
Total	**446 (41.9%)**	**618 (58.1%)**	**1064 (100.0%)**

χ^2=47.314, df=1, N=1064, p<.000

Source: Author's Field Survey, 2022

To test hypothesis one, the Chi square test result showed that the computed χ^2 is 47.314 while the critical/table χ^2 value is 3.841 and df= 1. The test also showed that there is a statistically significant relationship (P <.000) between education and the utilization of family planning services. From the decision rule, since the chi-squared calculated (47.314) is greater than the chi-squared tabulated (3.841) we accept the substantive hypothesis which stated that spouse with higher level of education are more likely to utilize family planning services than those with lower level of education, while the null hypothesis which stated that spouse with higher level of education are not more likely to utilize family planning services than those with lower level of education is hereby rejected.

Hypothesis two

Null hypothesis (H₀): Spouses with higher level of income are not more likely to utilise family planning services than those with lower income level

Substantive hypothesis (H₁): Spouses with higher level of income are more likely to utilise family planning services than those with lower income level

Table 5: Percentage distribution of respondents on utilization of family planning services by income level

Income level	Utilization of family planning services		Total
	Utilize	Do not utilize	
Lower level of income	210 (38.1%)	341 (61.9%)	551 (100.0%)
Higher level of income	236 (46.0%)	277 (54.0%)	513 (100.0%)
Total	**446 (41.9%)**	**618 (58.1%)**	**1064 (100.0%)**

χ2=6.795, df=1, N=1064, p< .009

Source: Author's Field Survey, 2022

To test hypothesis three, the Chi square test result shows that computed χ^2 is 6.795 while the critical/table χ^2 value is 3.841 and df= 1. The test shows that there is a statistically significant relationship (P <.009) between income and utilization of family planning services. From the decision rule, since the chi-squared calculated (6.795) is greater than the chi-squared tabulated (3.841) the substantive hypothesis which states that spouse with higher level of income are more likely to utilize family planning services than those with lower level of income is hereby accepted while the null hypothesis which states that spouse with higher level of income are not more likely to utilize family planning services than those with lower level of income is hereby rejected.

Discussion of Findings

Reachability of Modern Contraceptives/Family Planning Services

Being informed about a family planning service is good but the availability of these services makes it important for respondents to easily access these services. Findings from this study revealed that majority (50.3%) of the respondents said that family planning services was not available in their locality. This finding is in congruent with what Ahmed, Shokai, Abduelkhair, and Boshra (2015) found. Concerning the

availability of family planning services, people in Jelhak mentioned that family planning services do not exist. It was observed that there was only one health centre which provides medical services in addition to selling pills with very low rates.

Furthermore, this finding found that a little less than majority (41.8%) of the respondents said counselling of clients for appropriateness of methods and provision of variety of contraception were the available family planning services. This finding has a slight dissimilarity with that of Ahmed, Shokai, Abduelkhair and Boshra (2015). According to them, women and men in Jelhak and Renk had good knowledge about traditional and modern methods of family planning and poor knowledge about contraceptives. Injectable contraceptives rated the lowest of all while condoms were well known but remains socially unacceptable.

Utilization of Modern Contraceptives/Family Planning Services

In terms of the utilization of family planning, majority (54.5%) of the said they had no access to family planning services hence they cannot utilize it. Also, this study found out that despite the level of awareness of family planning services available in Kogi State, majority (58.1%) of the respondents said they don't utilize family planning services. When asked the reasons for not utilizing family planning services, majority of the respondents said family planning services have harmful health side effects while another significant majority said it was against their religion. Similar finding by Etokidem, Ndifon, Etowa and Asuquo (2017) revealed that 56.0% of their study respondents indicated that their religious belief hinders their utilization of family planning services. Another striking finding is that 52.5% of the study respondents said they were not currently utilizing family planning services. This is in contrast to the finding of Ushie, Otu and Undelikwo (2014) in Cross River State. Ushie, Otu and Undelikwo (2014) found that 61.3% of their respondents were currently using one form of family planning method or another.

Factors Influencing the Uptake of Modern Contraceptives/Family Planning

Various factors influence the utilization of family planning services. From this study, it was found that accessibility, cost, proximity, culture and religion were all the reasons why people utilise or do not utilize family planning services. Again, FGD from Kogi-East revealed that place of residence was an influencing factor for the utilization of family planning. According to a participant, "the family planning centre is quite far from my place of residence and coupled with the hard economic state

of things in our state, I find it hard making it to the family planning centre for the use of the services therein". This finding has similarities with that of Gaetano, Lutuf, Zaake and Annika (2014) who, in their study, revealed that although most people were aware of the benefits of family planning services, they however complained that it was difficult to access family planning services because these services were provided by health facilities that were far from their homes. Education is a major factor in influencing the use of family planning method; majority (75.2%) of the respondents indicated that lack of education inhibits the utilization of family planning. This Finding is slightly similar to that of Apanga and Adam (2015). Apanga and Adam (2015) in their study revealed that lack of knowledge and misconceptions about family planning have been strongly linked with non-use of family planning methods.

Conclusion

This study investigated the reachability and use of modern contraceptives among spouses in Kogi State, North-Central, Nigeria. The use of modern contraceptive is important in preventing maternal and neonatal deaths; hence, its availability and accessibility cannot be overemphasized. This study provides facts to demonstrate that even though there is a good knowledge of modern contraceptive among spouses in Kogi State, it does not inevitably increase the reachability and use of modern contraceptive since the spouses indicated that they had no access to these services and that it was not available. It is therefore crucial to enlighten people on where to find these services and how to utilize these services. This will help spouses utilize family planning services. Husbands should be fully active in family planning decisions. Women should not be made to go through this stage alone. Both husband and wife should take decisions of family planning services. To this end, the government, organizations, international bodies, community leaders, institutions, health workers and the general public should quickly rise to their distinct responsibilities in providing relevant information about family planning services.

Recommendations

Based on the findings, the researcher recommends the following to guide the government, religious leaders, organizations, institutions, health care providers, sociologists, all spouses and the general public in addressing issues on the reachability and uptake of modern contraceptives. The recommendations are:

- Sociologists should educate and create more awareness on the

benefits of utilizing family planning services. This they can do by organizing programmes that educate and keep spouses as well as couples and reproductive persons informed.

- Impediments limiting access to and reachability of family planning services should be addressed by the state government. This will help spouses utilize family planning services and will in turn improve their well-being.

- Government should collaborate with international bodies and organizations that are capable of providing the required healthcare needed by spouses and that can also provide these services at a subsidized rate for couples. If possible, government should also incorporate and implement already formulated policies that promote free family planning services for rural dwellers.

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Applications of Information Cryptography in Its Various Stages of Evolution, from Antiquity to the Modern Era

By

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Abstract

Communication is a daily activity. Information needs to be move from a sender to a receiver, for a communication to hold. However, there are information or messages that should be kept secret and does not require knowledge of a third party. Such messages are encrypted or coded into a cipher text, so as to make no meaning to a third party who may eventually intercept it. This coding of information is called Encryption, while Decryption is the reverse of encryption. Thus, Cryptography is the process of encryption of plain texts and decryption of cipher texts. Cryptography began in early civilizations of Hebrew, Egypt, and Rome with the Atbash, Hieroglyph and Ceaser's Ciphers respectively. This period is regarded as the "Antiquity". Cryptography later evolved into Classic Cryptography, in the Middle Ages, where the "Key Model" and "Cryptanalysis" or code-breaking were introduced. Furthermore, Cryptography evolved to "Field Ciphers" and "Tele-Printer Ciphers" during the World War I. Moreover, the World War II saw the evolution of cryptography into various "Cipher Machines". In modern times, cryptography evolved into sophisticated mathematical equations called "Algorithms", for encrypting and decrypting messages. At these various evolution stages, cryptography is seen to be applied in civil communications, wars, cryptanalysis and e-commerce.

Keywords: cryptography, cryptanalysis, ciphers, encryption, decryption, data.

1.0 Introduction

Cryptography is a method of protecting information and communications through the use of codes, so that only those for whom the information is intended can read and process it (Richards, 2021).Cryptography is one of

the techniques used to ensure secure transmission of information via a channel between a pair of communicators. This prevents third parties from being acquainted with the data in transit (Peralta et al, 2014).Cryptography is a Greek word that means 'secret writing'. Cryptography is the science of both encryption and decryption. Encryption is the process of encoding a message in such a way as to hide its contents. A plain or normal text sent over the network is converted into cipher text so that the information can only be used by the sender and the receiver (Krishna and Manikandan, 2020). The reverse process of encryption is called Decryption. It is the process of converting Cipher Text into Plain Text. Cryptographers use the decryption algorithms at the receiver side to obtain the original message from non-readable message i.e. Cipher Text (Naser, 2021). However, from ancient times till this modern times, several cryptographic techniques have been invented. This study presents cryptography in different era and are treated in the following order:

- Cryptography in the Antiquity

- Cryptography in the Middle Ages (*Classical Cryptography*)

- Cryptography in the World War I

- Cryptography in the World War II

- Modern Cryptography

2.0 Main Body

2.1 Cryptography in Antiquity

Antiquity is any period before the European Middle Ages (5th to 15th centuries) but still within the history of Western civilization ("Antiquity", 2023). According to Naser (2021), from the beginning of civilization when people started to live in different tribes or groups, each of them got the idea to be more powerful than others and to rule other tribes. So they feel for a secure and secret communication and thus how the process of primary cryptography was introduced. Hebrew scholars made use of simple mono-alphabetic substitution ciphers (such as the Atbash cipher) beginning perhaps around 600 to 500 BC ("Antiquity", 2023). Early civilizations in Egypt, Greece, and Rome adopted encryption for communication. Nearly 1900 B.C. (2000 B.C.), in ancient Egypt, a non-standard encryption was utilized on hidden "hieroglyphics" engraved on stone—the earliest known instance of cryptography—to conceal the meanings from those who did not know them, and for the amusement

(Naser, 2021).By later periods of antiquity, cryptography was widely used to protect important military information, a purpose that it still serves to this day. A prominent example of Roman cryptography, known as the Caesar cipher, involved shifting the letters of an encrypted message by a certain number of places down the Latin alphabet. Knowing this system and the number of places to shift the letters, a recipient could successfully decode the otherwise illegible message.

Figure 1: Hieroglyph (First techniques of Cryptography) (Hashmi and Choubey, 2018).

Below is a summary of the cryptographic techniques in Antiquity.

Period	Cryptographic Techniques		
Antiquity (5th to 15th Century)	(1). Atbash Cipher • 600 – 500 BC • By Ancient Hebrew • Used in Civil Communications • Mono-Alphabetic Substitution Technique	(2). Hieroglyph • 300 BC • By Ancient Egypt • Used in Wars and in Civil Communications • Pictorial Writing Technique	(3). Caesar Cipher • 100 BC • By Julius Caesar and Roman Armies • Used in War • Mono-Alphabetic Shift Technique

2.2 Cryptography in the Middle Ages (Classic Cryptography)

According to Hashmi and Choubey (2018), around 500 – 600 BC, Cryptography became popular, so encryption followed these methods:

- Substitution

- Transposition

- Codes

- Additionally, Cryptanalysis began in the Medieval ("History of Cryptography", 2023)

2.2.1 Substitution cryptographic method

This was the first cipher method which makes use of key model. Therefore, it can be called a 'Substitution Cipher'. Key means replacing alphabet to other alphabet for some secret rule. This rule becomes called a key (Abbasi and Singh, 2021).

There are Two (2) applications of substitution method.

i. Mono-Alphabetic Cipher

According to Aung et al. (2019), in Mono-Alphabetic substitution, a character (or a symbol) in the plain text is always changed to the same character (or a symbol) in the cipher text regardless of its position in the text (Aung et al., 2019).Examples are: Additive cipher, Shift cipher, Caesar cipher, Multiplicative cipher, Affine cipher, etc.
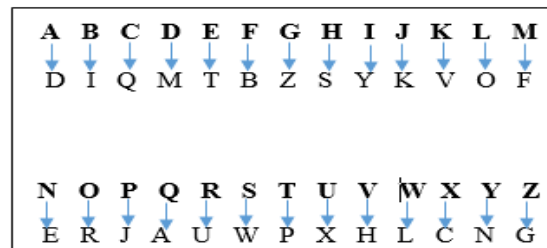
Figure 2: A Mono-Alphabetic Substitution Cipher (Hashmi and Choubey, 2018)

ii. Poly-Alphabetic Cipher

In Poly-Alphabetic substitution, each occurrence of a character may have a different substitute. (Aung et al., 2019). Examples of Poly-Alphabetic ciphers are: Vigenère cipher, Autokey cipher, Playfair cipher, Beaufort cipher, Running key cipher, Porta cipher, Hill cipher, One-Time pad, Rotor cipher, etc.

2.2.2 Transposition cryptographic method

According to Twum et al (2019), transposition ciphers shuffles characters around, instead of substituting them with other characters, as in the Substitution Method treated earlier. A transposition cipher is one which rearranges the order of the letters in the cipher text (encoded text),

according to some predetermined method, without making any substitutions (Nrich, 2018).

E	N	E	M	Y	T	A
N	K	S	A	P	P	R
O	A	C	H	I	N	G
H	I	L	L	E	I	G
H	T	S	I	X	T	H
R	E	E	S	T	O	P

Plain Text: ENEMY TANKS APPROACHING HILL EIGHT SIX THREE STOP

Cipher Text: ENOHH RNKAI TEESC LSEMA HLISY PIEXT TPNIT OARGG HPXXX

Figure 3: A Simple Columnar Transposition Cipher (UMich, 2018).

2.2.3 Codebook cryptographic method

Codebook makes use of codes to replace a word or a phrase. Using Code, it was a good way to obfuscate meaning if the message is small and the codebooks are safe (Hashmi and Choubey, 2018).

plaintext	attack	to	taj	on	five	dec	eighteen
symbol	&	%	@	!	<	#	?

Figure 4: A Codebook Cipher Method (Hashmi and Choubey, 2018)

2.2.4 Cryptanalysis

Frequency Analysis technique was designed by Al-Kindi, an Arab mathematician, for breaking mono-alphabetic substitution ciphers. This was around AD 800, in the medieval ("History of Cryptography", 2023). Cryptanalysis means trying to break any security system (or cipher) by using unauthorized ways to access the information in that system. Thus, cryptanalysis works against cryptography. The cryptanalyst tries to find any weakness in the cryptographic system to get either the source of information (plaintext) or the key used in the encryption algorithm (Al-Janabi, Al-Khateeb and Abd, 2017). The objective of cryptanalyst is to be able to decrypt cipher text (Tiwari, Nandi and Mishra, 2013). In the modern era, among several instances, Brute-force key-space search has broken some real-world ciphers and applications, including single-

DES, 40-bit "export-strength" cryptography, and the DVD Content Scrambling System. In 2008, researchers conducted a proof-of-concept break of SSL using weaknesses in the MD5 hash function and certificate issuer practices that made it possible to exploit collision attacks on hash functions ("Cryptanalysis", 2023). In World War II, the Allies benefitted enormously from their joint success cryptanalysis of the German ciphers – including the Enigma machine and the Lorenz cipher – and Japanese ciphers, particularly 'Purple' and JN-25. In World War II, the Enigma cipher system was broken by Polish and British cryptographers. ("Cryptanalysis", 2023). Below is a summary of cryptographies used in the medieval period.

Period	Cryptographic Techniques			
Medieval (500 – 1500 CE)	(1). Substitution • Makes use of Ciphers • Substitutes alphabets with another • Used in Civil Communications	(2). Transposition • Makes use of Ciphers • shuffles characters around • Used in Civil Communications	(3). Codebook • Makes use of Codes to replace words or phrases • Used in Civil Communications where the message is small and codebooks are safe • Used in Wars	(4). Cryptanalysis • The cryptanalyst tries to find any weakness in the cryptographic system in order to break the code. Thus, cryptanalysis works against cryptography.

2.3 Cryptography in the World War 1

According to Cthaeh (2021), Radio was invented at the very end of the 18th century and World War I and became the first big war in which it was used. Naturally, making communications more effective also increased communication traffic by several orders of magnitude. World War I has a timeline from 28th July, 1914 to 11th November, 1918 (Ray, 2018). According to Cthaeh (2021), World War I is the second largest military conflict in history, surpassed only by World War II. The war was fought between two camps — the Central Powers and the Allied Powers — and lasted until late 1918. The main participants on the side of the Central Powers were Germany, Austria-Hungary, the Ottoman Empire, and Bulgaria. On the side of the Allied Powers were France, Britain, Russia, and Italy. Many other countries joined the conflict at different stages (including the United States on the side of the Allied Powers). The invention of the electric telegraph increased the traffic of messages dramatically. Messages could now travel through electric wires close to the speed of light.

2.3.1 Standard codes used in World War I

Cthaeh (2021) stated that the most common use of codes was for naval, diplomatic, and strategic communication. In general, using codes is more cumbersome compared to ciphers, since the encoding/decoding process is significantly slower and the secure distribution of codebooks is always a challenging task, especially when the communicating parties are constantly on the move. On the other hand, these codes were considered far more secure than ciphers. That's why they were preferred for communication that required absolute secrecy.

Trench Codes: These were less sophisticated codes with a much smaller vocabulary of up to only a few thousand words, used by armies inside trenches. They were less secure but easier to distribute. The lower security wasn't necessarily a serious issue. Even if the enemy managed to break the code for a particular message, it wouldn't matter too much unless they break it fast enough. The situation on the battlefield is changing quickly and old information becomes useless very fast (Cthaeh, 2021).

2.3.2 Field ciphers used in World War I

i. Playfair (British): The Playfair cipher system was widely used by American army and English Army during the World War I (Shang & Lu, 2012).The British used it for tactical communication. Later on, the Americans picked it up too when they joined the war (Cthaeh, 2021).

ii. Interrupted Columnar Transposition (French): The French used the interrupted columnar transposition cipher for very similar purposes to the British's use of the Playfair cipher (tactical communication on the battlefield) (Cthaeh, 2021).

iii. Turning Grilles Cipher (German): This is a pure transposition cipher that uses a square made up of smaller squares. Crucially, there were holes at the positions of a quarter of the smaller squares. The Germans used squares of different sizes, depending on the length of the message they wanted to send (like 7×7 or 10×10), always removing a quarter of the small squares (Cthaeh, 2021).

iv. ADFGX and ADFGVX cipher (German): The cipher's name initially was **ADFGX** and shortly after it became **ADFGVX**, after a small modification. However, the ADFGVX modification doesn't change the nature of the cipher. Germany introduced it in early 1918 and used it for communications between divisions, corps, and army headquarters during the Spring Offensive I told you about earlier (Cthaeh, 2021).

v. Vigenere Cipher (Russia): Ernst Fetterlein was in the Tsarist Russian Ministry of Foreign Affairs from 1896 and solved (among others) German, Austrian and British codes. He became chief cryptographer with the rank of admiral. The Russians used an overcomplicated version of the Vigenère Cipher. It was broken within three days by Austro-Hungarian cryptanalyst Hermann Pokorny (Cthaeh, 2021).

2.3.3 Tele-printer ciphers used in World War I

In 1917, Gilbert Vernam proposed a tele-printer cipher in which a previously prepared key, kept on paper tape, is combined character by character with the plaintext message to produce the cypher text. This led to the development of electromechanical devices as cipher machines, and to the only unbreakable cipher, the One-Time pad (Rijmenants, 2022).

One-Time Pad

To perform one-time pad encryption, we need a key, called one-time pad. A one-time pad can be a single sheet, a booklet or a strip or roll of paper tape that contains series of truly random digits. A one-time pad set consists of two identical one-time pads, one pad called OUT and one called IN. To establish one-way communications, you only need one OUT pad for the sender and an identical copy called IN pad for the receiver. To communicate in both ways, you need two different one-time pad sets: person A has an OUT pad of which person B has the IN copy, and person B has another OUT pad of which person A has the IN copy (Rijmenants, 2022). Below is a summary of cryptography used in the World War 1

Periods	Cryptographic Techniques		
World War 1 (1914 - 1918)	(1). Codebooks • Makes use of Codes to replace words or phrases • Used in Civil Communications where the message is small and codebooks are safe • Used in World War 1 (Codebook with super-encryption). • Example: **Trench Codes.**	(2). Field Ciphers i. PlayFair Cipher (British) ii. Interrupted Columnar Transposition (French) iii. Turning Grilles Cipher (Germany) iv. ADFGX and ADFGVX cipher (Germany) v. Vigenere Cipher (Russia)	(3). Tele-Printer Ciphers • This is a technique, in which a previously prepared key, kept on paper tape, is combined character by character with the plaintext message to produce the cypher text. • Example: One Time Pad Cipher

2.4 Cryptography in the World War II

By World War II, mechanical and electromechanical cipher machines were in wide use ("History of cryptography", 2023). The World War II has a timeline from 1939 to 1945. The principal belligerents were the Axis powers—Germany, Italy, and Japan—and the Allies—France, Great Britain, the United States, the Soviet Union, and, to a lesser extent, China (Hughes and Royde-Smith, 2023).

In the 1920s, various mechanical encryption deviceswere invented to automate the process of encryption. Most were based on the concept of a rotor, a mechanical wheel wired to perform a general substitution (Sokouti, Sokouti and Pashazadeh, 2009).

2.4.1 Cipher machines used in World War II

Enigma (Germany): As complicated as the Enigma was, it was broken during World War II. First, a team of Polish cryptographers broke the German Enigma and explained their attack to the British. The Germans modified their Enigma as the war progressed, and the British continued to cryptanalyze the new versions (Sokouti, Sokouti and Pashazadeh, 2009).
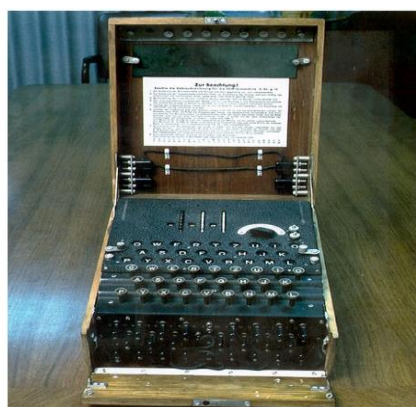
Fig 5: The German Enigma ("History of cryptography", 2023)

Purple (Japan): In the early 1930s, the Japanese government purchased the commercial version of the Enigma machine from the German government in order to build an enhanced version of it. This cryptographic machine was named ''Red" by the US government. Soon after the ''Red" cipher was broken by the U.S.A, the Japanese government created a more evolved and secure cipher known as ''97-shiki O-bun In-ji-ki" or ''97 Alphabetical Typewriter", named for its creation on the Japanese year 2597 in 1937. The US later named it as Purple. Unlike the Enigma machine, which used the blinking lights to represent the message, Purple used an electric typewriter, which could write the message on paper. This was easy to use than the Enigma

machine. However, it was heavy and tedious to carry in combat areas. It was a complex machine used to encrypt data not only in the 1930s, but even today. It falls under the category of homophonic substitution ciphers, where a single plaintext letter can be replaced by any of the different cipher text letters. (Shikhare, 2015).
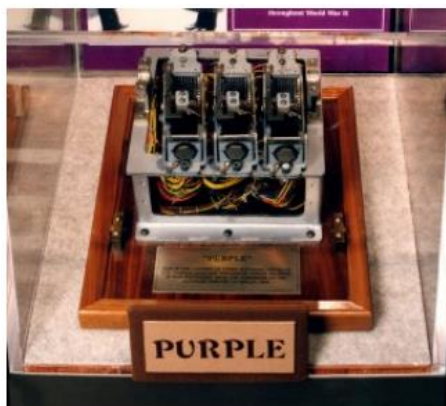
Fig 6: The Japanese 'Purple'(Shikhare, 2015)

Typex (Britain): After the World War I, the British government in 1926, established the Inter-Departmental Cipher Committee to explore possible cipher machines to replace their current book cipher systems. In 1935, the Committee decided upon "Enigma type cipher machines improved through the use of 'Type X' attachments" or Typex. The Typex machine, developed by Wing Commander O.G.W. Lywood, was such a close relative of the Enigma machine that the British use Typex machines in place of Enigma when trying to decipher Enigma messages. When German soldiers recovered a Typex machine sans rotors, they successfully converted it into an Enigma machine. This similarity discouraged German cryptanalysts from attempting to cryptanalyze Typex enciphered messages because they believed Enigma to be unbreakable (Chang, 2012).

Fig 7: The British 'Typex' (Chang, 2012).

Sigaba (USA): SIGABA is a cipher machine used during World War II until the 1950s. It takes a shot at the electromechanical arrangement of rotors (Pal, Datta and Karmakar, 2020). In the 1930s, the U.S. Army cryptologist William Friedman and his assistant Frank Rowlett drew on this simple precept to conceive a cipher machine that was easy to use, simple to rekey, and ostensibly impossible to break. To the Army it was known as SIGABA, to the Navy, ECM (Electric Cipher Machine) II. Not only was SIGABA the most secure cipher machine of World War II, but it went on to provide yeoman service for decades thereafter (Mucklow, 2015)

Fig 8: The USA 'SIGABA' (Mucklow, 2015)

Below is a summary of cryptography used in the world war II.

Period	Cryptographic Techniques	
World War II (In the 1920's)	(1). Codebooks Used in World War 2 (Eg. The Japanese JN-25 Code)	(1). Cipher Machines Mechanical encryption devices that were invented to automate the process of encryption. Most were based on the concept of a rotor, a mechanical wheel wired to perform a general substitution. Examples: i. Enigma (Germany) ii. Purple (Japan) iii. Typex (Britain) iv. Sigaba (USA)

2.5 Modern Cryptography

Around 1990, the use of the Internet for commercial purposes, the introduction of online commercial transactions and as wireless networks became more common among households, the need for encryption grew, as a level of security was needed in these everyday situations ("History of Cryptography", 2023). Adomey (2020) explained three (3) types of Cryptography:

    i.   Secret (Symmetric) Key Cryptography

    ii. Public (Asymmetric) Key Cryptography

    iii. Hash Functions

    iv. Hybrid Cryptography (additional)

2.5.1 Secret (Symmetric) key cryptography

The Symmetric Key Cryptography is also known as Secret Key Cryptography or Conventional Cryptography. The Symmetric Key Cryptography is an encryption system in which the sender and receiver of a message share a single, common key used to encrypt and decrypt the message. It uses an algorithm called Secret Key Algorithm or Symmetric Algorithm (Adomey, 2020).
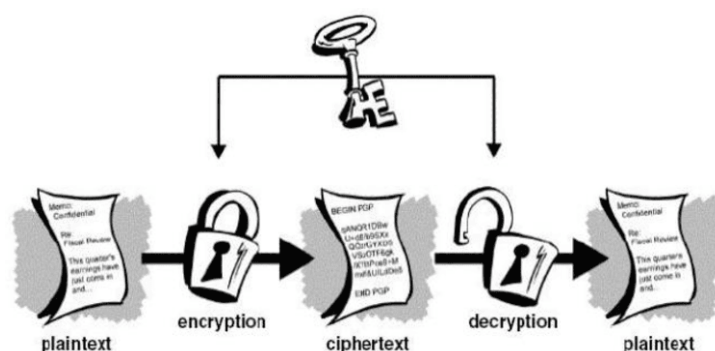

Figure 9: Symmetric Key Cryptography (Adomey, 2020)

Some examples of popular Symmetric Key Cryptography are: DES – Data Encryption Standard, Triple-DES, AES – Advanced Encryption System, Rivest Cipher 4 (RC4).

2.5.2 Public (asymmetric) key cryptography

According to Adomey (2020), Asymmetric cryptography, also known as Public-key cryptography, refers to a cryptographic algorithm which

requires two separate keys, one of which is private and one of which is public. The public key encrypts the message while the private key decrypts the encrypted message. Public Key Cryptography is a very advanced form of cryptography. Officially, Whitfield Diffie and Martin Hellman invented it in 1975. The British Clifford Cocks of Communications-Electronics Security Group (CESG) of (Government Communications Headquarters - GCHQ) first discovered the basic technique of public key cryptography in 1973 but this was a secret until 1997. The figure below depicts a public key cryptography.
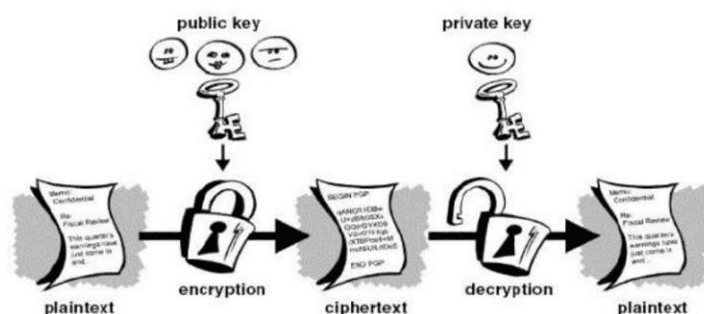
Figure 10: Public (Asymmetric) Key Cryptography (Adomey, 2020)

Some examples of asymmetric cryptography are: Rivest-Shamir-Adleman (RSA) Algorithm, Digital Signature Standard, EIGamal, etc.

2.5.3 Hash functions

According to Kundu and Dutta (2020), hash functions refer to a function that compresses a string of arbitrary input to a string of fixed length. In other words, we get a fixed-length message digest out of a variable-length message. Compared to the message the digest is normally much smaller. The main purpose of hashing is related with message security like protecting message integrity, authenticity, etc. Wahome (2021) further explained that using hash functions for cryptography refers to cryptographic hash function. He continued that all cryptographic hash functions are hash functions, but not all hash functions are cryptographic hash functions. Mathematically, Wahome classified cryptographic hash functions into two classes:

- Unkeyed hash functions also known Manipulation Detection Code (MDC) or Message Authentication Code (MAC) with a single parameter, an input message.

- Keyed hash functions with two distinct input, an input message and a secret key.

Wahome (2021) also listed the examples of cryptographic hash functions

as follows:

- The Secured Hash Algorithm (SHA) family - They are six hash functions: SHA -0, SHA – 1, SHA – 224, SHA – 256, SHA – 384 and SHA – 512. The first four operate on 512-bit message blocks divided into 32-bit words and the last two on 1024-bit blocks divided into 64-bit words. Bitcoin, the original and largest cryptocurrency (at the time of writing), uses the SHA-256 hash function.

- **The MD (Message Digest)** family — comprises of MD2, MD4, MD5 and MD6 authored by Ronald Rivest for RSA security and was adopted as the Internet Standard RFC 1321.

- **RIPEMD (RACE Integrity Primitives Evaluation Message Digest)** — a family of cryptographic hash functions based upon the design principles used in MD4 developed by Hans Dobbertin, Antoon Bosselaers, and Bart Preneel at the COSIC research group at the Katholieke Universiteit Leuven. RIPEMD-160 produces a hash digest of 160 bits (20 bytes).

- **Whirlpool** — designed by Vincent Rijmen and Paulo S. L. M. Barreto, this hash function based on a substantially modified version of the Advanced Encryption Standard (AES). Whirlpool produces a hash digest of 512 bits (64 bytes).

- **BLAKE** — a hash function submitted to the NIST hash function competition by Jean-Philippe Aumasson, Luca Henzen, Willi Meier, and Raphael C.-W. Phan. It is based on Dan Bernstein's ChaCha stream cipher, but a permuted copy of the input block, XORed with round constants, is added before each ChaCha round.

- **Curl-P** — a hash function formerly used in IOTA Signature Scheme (ISS). IOTA is a cryptocurrency designed for use with the Internet of Things (IoT) and automotive ecosystems. ISS is based on Winternitz One-Time Signatures but unlike traditional Winternitz, in IOTA users sign the hash of a message. Thus, the security of ISS relies on its cryptographic hash function, which was Curl-P-27.

2.5.4 Hybrid cryptographic systems

Hybrid cryptography means combining two or more cryptosystems. There are benefits and limitations in both symmetric and asymmetric

ciphers. Symmetric ciphers are fast but suffer key exchanging. Asymmetric ciphers solve the key exchange problem, in other words secure, but slow. Practically, hybrid cryptography, which is an integration of symmetric and asymmetric ciphers, makes use of the efficiency of symmetric ciphers and the simplicity and security of asymmetric ciphers (Murad and Rahouma, 2021b).

2.5.4.1 Approaches to hybrid cryptography

In this study, three (3) approaches to hybrid cryptography were studied:

Double Encryption (of Symmetric or Asymmetric)

The first approach, according Murad and Rahouma (2021a), involves performing two layers of symmetric or asymmetric encryption. Here, data is double encrypted by applying two consecutive, either symmetric or asymmetric ciphers in a row. See figure below.
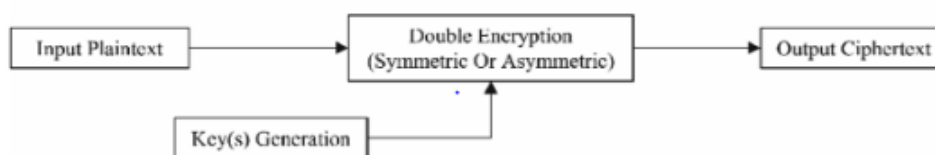
Figure 11: Hybrid scheme uses double encryption of either symmetric ciphers or asymmetric ciphers for data encryption (Murad and Rahouma, 2021a)

Symmetric / Asymmetric Hybrid Cryptography

As shown in the next figure below, this approach utilizes a symmetric algorithm to encrypt the data and applies an asymmetric algorithm to encrypt the secret key. See figure below.
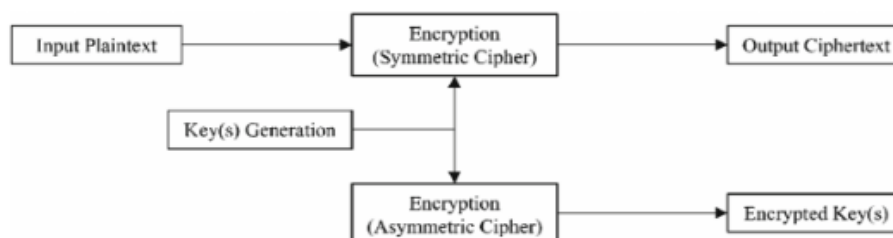

Figure 12: Hybrid scheme uses symmetric ciphers for data encryption and asymmetric ciphers for key encryption (Murad and Rahouma, 2021a)

Cryptography with other Supportive Methods (i.e. with other technologies)

To further strengthen cryptography, researchers have presented schemes

where supportive methods were used to improve cryptography security level. Examples of such supportive methods are:

- Hybrid cryptography and steganography method to embed encrypted text message within image (Jassim, et al., 2019)

- A hybrid scheme of cryptography and watermarking (Kaur and Kaur, 2016)

- A hybrid cryptographic technique using RSA algorithm and scheduling concepts (Shankar and Akshaya, 2014)

These supportive methods are applied to increase the strength of a symmetric / asymmetric hybrid algorithm.

Below is a summary of cryptography used in the modern era.

Period	Cryptographic Techniques			
Modern Era	(1). Symmetric (Secret key) Cryptography	(2). Asymmetric (Public key) Cryptography	(3). Hash Functions	(4). Hybrid Cryptography
	Sender and receiver of a message share a single, common key, used to encrypt and decrypt the message. **Examples**: i). Data Encryption Standard (DES) ii). Triple-DES iii). Advanced Encryption System (AES) iv). Rivest Cipher 4 (RC4) Etc.	This requires two separate keys, one of which is private and one of which is public. The public key encrypts the message while the private key decrypts the encrypted message. **Examples**: i). Rivest-Shamir-AdlemanAlgorithm(RSA) ii). Digital Signature Standard iii). ElGamal Etc.	Here, we get a fixed-length message digest out of a variable-length message. **Examples**: i). Secured Hash Algorithm (SHA) family ii). MD (Message Digest) family iii). RIPEMD family iv). Whirlpool v). Blake vi). Curl-P	Hybrid cryptography means combining two or more cryptosystems. **Approaches**: 1). Double Encryption (AES + AES) 2). Symmetric + Asymmetric (AES + RSA) 3). Cryptography + Supportive Methods. Eg: - (RSA + Scheduling Concepts)

3.0 Conclusion

Based on the above reviews, cryptography has evolved in so many ways and is still evolving. It has been found to be applied in the following ways:

i. Civil Communication

Cryptography is applied in encrypting messages in civil communications or messages between two regular individuals or organizations. Starting from antiquity, through the medieval, and through the world wars, and in the modern era, messages can be encrypted to ensure confidentiality. Emails are usually encrypted in order to keep them confidential. As messages travel through communication links, both wired and wireless, they are often encrypted.

ii. Cryptanalysis

Cryptanalysis is as an application of cryptography, though as a reverse process. Cryptanalysis began in the Medieval period. This is because classical cryptography began in this era, with the introduction of keys-based cryptography or ciphers. The medieval period cryptographic methods and those used in the world wars were at a point in time broken. In this modern era, cryptographic systems are not easily broken, because, they cannot be solved by hand. However, the One-Time-Pad is a Tele-Printer Cipher which has never been broken.

iii. Wars

In antiquity, Hieroglyphs were used to encrypt messages between soldiers. Cryptography in wars was mostly applied in the World War I and in the World War II. Cryptography is very essential during wars since each army group needs to frequently send messages to their colleagues in case of a need of unfavorable circumstances like need for back-up, need for a retreat, need for change of plans or change of direction, need for supply of more ammunitions. The message must be confidential, otherwise the enemy camp will know their plans and move ahead of them.

iv. E-Commerce

Cryptography is very important and is carefully applied for commercial purposes. Encryption keeps your data secure when you're shopping or banking online. It scrambles data like your credit card details and home address to ensure hackers can't misuse this information. Cryptography in e-commerce ensures data privacy.

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Self-Querying Process (SQP): A Technique for Attaining Clarity through Self-Analysis

By

Duve Nakolisa

Abstract

This paper presents aspects of the author's innovative Self-Querying Process (SQP), which he espouses as a practical technique for attaining clarity through self-analysis. It is a complement to his "bevalhabismic theory" (Nakolisa, 2022) which posits that the belief-values-habit (BVH) make-up of an individual is the fundamental cause of their ability or inability to achieve set goals. The SQP process consists of two self-administered exercises: the Self-Probing Talk (SPT) and the Guided Question and Answer (GQA) session. The SPT talk induces the individual to recall personal issues and events given rise to by their BVH framework with a view to analyzing their implication for the pursuit of set goals. The GQA exercise methodically narrows the clues the individual emerges with from the Self-Probing Talk into two clear options: positive (+) or negative (-), thereby reducing otherwise complicated issues of personal dilemma into two clear options that enhance the individual's ability to choose and take a definite, success-generating, course of action.

Keywords: BVH, SQP, Self-Querying Process, SPT, Self-Probing Talk, GQA

Introduction

Let's begin with an explanation. The Self-Querying Process (SQP) is a method of self-analysis I designed to enable anyone faced with a difficult problem to rouse and examine their thoughts, feelings, and past choices in order to gain the clarity of mind they need to make a quality goal-driven decision that paves the way for a possible solution. Each SQP activity should be an exercise aimed at reaching, from the perspective of the individual employing the method, the best decision regarding a vital issue of his or her life.

The Self-Querying Process is made up of two soul-searching activities:

- Self-Probing Talk (SPT), and
- Guided Question and Answer (GQA) exercise.

The SPT and GQA sessions are explained below.

The Self-Probing Talk

The Self-Querying Process (SQP) starts with the Self-Probing Talk (SPT). The SPT is a self-examination exercise in which one may or may not talk aloud. It appears more effective when one talks quietly to oneself, letting the voice of one's inner being respond to the issue of the moment.

The SPT entails one's inner self talking to one's outer self. It could be a monologue or a "dialogue" of sorts. The SPT is essentially an exercise dominated by the inner self who utters into one's consciousness truths, sometimes disturbing truths, long suppressed and hidden in the mind's bid to make one overlook or forget the unpleasant or unresolved aspects of one's life.

The SPT function is like turning one's pant inside out in order to see how clean or dirty it really is, what caused the dirt, and what kind of laundry is required to clean it. The SPT, if you like, is an auto-dialogue in which one engages with oneself to thrash out a critical personal matter.

An important idea behind the SPT concept is the notion that every problem contains the seed of its own solution. In other words, the closest solution to everyone's personal problem lies within them. If the individual can dig deep enough into the recesses of their being, speaking out relevant data about a given area of their life, there is a huge possibility of "unearthing" a useful, relevant or appropriate direction, decision or solution.

A complementary concept behind the SPT is my understanding that everyone is largely a reflection of all the choices they have made (including their response to other people's choices) and all the actions they have taken or failed to take (including their response to other people's actions and inactions). Most personal problems arise out of wrong choices and actions (including one's responses to other people's wrong choices, actions and inactions).

The SPT is an inward exploration in which the individual looks deeply inwards and voices out the happenings and intimations of their past as they relate to a given current problem. While there is no strict procedural

formula for the SPT, it should be conducted as an investigative soul-searching talk. You can sit down and begin to think about the difficult challenge staring you in the face. "How did things get this bad?" you might audibly ask, and then proceed by reviewing your past and present journey in that area of your life, noting key incidences that point to what happened, when they happened, where they happened, and how they happened? Be analytical, think through scenarios, make necessary linkages and observations, and draw tentative conclusions that might give you clues regarding the way forward.

It must be borne in mind that the underlying aim of the SPT talk is to take you forward, not backward. Why digging into the past is necessary is because it traces the build-up of events that led, directly or indirectly, to the crisis of the moment, thereby enlarging the scope of the problem-solver's understanding.

Even if the events recalled during the talk have little connection with the past choices and actions of the solution-seeker, the SPT talk will help in heightening the moment of crisis and in arousing the person recalling his journey to seek new, better, or more promising paths. Unless agitated into taking action, many people would rather tarry with their problems as long as it has not completely swept them out of their comfort zone.

One of the finest typesetters I have ever known started his successful computer-services business after he was undeservedly sacked from a business he had co-founded. It was a big blow and he was about to apply to work in another business centre when he implemented the Self-Probing Talk. Digging into his past jerked him up and propelled him towards a clue that changed his life: you may have no money, and no office space, but start your own business centre right away! Don't ask me how he did it; digging into his past life, the SPT way, evoked that clue which made it possible for him to do it!

People hardly revisit themselves, they conduct no personal retreats, and so produce no new strategies to overcome difficult, and often recurring, personal problems. They seem not to know that within their past lie useful but often undetected insights into their future. The SPT activity, when seriously and soberly conducted, is much more than a talk show. The SPT exercise, when fertilized by thoughtful enquiry under the guidance of a mind sensitive to useful cues, can give birth to urgent insights that crystallize the right decisions, fresh opportunities, creative alternatives, and amazing results.

Figure 1: Look inwards and talk to yourself
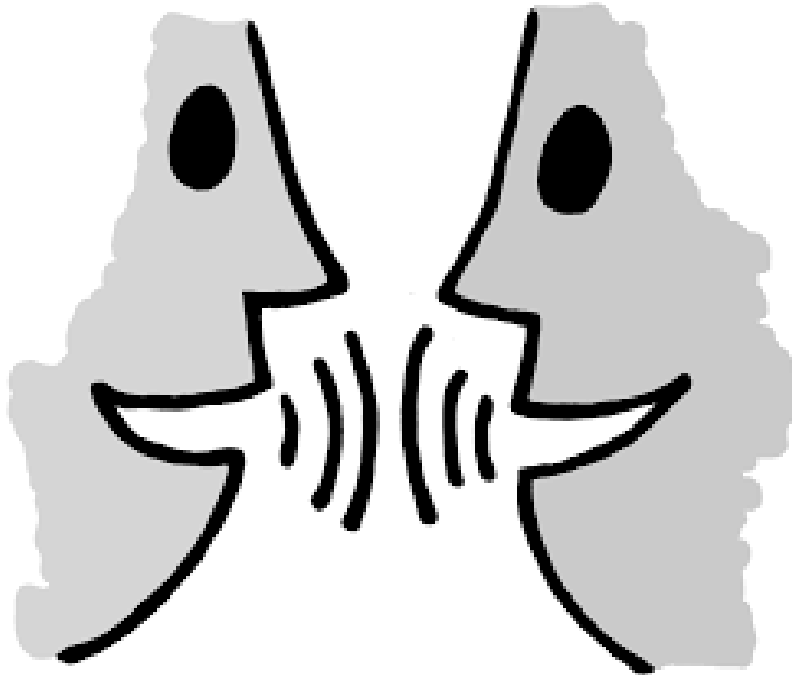
Source: www.clipartmax.com

The conduct of the SPT exercise may differ from person to person, and that's OK; just make sure your own exercise is conducted in accordance with the guidelines stated in this paper.

The outcome of the SPT exercise should be noted. In fact, if the individual involved so prefer, the "talk" may be conducted in writing. This will entail sitting down in some quiet corner and pouring down, in one or two sessions, one's evaluative recollection or understanding of events. Many people, I believe, will find it easier or more cathartic to talk orally than to capture their thoughts in writing.

Whichever method is adopted, it is crucial to ensure that one is talking to oneself and not to someone else and that the talk is conducted when one is alone. The Self-Probing Talk, it needs to be stressed, is self-analysis, not group analysis. It is one talking to oneself, probing one's actions and inactions, and exploring private and confidential matters. It is important to conduct the talk where no one else will hear or distract you.

Once you are seated or pacing to and fro in your private room, you can begin your SPT talk by probing into that area of your life where the issue of concern is emanating from. Proceed as your thoughts and emotions may lead you but ensure that you reassess key issues of your life with a view to determining where you made choices that hurt the steady and unwavering pursuit of specific goals.

The SPT talk is essentially recalling personal chronicles given rise to by one's beliefs, values and habits (BVH) and analyzing their implication for the pursuit of set goals. So, during your SPT exercise, you need to ask, among other questions, BVH-specific questions. Questions such as: "My belief that advertising is exploiting people's emotion in order to make them buy what they don't need – how has this belief and my refusal to advertise led to the poor sales I've been recording?" "Should I increase the percentage of my salary that I invest to enable me earn more passive income?" "I have had three fiancées and now I'm about to break up with the fourth. What is really wrong with my relationship values?"

It is called the Self-Probing Talk because it is one talking to oneself to see where one had made right or wrong decisions or choices. It is not a talk about what others had done or failed to do. It is not a blame or buck-passing game. Yes, others might have contributed to your past failures and losses but if you are honest about it, you will discover that you have, somehow, contributed, favourably or unfavourably, to nearly every situation of your life. Could it not be they cheated you because you were careless or trusted too much? Could you have failed if you were thoroughly prepared for the business or the competition?

It might have been sheer hatred that stood those forces against you, but if you had reacted tactfully couldn't things have turned out differently? Oh, it is the system; it is all designed to work against someone like me… Don't let this kind of thought bother you, for when you excel, and excel irresistibly, systems open to let you pass.

The SPT activity offers you moments of hard-hitting reflection that enables you to gain clarity and locate what *you* need to do to make a success of *your* life. The biting edge of such self-analysis, especially when unnecessary excuses are disallowed, may be very discomforting, but let the scalpel of this self-enquiry do its work. How did I get it wrong? How did I miss the mark? What personal shortcomings brought about the setback? What do I need to do differently to make me succeed, regardless of the challenges? These are the kind of questions and issues you should sincerely and openly address.

Other people might have consciously or unconsciously blocked your way, and there might have been some unfavourable external factors but none of these must be elevated above your capacity to break through every barrier and achieve your goal!

You will arrive at the destination you envisioned if you let nobody and nothing block your way. It is *your* way! It is *your* responsibility to

surmount or circumvent whatever is on *your* way to make things happen for you. And should the task be daunting, should the way be repeatedly blocked, well, you must do what you can to out-manouevre the obstacle. And if need be, pave a new way for yourself. By all legal and innovative means, succeed!

You must be merciless, but without wallowing in self-pity, while analyzing your situation. Find out where you made mistakes in the past and locate what you must do right to make you succeed. Don't deny your mistakes; you must realize that if you had not made a mistake you might not have mis-stepped. Accept your mistakes without feeling sorry for yourself, but be determined not to repeat those mistakes or make other careless choices in the future.

Avoid agonizing over what someone has done to frustrate or stop you! Don't rub the balm of self-pity and soothe your aching ego by blaming others. This will not help you to get to where you are going. It is your life, it is your quest. Focus on where you are going, and don't forget that realizing your desired goal is what matters most.

This is why the Self-Probing Talk is about you looking inward to gain clarity, to re-strategize, and take winning steps towards the future. Everyone can do this but, just as earlier noted with respect to the BVH Evaluation, there might be some people who might need expert guidance to carry out this process with significant beneficial results.

Don't forget, the Self-Probing Talk is not a pointless reflection: its ultimate aim is to produce, through your sober recollections, a useful decision-making insight or a clue towards a possible solution or new course of action. Unless it led you to harness a helpful clue or clues, the Self-Probing Talk should not be deemed to be over. Keep mulling over the issues until something epiphanic happens – a revelation or connection that illuminates the confusion and points you to a promising way out of the problem. But "the way out" must not be an escapist "solution" that side-tracks the challenge and steers you toward some pleasant goal-boycotting path.

Continue with the SPT exercise until you have some clues regarding the way forward or the way out of the problem. The endpoint of the Self-Probing Talk is the attainment of significant clarity, one that suggests a useful clue – it could be the identification of what might be the problem and a possible solution; or it could be an inkling that leads to a change of strategy. If this endpoint is not reached, do not move to the Guided Question and Answer (GQA) stage. If you do, you are likely to get a

distorted result, a set of pointless clues that leave you confused regarding which step to take. Should this happen, return to the Self-Probing Talk stage and do it all over again before continuing with the GQA session.

There are two ways of repeating the Self-Probing Talk. The first is to start "talking" to yourself the way you had earlier done – speaking out audibly or inaudibly to yourself in your closet, pouring out your mind on paper, or using a recording device to capture your talk.

The second method of repeating your Self-Probing Talk is to recall your earlier "talk" on the same issue and read or listen to it over and over again. Proof-readers would tell you that the more they go through a manuscript, the more mistakes they are likely to find. A similar reality applies here; the more you read or hear your talk's "message", the more insight you are likely to gain into key aspects of the matter of current concern. On one occasion, I had to listen to and reflect upon my SPT talk twice before hitting the crucial point that led me to the way forward.

Note, however, that the method of recalling your earlier "talk" may not be adopted unless the following conditions are met:

> i. the initial talk was clearly written or recorded,
>
> ii. the initial talk was exhaustive enough to make conducting a fresh talk unnecessary.

The Self-Probing Talk is deemed to have been concluded at any given time only after one has gotten a helpful clue regarding which cause of action to take.

Before going further, let us note that the SPT is not meant to be used in determining the validity of issues of public interest, such as a public health advisory, nor should it sidetrack the need for fact-finding research. Information is vital. Some of the issues people face can be easily resolved if they can avail themselves of available information, and take necessary action. Many people, for example, are unemployed because they don't know where their services are needed and, therefore, have not gone there or reached out by mail to seek for employment. To dig up non-personal hard facts, one would need to conduct objective research. Don't watch your problem; find out what can be done about it, and take action!

The SPT is basically a vocalized recollection of past experiences aimed at generating an optimal goal-driven decision concerning a developmental, occupational or social matter of personal relevance.

Complemented by the GQA session (discussed below), the SPT exercise serves as one of the means of weighing how relevant an idea, clue, thought or suggestion is in the decision-making process or to the pursuit of one's goal.

Only for the Willing and Sincere

As you might have realized by now, the Self-Querying Process can only make sense if the person utilizing the tools being proposed here is willing to reassess his or her beliefs, values and habits. Willingness and sincerity are the primary requirements. Should one be willing and sincere as well as repentant, in the sense of being ready to depart from current negative beliefs, values and habits, then we have the perfect individual for whom this paper was written.

Issues of beliefs, values and habits can be personal and any meaningful change in perspective or behavior would need the cooperation of the individual involved. So, for any step of the Self-Querying Process to yield result for any individual, he or she must be sincere at every stage of the soul-searching procedure. The entire process is predicated on the fact that the individual involved in it is desirous of change as well as ready to be honest about his or her strengths and shortcomings.

Specifically, ensure that the Self-Probing Talk (discussed above) and the GQA session (discussed below) are applied to your unique situation with a delicate sense of destiny. See these steps as self-managed mechanisms you can utilize to overcome whatever is hindering you from charting a clearer and more focused path for your life.

The Self-Querying Process is very personal and confidential and can deliver great benefits in self-enlightenment for whoever would approach this process with a sense of purpose and mission.

The Guided Question and Answer (GQA) Session

The second soul-searching step of the Self-Querying Process (SQP) is the Guided Question and Answer (GQA) session. While this sort of auto-analysis may take other forms, the technique I have developed, having used it and found it effective in different contexts, is the Guided Question and Answer (GQA) method. The main aim of the GQA session is to enable the individual to ask personally-relevant, issue-based questions to which only Yes or No answers are required. Whatever matter is under consideration, the Yes/No answers are taken as indicators of what could be that individual's right decision, goal or response.

The GQA session involves a series of questions set by the one who had conducted the SPT talk and derived a clue or clues about the way forward. At the GQA stage, such a person is required to turn the issues he had recollected and reflected upon into guided questions framed within the context of whether the issue raised in the question is pro-success or anti-success. If the person's response to his or her own question is Yes, the matter raised in the question is deemed to be pro-success or positive (+); if No, the matter raised in the question is deemed to be anti-success or negative (–).

In a nutshell, the goal of the GQA session is to use the tool of guided questions to generate responses that narrow the many clues the enquirer might have emerged with from the Self-Probing Talk (SPT) into two clear options: pro-success or anti-success. In a well-conducted session, the respondent's Yes responses would turn out to be pro-success while the No responses would most likely be anti-success.

For the GQA session to be effective, the guidelines that characterize it must be strictly adhered to. To make your GQA session generate realistic rather than emotive, goal-pointed rather than blurred result, the following rules should be observed:

a. All the questions must arise from and be restricted to the issues raised during the Self-Probing Talk (SPT).

b. Use one format (with or without slight variations) for all the self-evaluative questions relevant to your specific situation or enquiry. This format can be a uniformly-phrased question, such as, "This thing that I believe, value, or do (*specify*), will it take me closer to my goal?" The dependent clause ("This thing that I believe, value, or do") would differ from question to question but the independent clause ("will it take me closer to my goal?") should be the same or similar in every question that requires a Yes/No response. This will ensure that the questions are commonly posed, thus making the Yes or No responses generated effective, uniformly-derived pointers to action.

c. Since the objective of the GQA session is to enable the enquirer to determine what is to be done about the matter under consideration, each question (such as, "…will it take me closer to my goal?") should address a present or future concern. Questions probing the past (such as "…did it take me closer to my dream?") are NOT allowed during the GQA session. But during the Self-Probing Talk exercise, which precedes the GQA stage, one may analyze present and past events in any possible manner. However, reference to past events within the dependent clause

may be allowed as long as the clause completing the sentence ends with "…will it (will he/she or will they) take me closer to my goal?" or some other permissible uniformly-adopted format of ending the question.

Success is a Matter of Yes or No

A lot, quite a lot in success progression or regression, will depend on how one answers GQA's self-evaluative questions. Let's consider how not to answer them. It is important not to be wordy, defensive or explanatory in the responses you give. Excuses often hide in thickets of words. In football, it usually takes only one effective shot to score a goal while many ineffective kicks and passes may lead to no goal. Explaining away the failure to score could take words that outnumber all the futile kicks and passes put together. Don't be wordy to avoid making undue excuses.

So, discounting the possibility of a spectrum of values (the afore-recommended phrasing of the self-evaluative questions having effectively ensured that), we may now dichotomize and declare that, as far as the pursuit of success is concerned, there are two kinds of beliefs, and two kinds of values, and two kinds of habits: positive and negative.

In considering, therefore, the self-evaluative question, "This thing that I believe, value, or do (*specify*), will it take me closer to my goal?", your answer should be either yes (positive) or no (negative). Success (or failure) is a matter of yes or no – a matter of choosing one way or the other and acting in the direction of that choice. Anything other than yes or no is suspect, cannot be given a positive (+) or negative (–) sign and, therefore, may not be a clear pointer or guide to action.

This is why GQA session questions are phrased in a manner that prompts one to say Yes or No. No middle or neutral ground. No provision for "I don't know" answers. No room for equivocation or sitting on the fence.

The GQA session places you in the court of your own opinion demanding neither "Guilty" nor "Not Guilty" plea but simply your Yes or No response to vital queries of your visionary quest. If the question is properly phrased, a Yes response (assigned a + sign) is goal-oriented and pro-success while a No response (assigned a – sign) is explicitly counter-goal and anti-success:

$$\boxed{\textbf{Yes = pro-success}} \quad + \Big| - \quad \boxed{\textbf{anti-success = No}}$$

Interestingly, the most fundamental things of life are separated into two divisions: day and night, male and female, good and evil, life and death. To gain clarity in one's life, one should be able to sort out issues in terms of "Yes" or "No". Equivocation is a sign of indecision, and an indecisive person is an unstable person – and unstable people hardly make substantial progress in life. That is why it is important to use the GQA session to determine what is pointedly right or wrong in one's success journey.

Rules Governing the Framing of Questions for the Guided Question and Answer (GQA) Session

For the GQA session to generate a reliable, goal-oriented outcome, each of the questions requiring a Yes/No response should be posed according to the following rules:

1. All the questions must arise from and be restricted to the issues raised during the Self-Probing Talk (SPT).

2. Each question should be asked in the first person.

3. Each question should be asked in such a way that a Yes or No answer would be given.

4. A modal verb inverted with the subject, which indicates future time (such as "will" or "can"), should be used to form the interrogative question.

5. The independent clause ending with the question mark should be uniformly or similarly worded in all the questions.

Goal-Chasing Fundamentals

Before we demonstrate how the GQA session can be conducted in practice, let us briefly refresh our minds about the basic things we need to know regarding setting and realizing personal goals. Knowledge of goal-chasing fundamentals should be in place before anyone can derive maximum benefit from the GQA session.

Life is meaningless without a defined sense of purpose to dictate and coordinate one's desires and actions. No one can have a sense of purpose without having a set of authentic beliefs, values, and habits (Nakolisa, 2022). These will stimulate him to envision a desirable future. Then, he begins the exciting, highly focused climb towards it. He approaches this vision passionately through rungs of short-, medium-, and long-term goals.

For your goals to be workable, they must be specific, measurable, and timed (Doran, 1981). A specific goal usually aims to get one thing accomplished, and the goal-setter realizes this objective by ignoring other things competing for his attention to focus on getting this one thing done. A goal is measured by the specific tasks the goal-setter needs to perform before realizing it. Ideally, such tasks are performed sequentially such that one accomplished task lays the foundation for and enhances the performance of the next scheduled task. And effort should be made to perform each task within the time allocated to it.

Goals, also, are not arbitrarily executed but are realized one by one in an ascending order of visionary relevance (Nakolisa, 2006). It is in this sense that goals can be said to be ascendant arrows of graded attainments. (See Figure 1.1)

Figure 2: Ascendant arrows of graded attainments

A visionary picture is what drives a goal – it enables every individual to see where they are going and supplies them the passion they require to keep seeing where they are going, even in their life project's foggy moments and in seasons of personal and social turmoil.

A vision is an internal force. Everyone's goals are the steps they take to externalize and make real their visionary dream. So, everyone needs their vision, and they need their goals. Everyone's vision is the lubricant of their goals. Vision gives goals direction. It helps one ensure that one's

goals are not arbitrary or contradictory but are rather sequential targets or results that take one closer to that big thing one wants to achieve in life.

An Illustrative Story

We need a real-life scenario to illustrate how the GQA session might be conducted by the individual. Below is a true-life story with the real names of the individuals mentioned in the story changed. Let's call it Teddy's Story.

Teddy's Story

 Teddy's family was holding a meeting to see how he could be helped to start a new business or learn a new trade. Sitting quietly in their midst, Teddy (real names withheld) was nursing his resentment of some past ventures that looked too promising to fail but failed nonetheless.

Claiming to be better in using his hands than in cramming class notes, Teddy had dropped out of secondary school two years before he was due to take his ordinary-level examinations. Since then, he had worked as an apprentice motor mechanic, a barber, a school-bus driver, a bricklayer, a pub guitarist, a cross-border cannabis smuggler, and a quick-fix pimp and match-maker of sorts. During his stint work as a political thug, he got his only somewhat appreciable pay when he was compensated for losing two teeth in defence of the boss.

None of the above engagements had financially stabilized Teddy, a regular face in rowdy parties where he was hailed by many but trusted by none. Years after many of his schoolmates had graduated from the university and climbed the corporate ladder or set up successful businesses, Teddy was pressurizing his siblings and aged parents to contribute funds to enable him "travel abroad and make money".

Exemplification of the Yes/No Responses

To make the normative value of the Yes/No responses more practical, let's return to Teddy's story. You will recall that he was in a family meeting called to see how his protracted failure to make progress in life could be ended.

Teddy left the meeting asking his family to give him time to think over their proposals. Let's assume he was now tired of his self-engineered retardation and had used the Self-Probing Talk to appraise his situation more honestly, emerging from the talk with a clearer sense of what he should be doing with his life…

And now, Teddy is ready to use the GQA session to test the clues he obtained from the SPT exercise – to find out the best decision he should make to move his life forward.

Let's assume Teddy, after his SPT session, came up with 10 questions and is set to test each of them in terms of whether it is pro-success or

anti-success. Each question is framed around issues taken from his unique experience, particularly those emerging from his reflections during his Self-Probing Talk.

For illustrative purposes, let's take it that Teddy seriously considered the following questions:

1. My lack of a sense of purpose or an overriding goal in life, will it take me closer to my dream of being a successful person?

2. My habit of dropping out of worthwhile pursuits and my habit of starting a project without finishing it, will it take me closer to my dream of being a successful person?

3. My get-rich-quick attitude and schemes, which had continually put me in trouble, will it take me closer to my dream of being a successful person?

4. The kind of choices I made after the failure of each of my past businesses, choices that didn't indicate I had learnt the right lesson, will they take me closer to my dream of being a successful person?

5. Remaining a pimp and a cannabis smoker and smuggler, assuming I don't get caught and jailed like Sneaky Boy, will it take me closer to my dream of being a successful person?

6. My family members have pledged to give me a lump sum of money to start life all over again on the condition that I should first serve under a successful trader and learn a trade for two years…going to learn a new trade, as proposed by my relations, will it take me closer to my dream of being a successful person?

7. Doing music is the one thing that gives me the greatest joy in life and the one thing that I can work hard at with a sense of responsibility and achieve success, but that's what my family is not willing to sponsor. Doing whatever I can to advance my music career, foregoing every other alternative venture my family would prefer to finance, will it take me closer to my dream of being a successful person?

8. What about my plans and hopes of going abroad…? My mum had blocked my plans of being sponsored by the family when she said that someone who could not be a successful lizard at home should not hope to be a crocodile abroad. Maybe my mum is right… Going abroad without first correcting those shortcomings that made me to fail repeatedly in the past, will it take me closer to my dream of being a successful person?

9. Uncle Ray has suggested that I should go back to school and even promised to sponsor me. But I feel I'm too old for that and I've never really been a good student. Taking up Uncle Ray's generous offer, will it take me closer to my dream of being a successful person?

10. What of returning to my former master, from whose workshop I ran away many years ago, to complete my training as a car mechanic…will it take me closer to my dream of being a successful person?

Chart of Teddy's Yes/No Responses

Preparing a chart such as the one below is desirable because it makes you to state your questions and answers in writing and leaves you with a written record of the turning point your GQA session could become. Besides, the writing option makes it easy for you to correct your questions and bring them in line with the rules governing the framing of GQA questions.

There are people who find writing things down, particularly when it runs into a few paragraphs, very stressful. Some others may feel that the effort expended in ensuring that their thoughts are properly framed may obstruct or derail the free flow of their thoughts. It will be nice if this category of persons can choose to overcome their shortcomings and write down their questions. Otherwise, they should resort to using the recording device in their electronic gadgets to voice out their questions and answers, particularly if the questions are not more than five.

Let's take a look at what might have emerged as Teddy's responses – responses that indicate an apparent willingness to change for the better. Here is the table of his responses to the 10 questions posed above. For the sake of brevity, only the direct questions are used below; the preceding statements are excluded. And the independent clauses ending with the question mark have been reworded to bring them in line with rules 4 and 5 above.

Teddy's Questions and Answers

	Question	Answer	Sign
1	My lack of a sense of purpose or an overriding goal in life, will it take me closer to my vision?	No	_
2	My habit of dropping out of worthwhile pursuits and starting a project without finishing it, will it take me closer to my	No	_

	vision?		
3	Continuing my get-rich-quick attitude and schemes, which had continually put me in trouble in the past… will it take me closer to my vision?	No	–
4	Continuing with the kind of choices I made after the failure of each of my past businesses, choices that didn't indicate I had learnt the right lesson, will it take me closer to my vision?	No	–
5	Continuing to be a pimp and a cannabis smuggler, with the risk of being caught and jailed like Sneaky Boy, will that take me closer to my vision?	No	–
6	My family members have pledged to give me a lump sum of money to start life all over again on the condition that I should first serve under a successful trader and learn a trade for two years…following this proposed plan, will it take me closer to my vision?	No	–
7	Doing whatever I can to advance my music career, foregoing every other alternative venture my family would prefer to finance, will it take me closer to my vision?	Yes	+
8	Insisting on going abroad without first correcting those shortcomings that made me to fail repeatedly here at home, will it take me closer to my vision?	No	–
9	Taking up Uncle Ray's generous offer to sponsor my return to secondary school decades after I dropped out of school, will it take me closer to my vision?	No	–
10	What of returning to my former master, from whose workshop I ran away many years ago, to complete my training and become a car mechanic, will it take me closer to my vision?	No	–

In the above illustrative table, you would notice that Teddy gave only one positive response, which clearly indicated what step he should take.

Some charts may be more complicated than this in that they may contain more than one positive response, which is not a problem if all the positive responses support each other or enhance the emergence of a definite goal/decision or point towards a definite course of action.

If such indicated steps appear contradictory, it is possibly

> i. a sign that the individual had not emerged from the Self-Probing Talk with a genuine clue or clues regarding what might be his or her decision, goal or direction; or

> ii. an indication that some or all of the questions of the GQA session were not properly thought out or phrased.

The likely solution to (i) above is for the individual involved to return to the Self-Probing Talk (SPT) stage and conduct afresh the exercise. Let him or her probe deeper into the issues of concern, noting the choices made and examining if or how those choices contributed to the eventual turn of events. The person probing his past actions should also endeavour to locate the extent to which specific beliefs, values and habits have positively or negatively contributed to leading or misleading him or her to make those choices.

The solution to (ii) is to revise the questions in order to ensure that each of them is framed according to the rules earlier specified.

Meanwhile, during the process of talking and analyzing issues, the sober self-analyst is likely to generate some inner awakening that might light up some areas of confusion, doubt or ignorance…and this is when the self-analyst should steer his reflection to the search for clues that point toward a solution, the right decision, a purposeful goal or a meaningful vision.

As earlier pointed out, the GQA session is a process that should only be meaningfully used AFTER one has, at least, gotten a clue regarding what decision, goal or vision he or she appears to be leaning towards. The series of questions raised during the GQA session is aimed at generating answers whose positive or negative slant would authenticate or invalidate the clue(s) gotten at the end of the Self-Probing Talk (SPT).

The SPT is a spontaneous, chronological or non-chronological recollection of past events. When the reflection leads to clarification of mind-boggling issues or produces an insight into the way out of the

problem, viable clues usually emerge. Now, these clues will need to be verified during the GQA session. Where a one-track solution is required, as in many cases in life, the GQA session becomes a way of helping the solution-seeker to choose a course of action, and to choose rightly.

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Folklore and History as Twin Rivers of World Heritage: A Personal Narrative

By

Bukar Usman

Abstract

This paper, originally presented at an International Conference on Folklore, National Integration and Development, held in Nigeria, appraises *Tatsuniya* (Hausa word for "folktale") as a richly-endowed form of folkloric expression in many African and non-African societies. It reveals that comparative study of the folklore of the Babur-Bura in north-eastern Nigeria and those of other countries, including the U.S, UK, Croatia, Jamaica, China and Sri Lanka, shows that folklore is a worldwide tradition whose roots could be empirically traced in history. Current studies in oral literature – or what the Ugandan scholar, Pio Zirimu, termed *orature* – have underscored the fundamental role folktales play as the earliest school of the child in many African communities. *Tatsuniya* is told both for its thrilling entertainment worth and for its educational values that further enrich the child's appreciation of the culture and history of his community and those of others. This study presents folklore as a treasured world tradition that ought to be explored with the same vigour and interest archeologists and historians employ in digging deep into our distant past. After all, the often inseparable linkages between folklore and history tend to suggest that both are twin rivers that flow into the same sea.

Keywords: folklore, history, culture, heritage, Babur-Bura, tatsuniya

Introduction

Let me begin this presentation which I deliberately titled, *Folklore and History: Twin Rivers of World Heritage,* with a personal confession. I am a firm believer in the truism that just as droplets of water form streams so

also do the collective actions of humans, either as individuals or groups, constitute the thread in human history.

Being an enthusiast of African folkloric tradition, I opted to devote time, energy and resources in researching deeply into the rich field of my native Babur-Bura folkloric tradition. In the course of this presentation, therefore, you will notice, at some points, that the arguments I advance are embellished with accounts from my personal experiences gathered from years of folklore research and publishing.

It was in 2005, *Voices in a Choir* and my other publications on public administrative matters had been published and I had just handed in for publication the manuscript of *Hatching Hopes*, my autobiography. Duve Nakolisa, my publisher, himself a writer of note, then asked me, "Why not turn your attention to folktales in your area?" I reflected on the question and remembered what I had experienced at home as a child and similar events that took place during my initial years of Western education in the early 1950s. I recalled the tales by moonlight narrated mainly by my mother and the introductory literature books in Hausa we had read in class. I called to mind books like *Dare Dubu Da Daya* (One Thousand and One Nights) and several others written by Abubakar Imam. I then resolved to go into the field and chose my Babur/Bura community as my principal research ground.

It was in the course of my research that I luckily met former Vice Chancellor of Bayero University, Prof. (Ambassador) Dandatti Abdulkadir. An expert in the field, he gave me very useful guidance on how to go about my assignment. I am immensely grateful to him for ensuring, through the careful review of the dedicated staff of BUK Centre for the Study of Nigerian Languages, that all my manuscripts written in Hausa were in accordance with standard Hausa language rules.

The books in Hausa were published in two batches. The first batch of six books (*Marainiya da Wasu Labarai*, *Jarumin Sarki*, *Yarima da Labbi*, *Tsurondi*, *Sandar Arziki*, and *Dankutungayya* were published in 2005.

The second, comprising eight books (*Gwaidayara*, *Dan Agwai*, *Tsohuwa da `Yan Mata Uku*, *Dankucaka, Al'ajabi, 'Yargata, Duguli Dan Bajinta*, and *Muguwar Kishiya*) were published in 2009. The publishing house was Gidan Dabino Publishers, Kano. The books are all in circulation within and outside the country. Within Nigeria, in Kano, Capital Primary School has included books 1-5 in their curricula.

The books have attracted the attention of a German NGO, IRENE Sahel, which sought my permission, which I gave, to publish the stories in "Boko" and "Ajami" as a way of educating the girl-child in Niger Republic's Qur'anic schools. So far, scholarly use is being made of the books outside the country at the following centres of learning: Hamburg University, Department of African Languages and Ethiopian studies Germany; School for Oriental and African Studies (SOS), London; Warsaw University Poland, Department of African Studies; UNESCO Institute for Lifelong Learning (UIL) Harmburg; Abdul Mumini University, Niamey; IRENE Sahel (NGO)-Germany; MAINZ University Department of African Languages, Cologne Germany; Institute of Research Studies, Dept of African Languages, Cairo University, Egypt.

The use of indigenous languages in teaching is an initiative which UNESCO is vigorously propagating in its current programmes worldwide.

Today, I can humbly say of the fruits of our collective achievement that I have written four short story books in English and fifteen in Hausa, all of them containing stories derived from our folklore. The fifteenth is the compendium of the fourteen books written in Hausa my Kano-based publisher has put them together as a readily available reference material.

Twin Rivers of World Heritage

The history of Africa, which includes the forceful enslavement and shipment to foreign countries of a huge number of its population, helped greatly in transporting and transplanting African tales to foreign shores.

Because the tales were spread by word of mouth, many scholars have observed, little variations in the storylines have occurred but without altering the essence of the tales. Its unique folktales, thus, constitute a very rich and fertile legacy that Africa bequeathed to many parts of the world, especially North America, South America, and the West Indies.

In the vast continent of Africa and other continents, folktales and myths serve as a means of handing down traditions and customs from one generation to another. In Africa, especially, the storytelling tradition, used to prepare young people for life, has continued to thrive over the ages. Although oral tradition is declining with the emergence of modern forms of communication, the invention of the printing press fortunately facilitated the documentation of tales in written form and their preservation and circulation on a wider scale.

Duve Nakolisa believes that some tales are historical and that such historical folktales tell the history of some ethnic groups. According to him (Nakolisa in Usman, 2006),

> In many parts of Africa, tales, generally speaking, are the history of the ethnic group and the ethnic portrayal of social interactions within the environment of that history. (Folktales) belong to the latter… (They) are not part of the grand tales of the origin of the people of the area, nor part of the revered exploits of any great ancestor. They do not belong to the canon of myths and legends, usually associated with dynasties and illustrious genealogies. Those ones belong to history, even where some of them sound somewhat like folktales. Indeed, under open and unbiased examination, many of such "histories" share canonical qualities with the simplest tale. That is why I assert that mythologies are generally the grandest form of the folktale tradition of any society, and the inspirational springboard for the ordinary tale.

To buttress Nakolisa's thesis which, as my research confirms, is also applicable to non-African societies, Khalid Imam (2010) further stresses that although most tales may have themes of universal concerns, a close study of some could reveal that such tales may well be telling the histories of some ethnic nationalities. He cites the popular story of

Bayajidda as a good example of a "grand tale" that lays claim to being the authentic origin of one particular group of people.

Imam could have easily cited further examples from Nigeria where almost every ethnic group – and there are more than 250 of them – lays claim to one mythic origin or the other. The most celebrated of such "grand tale" histories includes the "Ogiso" story of the Binis which has the contentious twist of a Bini prince being the pioneering Ooni of Ife. Key Yoruba scholars believe the more popular version, namely, that Oduduwa is the progenitor of the Yoruba race.

Similar "grand tales" from Nigeria are no less controversial. For instance, depending on the person telling the story, the Igala kingship is variously linked to the Yoruba, Nupe, Benin and Jukun. My own community of Biu has various versions of the origin of Yamtarawala, our own progenitor, equivalent to other legendary figures such as Oduduwa and Bayajidda.

In all these and similar stories across the world, what is the dividing line between history and folktale? Judging from the foregoing, it seems reasonable to say that history and folklore, in narrative origins, are two rivers which meet at the confluence of the communal imagination.

Comparative Study of Folktale Traditions

Following the encouragement and guidance I received from my publisher and the likes of Prof Dandatti Abdulkadir, I decided to dig deeper into the subject of folktales. I forayed into existing literature on the subject, seeking to have a comparative understanding of the place of folktales in global literature. I relied mostly on books I could lay my hands on. On the few occasions I travelled out of the country, my first attraction was the nearest bookshop where I went to in search of books related to folktales. I did that during my visits to the US, Jamaica, UK, Croatia, Sri Lanka and China, and I made some useful purchases.

According to Gerda Charles (1976), the Egyptians were rendering folktales on *papyrus* and inscribing them on stone as far back as 1300 BC. The Greeks later came out with *Aesop's Fables* which contained stories akin to that of the Hindus. The Hindus, like the Egyptians, had also written their stories, in *Sanskrit*. These were later commented upon and amplified by the Iranians or Persians.

The Arabians also adapted some and turned others into the famous Arabian Nights stories, some of which were embodied in the *One Thousand and One Nights* story book. It was the invention of the printing press in Germany which made it possible for folktales, such as the Arabian stories, to be reproduced and circulated in written form.

Short stories derived from folktales were not the preserve of one nation. Towards the end of the 19th century, the English came up with *Pickwick Papers* by the great writer, Charles Dickens. Some of Shakespeare's stories were rooted in folklore. The Germans, the Italians, the Japanese and the Russians have their own folktales.

In the United States, Charles Colcock Jones Jr. (1831-1893) came up with *Gullah Folktales from the Georgia Coast* (1888). Also known as "Negro Myths from Georgia Coast"*,* it was told as vernacular tales he heard black servants exchange on his family's rice and cotton plantation. The tales ranged from the humorous to the instructional and included stories of the "sperits", Daddy Jupiter's "vision", a dying bullfrog's last wish and others about how "buh rabbit gained sense" and "why the turkey won't eat crabs." The tales were rendered in Gullah, the language of the African Americans on the East coast, which is akin to what is popularly known as pidgin English in West Africa.

Susan Millar Williams, who commented on the book, observed that the stories of 1888 were similar to West African stories and that they were imported into America by slaves taken to the Americas from that part of Africa. To the best of her knowledge, that was about the first book she knew on folktales in the US. The stories in the book used ghosts, foxes,

hares, squirrel, lions, leopards, land monitor (lizard /African alligators), hyenas, rats, elephants, and other animals commonly found in Africa, as characters. The stories were also laced with animals and insects found in the eastern parts of the USA.

Back home, Prof. D. Waterman, who had done a lot of work in the field of folktales, found that F. Edgar and A.J.N. Tremaerne and Rudolf Prietze were reputed to have written books on Hausa folktales in 1904, 1910 and 1911. The only indigenous scholar who had similarly done tremendous work in that field was Prof. Ibrahim Yaro Yahaya who wrote *Tatsuniyoyi da Wasanni* books 1-6 in 1972. Before then, North Regional Literature Agency (NORLA) published *Tatsuniyoyin Zamani* titled *Almara* in 1952, although the publication was not attributed to any individual as its author.

Albert Helser (1923), the American who was among the foreign pioneer missionaries who brought Christianity to my Babur/Bura community of Borno State in North-East Nigeria, published 55 folktales gathered from the area. In the preface, he remarked that:

> A sincere attempt to understand native culture is the only fair and effective approach to the native mind. From the first day I set foot in Lagos, Nigeria, British West Africa, in 1922 I have been making honest effort to appreciate the native view of life...While the Bura people had no written language, we found that they had an unusually full system of culture embodied in their folktales.

He noted the role of stories in ensuring that the heritage of shared values was transferred from one generation to another. His observation:

> It was a surprise to learn that quite small boys and girls had a rather clear idea of the socially desirable ends which had been set up by the Bura tribe. These ends had been taught and emphasised through the folktales which had been passed on by word of mouth. The most respected women of each community had assumed the responsibility of passing on the culture of the tribe by telling stories to the younger children in the evening time. The older children carried on by reciting the stories to one another.

He was describing the society in which I grew up and it is a mark of the sustenance of that tradition that I was able to gather several folktales in less than one year of research effort.

Franz Boas in the foreword to Helser's book (Helser, 1923, p. 7) threw some light on the universality of the folktales phenomenon. He stated that:

> The collection of Bura Tales by Mr. Helser adds another one interesting collection from Africa that have appeared from time to time... Early attention has been called to the wealth of African folktales by Bleek's "Renard the Fox in Africa", a series of interesting animal tales. Materials from all parts of Africa, so far as they are available, illustrate the power of imagination of the Negro. They also show the interesting relations between all parts of Africa, and the migrations of tales from one part of the continent to the other.

> They also prove that many of our folktales and much of the homely wisdom laid down in proverbs is common property of Africa, Europe, and Asia. Many of the African tales have a particular interest for us because their equivalents are found among our American Negroes, for instance in the well-known Uncle Remus tales.

Commenting further, Franz Boas said:

> Folktales from all parts of the world are of particular interest because they illustrate with great clarity the mode of thought, the homely wisdom, and the ethical concepts of the people. In Africa, more than among other so-called primitive tribes, many a tale illustrates a proverb relating to the proper everyday behaviour. The Negro is fond of moralising by means of moralising tales.

I can confidently confirm from the annotations at the end of each of the folktales in my publications that there are indeed many morals in the stories. Not only that, the stories are as varied as there are literary categorizations: you have the comic, the tragic and the tragi-comic; then there are the horror or terror stories.

And the characters are imbued with diverse qualities: some exhibit wisdom, cleverness, bravery, strength and nobility whereas others are

characters of cruelty, foolishness, selfishness, cunning, and sluggishness. The clash of the contradictory qualities of the characters in a folktale is geared towards moulding the character of the child during his or her early education in the informal setting.

Nelson Mandela (2010), former President of South Africa, attests to this when he recalled that:

> After supper we would listen enthralled to my mother and sometimes my aunt telling us stories, legends, myths and fables which have come down from countless generations, and all of which contained some valuable moral lessons. As I look back to those days, I am inclined to believe that the type of life I led at my home, my experiences in the veldt where we worked and played together in groups, introduced me at an early age to the ideas of collective effort. The little progress I made in this regard was later undermined by the type of formal education I received which tended to stress individual more than collective values. Nevertheless, in the mid1940s when I was drawn into the political struggle, I could adjust myself to discipline without difficulty, perhaps because of my early upbringing.

Historical Significance of Folktales

While Skinner (1980) categorizes folktales by themes and characters, Duve Nakolisa (2006) draws attention to the historical dimension and includes in his categorization historical tales which narrate social interactions.

The historical relevance has earlier been underlined by Harward (Musaeus-Higgins, 1910) who remarked that:

> All children love a story...though there are many stories which may fairly be considered to belong to all races and all countries, there are folktales which only come home to the people of a particular race or country. To the latter class belong the tales by which a child gains its first notions of the history of its own land and people.

The following dialogue (Musaeus-Higgins, 1910) between a teacher (referred to as 'mother') and one of her students ('Somarawattie') further illustrates the place of history in folktales:

> "Please mother, about what year are we now in History?"
>
> "King Manavamma died 726 AD," answered mother, "and I am sorry I have to tell you some more sad things, before we come to another great King."
>
> "Oh, I don't think the stories now are half as nice as they were at first," called out an impudent little Somarawattie. "At first you told us about golden boats and beautiful Asoka-Mala, and now! Well, they are not so interesting."
>
> "Well, my little girl, how do you think I can tell you interesting stories, when no interesting things have happened? Look here! I am telling you stories from History, I don't make up the stories and so you will have to be satisfied with what I can tell you."
>
> Somarawattie felt a little ashamed when she received that answer and she saw that she was wrong. She came up to the mother and said pleadingly:
>
> "Please excuse me, dear mother; I will try to remember that you are not making the stories from Ceylon History but that you tell us what has happened in our country long ago. I am sure we are learning something from all the stories you tell us, even if they are not as pretty as some of the former ones.

To further underscore the historical significance of folktales, Ratnatunga (2010), author of *Tales from Sri Lanka: Folk and History*, said in the preface that "It is of utmost importance that the record of the island's folktales is preserved for the day when we are sane again; when we can remember what was before Terrorism and Tsunami."

The blurb is even more explicit:

> Sri Lanka, one of the most beautiful islands in the world, has a rich cultural history of more than 2,000 years. *Tales from Sri Lanka* is an attempt by Manel Ratnatunga to preserve the fast-dying, oral literature and traditions of the country and to make people aware of their national heritage.

> Through these tales, Manel Ratnatunga has succeeded in reminding people about their glorious past which has been handed down from generation to generation.

The general appeal of the stories as well as their historical relevance is also emphasized:

> The fascinating stories, retold in a lucid and simple style, will succeed in keeping readers of all ages spellbound. A blending of folklore and history make the tales more interesting and lively. This collection gives a rare glimpse into the captivating culture and history of Sri Lanka.

The Future of Folktales Research

Some critics distinguish between "creative" literature and folktales. Of course, value should be placed on new thinking as that is one of the ways the society develops. It is necessary, however, to consolidate achievements made and one way by which this could be done is to dig into the past, preserve and pass on the findings to generations to come. Archaeologists and social scientists are doing so. Mankind is currently making some breakthroughs in technology which in future will be subject of study as to how we reached this far.

As miners dig into the ground in search of precious mineral resources; so, it could be argued that similar effort needs to be made in digging into folktales to find the hidden treasures. The field is unlimited. One such effort was made by Parker (2003) who published five hundred and nineteen tales of Ceylon in three bound volumes with a total of 1,243 pages.

That was for Ceylon, now Sri Lanka, a country of 21,513,990 people (2010) with two principal ethnic groups, the Sinhalese and the Tamils. For Nigeria, which has a population of about 140,431,790 million people (2006 census) with over 250 ethnic groups, it will be a full time job for anyone to compile as many of their folktales as possible.

Abela Publishing (Jacobs, 2009) which reprinted 43 English folktales first published by David Nutt (1890) dedicates the book thus: "To the

teachers and story tellers who keep folklore and history alive through the telling and re-telling of these tales."

Abela went on to invite readers to:

> Take some time out and travel back to a period before television and radio, a time when families would gather around a crackling and spitting hearth and granddad or grandma or uncle or auntie would delight and captivate the gathering with stories passed on to them from their parents and grandparents from time immemorial.

As I found out in the course of gathering the folktales in my community, this beautiful picture painted by Abela no longer exists today and the fairly old people, who are the repositories of oral literature, are fast disappearing. Folktales narrated by such people, therefore, need to be reduced into writing.

The following five goals of Klamidas Classic Folktales series (Usman, 2005, pp. 11-12), to which I have added the last two objectives, are some of the aspirations which motivated me to delve into folktale research and publishing:

- To present through multimedia the best folktales around the world for the enjoyment of everyone, thereby promoting cross-cultural understanding and respect for story-telling and other traditions of the world's diverse peoples.
- To revive the age-old practice of telling children instructive tales by preserving in writing many of the stories which are believed to be fast disappearing as their human repositories pass on.
- To encourage the younger generations to appreciate, through the story-writing workshop (to which a segment of some of the books in the series might be dedicated), the educative and artistic qualities of the folktales of every culture.
- To inculcate in the students, through theory and practice, the art of short-story writing.

- To contribute, through the morals drawn from the tales, to the moral upbringing of children as well as the moral regeneration of the larger society, thereby reinforcing the need for the pursuit of worthwhile goals.

- To provide additional pleasurable reading materials for the young and old in their leisure hours.

- To provide reading materials with illustrations from familiar environments to supplant or complement foreign publications.

Chuma Nwokolo (*Sunday Trust,* October 30, 2011), legal practitioner and author of *Diaries of A Dead African*, has stressed the importance of preserving African traditions:

> We must have constant conversations between our past and our future, which should tell us how to live in the present...Once the basic needs – food, shelter – have been sorted out, the next imperative is...identity... I visited the British national archives in Kew Gardens and was struck by the overwhelming number of elderly folk researching their ancestry.

Because, in Africa, our elderly folk are the best custodians of our folklore, the folklore researcher is, therefore, racing against time. While one should not over romanticize the olden days, it must be recognized that folklore, particularly *orature,* has assumed new importance as a field of study. It promotes oral traditions, including the desirable art of story-telling and the shared values and enduring wisdom that emanate from it.

Besides, folktales are universal and can be used to unite mankind more remotely than sports or the internet is currently doing. Every country has got its own share of folktales which its people can share with others, thereby demonstrating the oneness of mankind. Says Jacobs (2009): "Up to 1870, it was said equally of France and of Italy that they possessed no folktales. Yet, within 15 years from that date, over 1000 tales had been collected in each country."

The harvest from Nigeria is even more amazing. In my small community of Biu, which has a population of 452,304 (2006 census), I collected over

1000 folktales within two years. Helser (1969, p. 8) had collected over 800 tales in the same community in the 1920s. The potential in Nigeria for gathering folktales is, therefore, quite enormous.

Retaining a Folktale's Original Flavour

While rendering the folktales I derived from my Babur/Bura cultural setting in Hausa language, I consciously tried to retain the flavour of the original tales. I chose the Hausa language for wider circulation within and outside Nigeria while bearing in mind the current UNESCO emphasis on writing in the vernacular for purposes of language preservation and ease of learning by the child.

Chinyere Obi-Obasi, one of Nigeria's budding authors, may somewhat be right in her assertion that folktales "can be retold in any fanciful way as nobody has copyright over them" (*National Mirror*, August 5, 2011). However, she is not absolutely right because folktales belong to the community of their origin and there is a limit to which they can be acceptably altered.

I have, in the case of my tales rendered in Hausa, tried as much as possible to maintain the form and content of the original Babur/Bura folktales. I was guided by Rev. Albert D. Helser (1969, p. 11) who researched 55 Bura folktales which he published in a book way back in the 1920s. He remarked in his preface:

> At first I translated the stories as I heard them and wrote them in English. After I had completed a number in this way I found that I was losing the native flavour of the stories, so I burned them. I started again... I have tried to preserve the indigenous spirit of the stories. My translation is as literal as it was expedient to make it.

Indeed, he said it was unusual to tell tales in the daytime. "The spell of the dark is necessary to the full appreciation of the stories," he emphasized.

Re-creating the Original Tale

I would like to re-visit the dichotomy between "creative" writing, on the one hand, and oral folktales captured in writing, on the other. Let me begin by noting that there are four major ways of capturing an oral folktale in writing; they are: transliteration, translation, modification, and adaptation.

To transliterate an oral tale means representing its letters or words using equivalent letters or words of another alphabet. For instance, the Hausa warning, "Ba shiga" strictly transliterated into English would read, "No Enter," or "No Entrance" if loosely transliterated.

To translate an oral tale means rendering it using the words and idioms of a new language to make it textually meaningful to the hearer or reader of the new language. Translation is not necessarily a word-for-word exercise. The above simple example, "Ba shiga", could in translation into English be rendered as "No road", "No passage", "No thoroughfare" or even, loosely, "Go back."

Modification, in the sense in which the word is used here, means changing key elements of the original tale in order to infuse into it fresh elements, such as new characters or sub-plot. Modification usually takes place when there is need to amplify or modernize the folktale and build a bigger story out of it without losing the essence of the original tale.

It is in the process of modification that the short-story writer, deriving his material from folklore, has a great deal of creative latitude. Indeed, modifying an oral tale from its oral source and re-telling it in writing in another language is as creative as any short-story writing effort can be.

Modification is not mere translation. It is translation enhanced by additional information and the re-ordering of key elements of the original tale. Modification is an exercise in creative writing. Many of the stories in my three short-story anthologies published in English, namely, *The Bride without Scars*, *The Stick of Fortune*, and *Girls in Search of*

Husbands were modified versions of oral tales. But the reader of these stories would easily see that the modified versions written in English (and it could have been any other language) are more elaborate than their comparatively shorter and simpler oral versions, especially in terms of plot and characterization. As for literary devices, modified and written forms of oral tales are stylistically very similar to the modern short story; in fact, they are modern short stories with traditional roots.

We move now to the fourth method – adaptation. The traditional meaning of adapting a work of art to new uses is intended here, except that apart from being a change from one genre to another (e.g., from a folktale to a radio play), it is also, in this context, a change from the original language of the folktale to a new language (e.g., adapting a Biu folktale to a radio play in English).

Evidently, a combination of two or more of the four methods I have identified above is very possible. The creative writer inspired by folklore, one may conclude, can only be limited by his own imagination. His creativity, rather than being hindered by tradition, can be enhanced by it.

Conclusion

It is an established fact that folklore and history are among the two most treasured world traditions. They are so vital that objects and monuments whose relevance are essentially folkloric and historic in nature are designated around the world as "cultural heritage" by the UNESCO "Convention Concerning the Protection of the World Cultural and Natural Heritage" of 1972.

Going by the facts which emerged from the comparative study detailed above, folklore and history really share some vital things in common. They maintain a symbiotic relationship. Folklore tells tales and some of the tales tell the history of communities and of mankind.

It is in the light of the above postulation that this paper is advocating that scholars, students and researchers should focus serious attention on the

study of folklore with the same vigour archeologists and anthropologists employ while digging deep into our distant past.

Maybe I should add, in closing, that I have conducted research in the folklore and history of my native Biu area, in north-eastern Nigeria, and that I have, hence, experienced and observed the close affinities between these two aspects of a people's cultural evolution. Indeed, the often inseparable linkages between history and folklore tend to suggest that they are twin rivers that flow into the same sea.

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