

THE ROLE OF PHYSICAL AND FUNCTIONAL CHARACTERISTICS OF
NINEVEH STREET, MOSUL CITY CENTRE, IRAQ, AS THE SENSE OF PLACE

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To My Father, Sami (may Allah be merciful to him)

To My Mother, Aqilah

To My Brother, Layth

To My Sisters, Iman and Noor

To My Beloved Wife, Rawia

To My Daughter, Asma

Who are the main sources of my happiness in this life

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ABSTRACT

The street is the most important element which determines the urban pattern of cities by creating its 'sense of place'. It plays a multi-dimensional function in the city. Its essential role can be seen not only through its function as a channel of movement, commercial, social and cultural place, but also through its physical characteristics such as location, appearance, and views in making the street legible and accessible, and in providing a safe, comfortable and orientated environment. In the face of rapid urbanisation, many of these roles of streets have changed, which affect the users' feelings and perception of the street, thus disrupting the sense of place of cities. The aim of this study was to establish the role of Nineveh Street in relation to the sense of place. The objectives of the research are to identify the role of two different characteristics of Nineveh Street; firstly physical and secondly functional characteristics in giving the sense of place. Nineveh Street was selected as a case study based on its physical and functional importance as well as its location in the core of Mosul City Centre in Iraq. A mixed methods approach was adopted in this research. The quantitative method was applied by using 330 questionnaire surveys, while the qualitative method was applied by using 30 semi-structured interviews, and direct observation. The data was quantitatively analysed using SPSS version 21 and qualitatively analysed using descriptive and self-interpretation analysis. The results showed that physically the location, appearance, and quality of views of Nineveh Street plays a significant role in making the street accessible, recognizable, visible and oriented respectively. Meanwhile, functionally the street plays an important role as a commercial space, a channel of movement, and some roles as a cultural and social space. The study concludes that these roles represent qualities that distinguish Nineveh Street and make it unique in terms of sense of place of Mosul City Centre. The major implication of the research is that in order to secure the sense of place of Mosul City Centre, the role of physical and functional characteristics of its streets should be considered in the design and redevelopment policy.

ABSTRAK

Jalan merupakan elemen terpenting yang menentukan corak urbanisasi sesebuah bandar dengan mewujudkan 'nilai setempatnya'. Ia memainkan fungsi pelbagai dimensi di bandar. Peranan asasnya boleh dilihat bukan hanya melalui fungsinya sebagai laluan pergerakan, perdagangan, sosial dan tempat kebudayaan, tetapi juga melalui ciri-ciri fizikal seperti lokasi, keberadaannya dan pemandangan untuk menjadikan jalan lebih jelas dan mudah dilalui, dan dalam menyediakan jalan berorientasikan persekitaran yang selamat, dan selesa. Bagi menghadapi pembangunan bandar yang rancak, banyak fungsi jalan telah berubah, keadaan ini melibatkan perasaan pengguna dan persepsi terhadap jalan. Oleh yang demikian, ia mengganggu nilai setempat di bandar-bandar. Tujuan utama kajian ini adalah untuk membuktikan peranan Jalan Nineveh dan kaitannya dengan nilai setempat. Dua objektif kajian ini adalah untuk mengenal pasti peranan; pertama, fizikal dan kedua, fungsi ciri-ciri Jalan Nineveh dalam memberikan nilai setempat. Jalan Nineveh dipilih sebagai kajian kes berdasarkan kepentingan fizikalnya serta lokasinya yang terletak di tengah-tengah pusat bandar Mosul, di Iraq. Pendekatan kaedah campuran digunakan dalam kajian ini. Kaedah kuantitatif dijalankan dengan menggunakan 330 soalan soal selidik, manakala kaedah kualitatif, dijalankan dengan menggunakan 30 temu bual separa berstruktur dan pemerhatian secara langsung. Data dianalisa secara kuantitatif menggunakan SPSS versi 21; kualitatif dianalisa menggunakan analisis deskriptif dan tafsiran sendiri. Keputusan menunjukkan bahawa lokasi fizikal, penampilan dan kualiti pandangan terhadap Jalan Nineveh memainkan peranan signifikan untuk menjadikan jalan mudah diakses, dikenali, dan dilihat dan mempunyai orientasi tersendiri. Sementara itu, fungsi jalan memainkan peranan penting sebagai ruang komersial, laluan pergerakan dan sedikit peranan sebagai ruang kebudayaan dan sosial. Kajian menyimpulkan bahawa peranan-peranan ini mewakili kualiti yang membezakan Jalan Nineveh dan menjadikannya unik dari segi nilai setempat di pusat bandar Mosul. Implikasi utama kajian ini adalah untuk mewujudkan nilai setempat pusat bandar Mosul, peranan fizikal dan ciri-ciri fungsi jalan-jalan harus diambil kira dalam polisi mereka bentuk dan pembangunan semula.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Streets are an important part of open public spaces that reflect the character and the sense of place of cities (Najafi and Shariff, 2011). The topic of this research refers to "Role", which means a function or the degree to which someone or something is involved in a situation or an activity and the effect that they have on it (Oxford, 2012). Streets have many functions that give them their sense of place, thus this sense is reflected generally in the city. People depend on streets for functional, social, cultural and leisure activities, as well as for travel, shopping, playing, and meeting other people (Abbaszadeh, 2011; Sholihah, 2006; Moughtin, 2006). Meanwhile, the physical characteristics of streets, such as building and landscape features, contribute not only to make the street legible and accessible (Abbaszadeh, 2011), but also to provide a safe, comfortable, visible, and orientated environment in the street (Ja'afar, et al., 2012; Shamsuddin, 1997). Therefore, it is vital to understand that street character and its role in urban studies is important to reinforce the sense of place of city centres (Cadw, 2010). Based on the statement, the main feature of this research is to identify the role of the physical and functional characteristics of the commercial street in contributing to the sense of place in Mosul City Centre.

Nowadays, rapid development has made an impact towards streets' development that acts as a public space, particularly the streets of the city centres. In Iraq, Mosul City Centre has witnessed a negligence crisis that can threaten the character of the city and reduce the functional and physical roles of public spaces (Mustafa, 2013). Although, in the last years, there were serious attempts by architects, planners, and sociologists for renewal and rehabilitation, but until now

Mosul City Centre has not witnessed factual and visual changes in its context. This issue puts the architects and designers in front of difficult challenges to strengthen the character, identity, and sense of place of Mosul City Centre. Hence, this study is significant in further informing the street character of the city. This research creates a framework to help architects, planners, psychologists and sociologists in identifying and understanding the role of Nineveh Street based on the impact of physical characteristics and functional characteristics on the sense of place.

This chapter is the most important part of the research because it describes what is planned in the study, what questions it will raise and how it will answer them, what the purpose of the study is, and what the methods of the proposed study are (Babbie, 2013). Thus, this chapter represents the main base of the study. This chapter represents the foundation and the major headlines of the whole research and briefly explains the direction of the overall thesis structure. This chapter is accordingly divided into five sections. The first section presents the global and local problems of research. The second, third, and fourth sections outline the research agenda, including the questions, aim, and the objectives of the research. The fifth section explains the methodology used in the proposed study. It is followed by the review of assumptions in the sixth section, and the case study and its justification in the seventh section. The next section presents the research scope and limitation. The last section draws the overall structure of this study.

1.2 Research Problems

This section explains the local and global problems that are related to the physical characteristics and functional characteristics of the commercial street respectively, which in turns contributes in making the sense of place in Mosul City Centre.

1.2.1 Problems Related to the Physical Characteristics of Streets

a) Global Issues

Many of the physical features of our public open spaces have changed (Ja'afar et al., 2012). According to Abbaszadeh (2011), modern physical characteristics have changed the traffic patterns and size of streets to create wider spaces for vehicles and, as a result, have reduced pedestrian spaces. However, due to the unfit development of street characteristics, the sense of place is interrupted, thus, affecting the people's feelings and perception of the streets (Shamsuddin and Ujang, 2008). In most cases, changes in the physical setting, the types of uses and the streets' activities may consequently erase what is precious.

b) Local Issues

Kharuffa and Bashi (2013) stated that the emergence of the contemporary urban environment in the old Mosul City is wholly different from the traditional environment. Although the city of Mosul has a deep historic legacy of civilisation and a distinct identity, its growth stages were not without negative effects and mess which still infest the city and contribute intentionally or unintentionally in increasing its decay. Nowadays, the old Mosul City suffers from big, worsening problems that increase with the passage of days. On one hand, the buildings, especially the historical buildings, have become mouldered, largely due to negligence. These issues led to the elimination of the element of astonishment that is strongly experienced in the urban environment of traditional Islamic cities.

On the other hand, the study pointed to the existence of the movement system complexity and difficulty in availability of access via the pathways which suffer from severe congestion for both pedestrians and vehicles. Also, the lack of isolation in the network of movement between pedestrians and vehicles resulted in a lot of accidents, thus a sense of comfort in the streets of the city became less. The other problems, such as the using of extraneous and strange building materials in modern

buildings, have negatively impacted the physical and contextual environment of the city (Kharuffa and Bashi, 2013).

Mustafa (2013) explained some problems of Mosul's scenario. He confirms that Mosul City has suffered from the lack of thoughtful maintenance, causing the demise of many of its ancient monuments, besides the repulsion of its buildings, lack of feeling secure, and the large number of un-aesthetic, undesirable scenes. He also mentioned that the presence of negligence and the destruction of what remains of landmarks, such as buildings, has led to the collapse of the traditional environment in Mosul City Centre.

The narrowness of street pavements in Mosul City Centre, which is caused by the display of the goods on the sidewalk either by stall owners or shop owners, has led to the loss of the pavements' features in people's perception, thus pavements or sidewalks of the street lose their role as one of the landscape features which make the street recognisable (Al-Janabi, 2013). Furthermore, the illegibility of the pavement and its narrowness force street users to leave the pavement and use the street for walking. This issue creates an uncomfortable environment for street users. Meanwhile, the street user faces difficulty for access when he wants to pass by or shop to (Al-Janabi, 2013).

Occupied areas in front of shops and stalls, the lack of parking area, and mixing traffic movements with pedestrian movement all create an annoying feeling to everyone who uses the street, such as feeling of being upset, fatigue and exhaustion. New buildings and their front facades in the streets do not emphasise the character of Mosul City. Some have changed the physical appearance by the use of different materials and colours. Moreover, random signs and billboards on the building facades reduce the significance of these facades in enhancing the character of Mosul City, making it difficult to notice (Jawad, 2011; Haider, 2012).

1.2.2 Problems Related to Functional Characteristics of the Streets

a) Global Issues

Sammas (2008) quoted from Jacobs (1961), recognised the role of streets as communication spaces, public spaces, places of social and commercial encounters and exchanges, places to do business, political spaces and symbolic and ceremonial spaces in the city. Nowadays, one of the main reasons is that narrow streets accommodate old buildings, which as a result creates traffic congestion. For this reason the street expansion policy has been introduced (Ja'afar et al., 2012). Moreover, streets are the fundamental public space in every city, the lifeblood of social and economic exchange. Yet today, more and more streets are simply choked with car traffic vying for space with pedestrians and bicyclists. (PPS, 2012, pp.7). This means that priority is given to the function of the streets as a channel of movement for motor vehicles. The destruction of flats and the transfer of residents have given a negative impact to street life (Ja'afar et al., 2012). The simple activities such as walking, talking and eating have been confined to parks, restaurants, and public buildings. This makes the street an uninteresting space (Sammas, 2008).

b) Local Issues

Al-Sa'adon and Al-Mosawi (2012) justified that the deterioration of Iraq's urban centres in terms of their character and identity resulted from the dramatic increase in commercial roles compared with their social and cultural roles. This issue led to the creation of new commercial buildings with poor facades that do not reflect the urban characteristics of these cities. Al-Ta'ay and Al-Azawi (2013) mentioned that the old city of Mosul has a big functional importance as it provides housing for a large number of the population, as well as it contains many commercial markets. This issue led to the migration of businesses from its central location in the old focus to new locations where accessibility for people is easily flexible (Al-Janabi, 2013). At the same time, Nineveh Street has a central location in Mosul City, thus it is expected to be a crowded street for the movement from one place to another using

various types of transportation such as cars, buses, and carts (Al-Janabi, 2013). With the development of the transportation modes, streets of Mosul City could not accommodate the large numbers of cars. As a result, the city streets have become pathways for cars creating traffic jams. Thus, the city has suffered from the loss of the local identity and character instead of enhancing harmony and originality (Muzahim, 2013).

In addition, Sadek (2012) mentioned regarding Nineveh Street that the presence of adjacent shops and stalls contradictory to each other in the kind of goods they sell, such as shops selling detergents and pesticides in front of grocery and fish carts in the Al-Maidan area, made this area an undesirable area for walking, leisure or sightseeing activities. This is because of its odorous smell and uncleanness, thus this issue reduces the importance of the Street as a social space.

1.3 Main and Subsidiary Research Questions

What are the roles of Nineveh Street in giving the sense of place to Mosul City Centre in Iraq?

The subsidiary questions are as follows:

1. What are the roles of the physical characteristics of Nineveh Street in giving the sense of place in Mosul City Centre?
2. What are the roles of the functional characteristics of Nineveh Street in giving the sense of place in Mosul City Centre?

1.4 Research Aim

To establish the role of Nineveh Street in giving the sense of place to Mosul City Centre in Iraq.

1.5 Research Objectives

1. To identify the role of Nineveh Street in terms of physical characteristics in giving a sense of place to Mosul City Centre.
2. To identify the role of Nineveh Street in terms of functional characteristics in giving a sense of place to Mosul City Centre.

1.6 Methodology

This research depends on two types of techniques, quantitative and qualitative techniques respectively. These types of methods are determined by many factors, namely the nature of research, research objectives, research questions and methodology used in previous research. The role of the research questions and objectives is to establish the limitations on what will be studied next (Charmaz, 2006). Thus, data collection techniques used in this research is to establish the aim of research, which is to establish the role of Nineveh Street in giving the sense of place to Mosul City in Iraq.

The first stage of techniques used was a questionnaire survey as a quantitative method to identify two features and qualities of Nineveh Street, namely physical characteristics and functional characteristics. In this case, the quantitative method used the 330 questionnaire surveys technique, based on 5.5% sampling error at 95% confidence level, which are employed by many considerable researchers (Shuhana 1997; Hilmilia 2005; Alford, 2011; Ja'afar, 2006; Ja'afar and Usman, 2009; Ja'afar, et al., 2012; Ujang and Dola, 2007; Ujang, 2011). After that, these qualities were re-measured using the qualitative method which included 30 semi-structured interviews, direct observations as in many previous studies (Ja'afar and Usman, 2009; Ja'afar, et al., 2012) and photos.

Table 1.1 Research methodology used in the study

Research questions	Research objectives	Technique	Method
What are the roles of the physical characteristics of Nineveh Street in giving the sense of place in Mosul City Centre?	To identify the role of Nineveh Street in terms of physical characteristics in giving a sense of place to Mosul City Centre.	Questionnaire	Quantitative
		Direct observation	Qualitative
What are the roles of the functional characteristics of Nineveh Street in giving the sense of place in Mosul City Centre?	To identify the role of Nineveh Street in terms of functional characteristics in giving a sense of place to Mosul City Centre.	Semi-structured interviews	Qualitative
		Questionnaire	Quantitative
		Direct observation	Qualitative
		Semi-structured interviews	Qualitative

For questionnaire design based on reference to the previous research of Dolbani (2000) quoted from Ujang (2011), the targeted population for this study was the static and mobile users. Static users comprise shop-owners, shopkeepers, vendors, office workers, residents, and students. Mobile users comprise shoppers and visitors. Meanwhile, this study used the approach of "non-probability sampling" of "Time-interval and Cluster Sampling" (cluster sample interval), as did Hilmilia (2005) and Ja'afar (2006). In non-probability sampling, the researcher chooses the sample based on who they think would be appropriate for the study (Joseph Castillo, 2009).

1.7 Research Assumptions

This study proposes the assumptions following:

- i. The strategic location of Nineveh Street plays a significant role in making the street accessible.
- ii. The Old Bridge as a non-building element has an influential role in recognising the street and in enhancing the sense of place.

- iii. The lack of the role of physical characteristics in providing safety and comfort has a negative effect on reducing the influence of sense of place in the street.
- iv. Physical appearance, especially buildings, and the quality of views needs to be improved to increase the influence of sense of place in the street.
- v. Nineveh Street has a stronger role as a commercial space and as a channel of movement compared to the cultural and social space in relating to the sense of place.

1.8 Significance of the Study

The following section discusses the significance of this research to environmental studies.

- i. Within environmental studies and urban design, there are no previous studies focusing on the sense of place in relation to the characteristics of Nineveh Street in the context of Mosul City. Thus, there is a gap of knowledge in the role of Nineveh Street in terms of physical and functional characteristics in creating the sense of place in Mosul City.
- ii. This study strengthens the knowledge of urban character and identity in the Iraqi context by integrating the street features in defining the distinction of local place character.
- iii. This study is significant in further informing the character and uniqueness of Mosul City. Users' identification of the attributes and characteristics that strongly influence sense of place provides a framework and guideline in securing the city's sense of place.
- iv. This study is significant in preventing the loss of street characteristics that encourage users to visit, pass by and work.

- v. Studying the sense of place can enhance the value and the role of streets as the core of mixed-use activities, thus benefitting the tourism industry and economy of the place.
- vi. This research is important in elevating the quality of life and the well-being of the people who are attached to the street. This issue will raise awareness among people to sustain their place and make them reject any form of urban intervention which threatens their sense of place in the street.
- vii. Nowadays, many considerable conferences and interviews are conducted by architects, planners, psychologists and sociologists for developing and renewing Mosul City. Thus, this research creates a framework to help them to understand the role of Nineveh Street based on physical characteristics, and functional characteristics in contributing to the sense of place.

1.9 The Study Area and Justifications

Nineveh Street has been selected as the setting of the investigation of this study. It was chosen based on the physical, and functional characteristics that represent the character of Mosul City Centre after the first decade of the last century, which emerged after the British occupation of Mosul City, when the process of planning and architectural transformation occurred in these areas (see Figure 1.1). Simultaneously, this street shares the following characteristics:

- a. It is located within the main commercial/shopping district of the City Centre.
- b. It is located in the core of Mosul City within a diversity of activities.
- c. It is identifiable as the main street and is well known as a popular shopping street.
- d. It receives the highest concentration of pedestrians, shoppers and visitors.
- e. It is located within an inherent socio-cultural stronghold.
- f. It is established according to constructivism rules which somewhat limited irregular construction in that period.

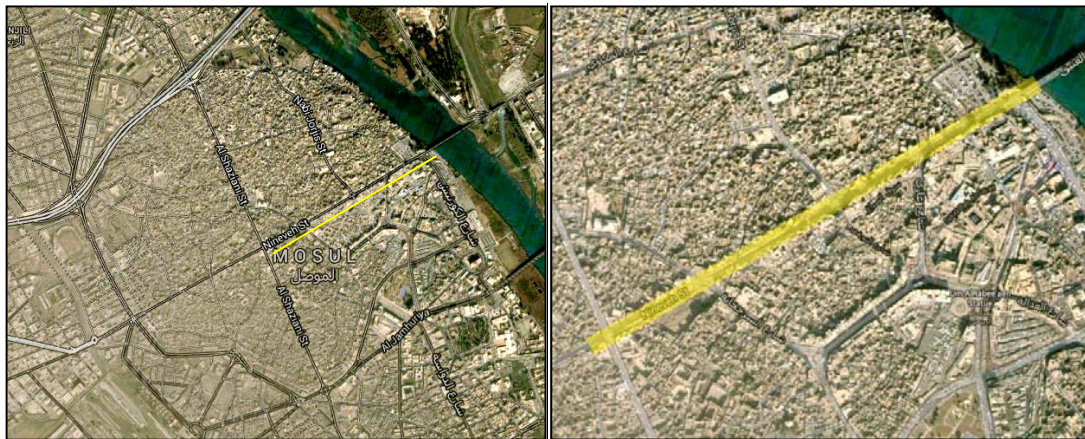


Figure 1.1: Top view of case study area, Source: Google earth.

1.10 Research Scope

The scope of the research was limited to several aspects. Firstly, the study area only focused on Nineveh Street in Mosul City Centre, Iraq. Nineveh Street is located within the main commercial district in Mosul City Centre. This Street is the first modern commercial street that emerged after the British occupation of Mosul City, where the process of planning and architectural transformation occurred in Mosul City Centre. It receives the highest concentration of pedestrians, shoppers and visitors among many City Centre streets. The selection of this street is arises from the many in-depth conferences and seminars on the renewal and revitalisation of Mosul City Centre. Besides that, Mosul City Centre is selected for this case study because it is the oldest area which reflects the character and identity of Mosul City. It is the city where historical values and architectural significance exists. Mosul City Centre has a high concentration of people who are working, shopping, visiting, and living. All the above-mentioned criteria elaborated the reasons for selecting the case study.

Secondly, the users within Nineveh Street in Mosul City Centre have been identified as the respondents to this research. According to Ja'afar et al. (2012), Shamsuddin and Ujang (2008) and Ujang (2008), there are two types of street users, namely mobile users and static users who use the City Centre streets. A mobile user is known as a visitor. Static users are residents, shop owners, shopkeepers, vendors and office workers. The purpose of selecting both types of street users is because

every type of user has a different perception and cognition to the city which is important in order to understand the place character. Thus, the research objectives were identified through examining users' perception and cognition of Nineveh Street.

Thirdly, according to previous studies, there are many definitions of the sense of place and many methods to measure it. This research studies the role of physical and functional characteristics as a method to measure the impact of sense of place. Sense of place is defined as the qualities that differentiate between one street and another (Shamsuddin and Ujang, 2008). Thus, the research seeks to answer the research objectives and achieves the aim of this study.

Lastly, according to the title of the research, the word "role" means a function or the degree to which someone or something is involved in a situation or an activity and the effect that they have on it (Oxford, 2012). This research focuses on the role of two issues. The first one focused on the role of the physical characteristics of Nineveh Street. According to the literature review, building, and non-building elements and structures (physical appearance), location, and the quality of view are the physical characteristics of Nineveh Street. The first characteristic, building, and non-building elements including hard and soft landscape and structures like bridges play an important role in the legibility of the street, but the non-building elements also play a significant role in making a safe and comfortable environment on the street. The second characteristic, location of the street, contributes in making the street accessible. The third characteristic, the quality of views, has an appreciated role in making the street visible and oriented. The second issue focused on the role of the functional characteristics of Nineveh Street. According to previous studies, in terms of function, streets play four roles to be considered, which are as a channel of movement, as a commercial street, as a social space, and as a cultural space. Hence, the roles of physical and functional characteristics in this research represent the qualities of the street that differentiate between one street and another, and as a result they give the sense of place.

1.11 The Structure of Thesis

The thesis is divided into four parts consisting of seven chapters. The following describes the structure of the thesis:

Part 1: Understanding the research subject and establishing a conceptual framework and the methodological approaches and strategies (Chapter 1 to Chapter 3).

Chapter 1 presents the overall structure of the research describing the background of the study, the issues, research questions and objectives, scope and limitation of the research, and the significance of the research to urban design knowledge and practice.

Chapter 2 presents a review of literature relating to the research topic, and the definitions and concepts of public spaces, streets, commercial streets, sense of place, and the role of street characteristics. It also addresses the current body of knowledge of the main roles of functional and physical characteristics of Nineveh Street.

Chapter 3 describes the methodology of the research and appropriate strategies to collect relevant data. It discusses the approach of the methodology, the scope of the research and the research processes which determines the appropriate research design and the way the investigation was structured.

Part two: Understanding context and identifying the role of Nineveh Street in giving the sense of place.

Chapter 4 presents the introduction of the study area (Nineveh Street).

Chapter 5 analyses and discusses data on the role of the physical characteristics of Nineveh Street in contributing to the sense of place.

Chapter 6 analyses and discusses data on the role of the functional characteristics of Nineveh Street in contributing to the sense of place.

Part three: Summary and recommendations

Chapter 7 is the final chapter and presents the Summary of the research, including the main two findings of the research which answer the two objectives of the research. The first finding answers the first objective, which is to identify the role of Nineveh Street in terms of physical characteristics in giving a sense of place in Mosul City. The second finding answers the second objective, which is to identify the role of Nineveh Street in terms of functional characteristics in giving a sense of place in Mosul City. Moreover, this chapter also presents the planning and urban design implications of the findings.

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