

**BROCA'S APHASIA WORD PRODUCTION OF
SODDERLAND IN *MY BEAUTIFUL BROKEN BRAIN* MOVIE**

THESIS

By:

Warda Humairoh Syarifah

NIM 16320144



**DEPARTMENT OF ENGLISH LITERATURE
FACULTY OF HUMANITIES
UNIVERSITAS ISLAM NEGERI MAULANA MALIK
IBRAHIM MALANG**

2020

**BROCA'S APHASIA WORD PRODUCTION OF
SODDERLAND IN *MY BEAUTIFUL BROKEN BRAIN* MOVIE**

THESIS

Presented to

Universitas Islam Negeri Maulana Malik Ibrahim

in partial fulfillment of the requirements for the degree of *Sarjana
Sastra (S.S)*

By:

Warda Humairoh Syarifah

NIM 16320144

Advisor:

Dr. Rohmani Nur Indah, M. Pd.

NIP 19760910200322002



**DEPARTMENT OF ENGLISH LITERATURE
FACULTY OF HUMANITIES
UNIVERSITAS ISLAM NEGERI MAULANA MALIK
IBRAHIM MALANG**

2020


STATEMENT OF AUTHORSHIP

I state that the thesis entitled **“Broca’s Aphasia Word Production of Sodderland in My Beautiful Broken Brain Movie”** is my original work. I do not include any materials previously written or published by another person, except those ones that are cited as references and written in the bibliography. Hereby, if there is an objection or claim, I am the only person who is responsible for that.

Malang, 7 June 2020

The Author




Warda Humalroh Syarifah

NIM 16320144

APPROVAL SHEET

This to certify that Warda Humairoh Syarifah's thesis entitled **Broca's Aphasia Word Production in Sodderland in *My Beautiful Broken Brain* Movie** has been approved for thesis examination at the faculty of Humanities, Universitas Islam Negeri Maulana Malik Ibrahim Malang, as one of the requirements for the degree of *Sarjana Sastra (S.S)*.

Malang, 7 June 2020

Approved by Advisor

Head of Department of English
Literature



Dr. Rohamni Nur Indah, M. Pd.

NIP. 19760910200322002



Rina Sari, M. Pd.

NIP. 197506102006042002

Acknowledged by Dean,



Dr. W. Syafiyah, M.A.

NIP. 1966091019911032002

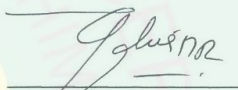


LEGITIMATION SHEET

This is to certify that Warda Humairoh Syarifah's thesis entitled **Broca's Aphasia Word Production of Sodderland in My Beautiful Broken Brain Movie** has been approved by the Board of Examiners as the requirement for the degree of *Sarjana Sastra (S.S)* in English Literature Department.

Malang, 7 June 2020

The Board of Examiners

Signatures

- | | | |
|--|-----------|--|
| 1. Dr. Hj. Galuh Nur R., M.Pd., M.Ed. (Main
NIP. 197402111998032002 | Examiner) |  |
| 2. Agwin Degaf, M.A
NIP. 198805232015031004 | (Cair) |  |
| 3. Dr. Rohmani Nur Indah, M.Pd.
NIP. 19760910200322002 | (Advisor) |  |

Approved by

Dr. Diah Syafiyah, M.A.



NIP. 1966091019911032002

MOTTO

انا عند ظنّ عبدي

I (Allah) according to My servants' prejudice



DEDICATION

The thesis cannot be finished without any support and love. I thank to lots of people who give affection and make me believe that nothing impossible. My praises belong to Allah SWT, the most Merciful who has given guidance and blessing to do my thesis. My endless love for several special people who give me a fascinating support and lots of pray, they are my honorable teachers and my advisor Dr. Rohamni Nur Indah, M. Pd. My beloved family, they are my father (Alm) Hudi Rohmad, my mother Khoiriyah Winarsih, my young sister Khoirotun Nisa and my brother Muhammad Sahal Mahfudz.

ACKNOWLEDGMENT

All my deepest gratituded and praise are always to Allah SWT, the Lord of the world and the Hope of all oppressed. *Shalawat* and *Salam* are always delivered to Muhammand SAW, the prophet of *ummah* who has ingerited Islam as a peace and blessing to th entire universe. *Alhamdulillah Rabbil Aalamin*, due to his mercies and blessings through His Prophet, I am able to accomplish my thesis as one of the requirement for the degree of *Sarjana Sastra (S.S)* in English Literature Department, Faculty of Humanities, Universitas Islam Negeri Maulana Ibrahim Malang, Indonesia.

Furthermore, I would like to express my best gratitude to people who have helped me to accomplish my thesis, especially Dr. Rohmani Nur Indah, M.Pd as my advisor who is always willing to guide me, share her ideas, and spend her busy time for this thesis. Besides, I also thankful to Dr. Hj. Istiadah, MA as my academic adviser who always remind me to be responsible for the study and also the worship. The last, I would like to extend my gratitude to all my friends who always support me in any situation.

Finally, I do realize that there are some imperfections and weaknesses in this thesis. Therefore, the criticism and suggestions are welcome to make it better. May this thesis be useful for all readers in order to deepen understanding about aphasia's word production to conduct similar research which fulfilled the gaps.

ABSTRACT

Syarifah, W. H. 2020. *Broca's Aphasia Word Production of Sodderland in My Beautiful Broken Brain Movie*. Minor Thesis. Linguistics, English Literature Department, Faculty of Humanity, Universitas Islam Negeri Maulana Malik Ibrahim Malang,

Advisor : Dr. Rohmani Nur Indah, M. Pd.

Key Words : Aphasia, Language Disorder, Language Production.

Aphasia is one of the types of language disorder caused by damage to the function of the brain as a language processor. Some diseases that can cause people to experience aphasia are stroke, trauma and brain hemorrhage. Complaints of aphasia sufferers can differ from each other, and the differences are caused by the location of the disruption of language function in the brain. Therefore, this study aims to analyze and observe some of the difficulties experienced by aphasia sufferers, particularly Broca's aphasia on Sodderland as the main character in *My Beautiful Broken Brain* movie. Through the mistakes made by Sodderland when producing words, the author can deduce what difficulties she has and how she interacts with the people around her.

Furthermore, the author used a qualitative descriptive approach because the data studied in the form of utterances produced by Sodderland in *My Beautiful Broken Brain* movie as research objects. In collecting data, the author compared the movie's transcripts with Sodderland's utterances in the movie. Therefore, the author can understand the context of Sodderland's utterances based on the scenes in the movie, so that the data in the form of speech production by Sodderland can be observed correctly. This study applies a theory proposed by Reason (2000) about a detailed speech production model and its problems or errors in people with brain damage, and Gall (2010) about the location of language in the brain.

The results of this research showed that there were twenty Sodderland's utterances which represented some of the difficulties she experienced. Fourteen of Sodderland's utterances shows that there are some problems in the process of producing words, among others, are shown by the types of error she produces, namely: *lexical selection error*, *malapropism*, *substitution*, *shift* and *omission*. While the other six utterances indicate that there are some difficulties experienced by Sodderland as a sufferer of Broca's aphasia, according to Yule (2016), namely: *effortful speech*, *distortion of articulation* and *stutter*. Furthermore, the author found that the location of brain damage experienced by Sodderland was in the area of Broca so that she experienced a disruption in the use of language that was dominant in language production. Some of the consequences of disrupting Broca's area are non-fluency in language production, bad in the repetition of words and wrong in naming objects. Thus, the author provide the suggestion to the further researchers that the selection of references from several previous studies, must be done more thoroughly. It is caused by the study of aphasia is discussed in not only the realm of psycholinguistics, but also neurolinguistics.

ABSTRAK

Syarifah, W. H. 2020. *Broca's Aphasia Word Production of Sodderland in My Beautiful Broken Brain Movie*. Skripsi. Linguistik, Jurusan Sastra Inggris, Fakultas Humaniora, Universitas Islam Negeri Maulana Malik Ibrahim Malang.

Pembimbing : Dr. Rohmani Nur Indah, M. Pd.

Kata kunci : Afasia, gangguan bahasa, produksi bahasa.

Afasia adalah salah satu jenis gangguan bahasa yang diakibatkan oleh rusaknya fungsi kerja otak sebagai pemroses bahasa. Beberapa penyakit yang dapat menyebabkan seseorang mengalami afasia adalah stroke, trauma dan pendarahan otak. Keluhan yang dimiliki oleh penderita afasia dapat berbeda satu sama lain, perbedaan tersebut disebabkan oleh lokasi terganggunya fungsi bahasa pada otak. Oleh karena itu, penelitian ini bertujuan untuk menganalisis beberapa kesulitan yang dialami oleh penderita afasia, khususnya afasia Broca pada Sodderland sebagai pemeran utama dalam film *My Beautiful Broken Brain*. Melalui kesalahan yang dilakukan oleh Sodderland saat memproduksi kata, peneliti dapat menyimpulkan kesulitan apa saja yang ia miliki dan bagaimana ia berinteraksi dengan orang disekitarnya.

Selanjutnya, peneliti menggunakan pendekatan deskriptif kualitatif karena data yang diteliti berasal dari beberapa ujaran yang diproduksi oleh Sodderland dalam film *My Beautiful Broken Brain* sebagai subyek penelitian. Dalam mengumpulkan data, peneliti membandingkan transkrip film dengan ujaran Sodderland dalam film. Oleh karena itu, peneliti dapat memahami konteks berdasar pada adegan yang ada pada film, sehingga data yang berupa produksi ujaran oleh Sodderland dapat diamati dengan benar. Penelitian ini menerapkan teori yang diajukan oleh Reason (2000) tentang model produksi wicara yang rinci beserta masalah atau kesalahannya pada orang dengan kerusakan otak, dan Gall (2010) tentang lokasi bahasa yang ada pada otak.

Hasil penelitian menunjukkan bahwa terdapat 20 ujaran Sodderland yang merepresentasikan beberapa kesulitan yang ia alami. 14 ujaran Sodderland menunjukkan bahwa terdapat beberapa masalah dalam proses memproduksi kata diantaranya ditunjukkan oleh jenis kesalahan yang ia produksi, yaitu: *lexical selection error, malapropism, substitution, shift and omission*. Sedangkan 6 ujaran lainnya mengindikasikan pada beberapa kesulitan yang dialaminya sebagai penderita afasia Broca menurut Yule (2016), yaitu: *effortful speech, distortion of articulation and stutter*. Selanjutnya, peneliti menemukan bahwa lokasi kerusakan otak yang dialami Sodderland adalah pada area Broca, sehingga ia mengalami gangguan pada penggunaan bahasa yang dominan ada pada produksi bahasa. Beberapa akibat dari terganggunya area Broca adalah tidak lancar pada produksi bahasa, buruk pada pengulangan kata dan buruk pada penamaan objek. Sehingga, peneliti menyarankan kepada peneliti selanjutnya untuk lebih teliti dalam memilih referensi. Hal ini dikarenakan studi tentang afasia tidak hanya dibahas dalam ranah psikolinguistik, namun juga pada neurolinguistik.

مستخلص البحث

شريفة.و.ح.2020. إنتاج كلمة حبسة بروكا من سودرلاند في فيلم **My Beautiful Broken Brain**. أطروحة اللغويات ، قسم الأدب الإنجليزي ، كلية العلوم الإنسانية ، جامعة مولانا مالك إبراهيم الإسلامية الحكومية في مالانغ.
المشرف : دكتور رحمان نور اندة الماجستير
الكلمات المفتاحية : حبسة ، اضطرابات لغوية ، إنتاج لغوي.

الحبسة هي نوع من جنس اضطراب اللغة التي تُسبب عن تلف وظائف الدماغ كمعالج لغة. كم الأمراض التي تسبب أن تجعل الشخص من الحبسة هي السكتة الدماغية والصدمات ونزيف الدماغ. يمكن أن تختلف شكاوى مرضى الحبسة عن بعضها البعض ، وذلك الفرق بسبب موقع تعطل وظيفة اللغة في الدماغ. و لذلك ، يهدف هذا البحث إلى تحليل وملاحظة بعض الصعوبات التي يجع منها ، خاصة حبسة بروكا في لوتجي سودرلاند باعتبارها الشخصية الرئيسية في فيلم **My Beautiful Broken Brain**. من خلال الأخطاء التي صنعها سودرلاند عند إنتاج الكلمات ، يمكن للباحثين استنتاج الصعوبات التي يواجهها وكيف يحاور مع الأشخاص من حوله.

و بالتالي ، استخدم الباحثون نهجاً وصفيًا نوعيًا لأن البيانات التي تُحلل من العديد من التصريحات التي أنتجها سودرلاند في فيلم **My Beautiful Broken Brain** كمواضيع بحثية ، قارن الباحثون نصوص الأفلام مع عبارات سودرلاند في الأفلام في جمع البيانات. لذلك ، يمكن للباحثين فهم السياق بناءً على المشاهد في الفيلم ، بحيث يمكن ملاحظة البيانات في شكل إنتاج الكلام من قبل سودرلاند بشكل صحيح. تطبق هذا بحث نظريا اقترحها Reason (2000) حول نموذج إنتاج الكلام التفصيلي و مع مشاكله أو أخطائه في الأشخاص الذين يجعون من تلف في الدماغ ، و Gall (2010) حول موقع اللغة في الدماغ.

أوضحت النتائج أن هناك 20 كلمة سودرلاند تمثل بعض الصعوبات التي واجهها. تُظهر 14 كلمات سودرلاند التي تظهر أن هناك بعض المشاكل في عملية إنتاج الكلمات ، من بين أمور أخرى ، حسب نوع الخطأ الذي أنتجته ، وهي: خطأ الاختيار المعجمي ، سوء التغذية ، الاستبدال ، التحول والإغفال. في حين تشير العبارات 6 الأخرى إلى أن هناك بعض الصعوبات التي واجهها سودرلاند كعانة من حبسة بروكا وفقاً لـ Yule (2016) ، وهي: الكلام العنيف ، وتشويه التعبير والتلعثم. علاوة على ذلك ، وجد الباحثون أن موقع تلف الدماغ الذي عانت منه سودرلاند كان في منطقة بروكا ، حيث عانى من اختلال في استخدام اللغة التي كانت سائدة في إنتاج اللغة. بعض عواقب تعطيل منطقة بروكا هي عدم إتقان إنتاج اللغة ، وسيئة في تكرار الكلمات وسيئة في تسمية موضع . وهكذا يقترح الباحث على الباحث القادم أن يكون أكثر حذراً في اختيار المراجع. وذلك لأن دراسة الحبسة لا تتم مناقشتها فقط في عالم اللغويات النفسية ، ولكن أيضاً في علم اللغة العصبي.

TABLE OF CONTENT

THESIS COVER	i
STATEMENT OF ACADEMIC INTEGRITY	ii
APPROVAL SHEET	iii
LEGIMATION SHEET	iv
MOTTO	v
DEDICATION	vi
ACKNOWLEDGEMENT	vii
ABSTRACT	viii
TABLE OF CONTENT	xi
 CHAPTER I: INTRODUCTION	
A. Background of the Study	1
B. Research Question	3
C. Objective of the Study	4
D. Scope and Limitation	4
E. Significance of the Study	4
F. Definition of Key Term	5
G. Previous Study	6
H. Research Method	9
1. Research Design	10
2. Research Instrument	10
3. Data Source	11
4. Data Collection	11
5. Data analysis	12
 CHAPTER II: REVIEW OF RELATED LITERATURE	
A. Psycholinguistics	13
B. Language Production	14
C. Language Disorder	15
1. Phonological Error	17
2. Lexical Error	17
3. Morphological Error	19

D. Brain and Language	19
E. Aphasia	21
1. Broca Aphasia	23
2. Wernicke Aphasia	24
3. Conduction Aphasia	25
4. Anomic Aphasia	25
5. Global Aphasia	25
6. Transcortical Motor Aphasia	26
7. Transcortical Sensory Aphasia	26
CHAPTER III: FINDING AND DISCUSSION	
A. Research Finding	28
B. Discussion	42
1. What are the difficulties had by Sodderland in producing words	43
a. Types of Error	
a) Lexical Error	44
b) Morphological Error	48
c) Phonological Error	51
b. Types of Difficulties	
a) Effortful Speech	52
b) Stutter	53
c) Distortion of Articulation	54
2. How does Sodderland have interaction with others	54
CHAPTER IV: CONCLUSION AND SUGGESTION	
A. Conclusion	63
B. Suggestion	65
REFERENCES	66
CURRICULUM VITAE	70
APPENDIXES	71

CHAPTER I

INTRODUCTION

A. Background of the Study

Some people have a speech disorder, such as difficulty in expressing words and pronouncing sentences with a good and correct structure. This happens when the human brain tissue that functions as language processing is disrupted. Therefore it can be predicted that they will lose some of their vocabulary and memory (Blumstein, 2016). This kind of disorder is called aphasia, a disorder caused by damage effects such as stroke, trauma, and brain hemorrhage (Schwartz, 2014).

We need to know, that the problems experienced by aphasia are influenced by the disruption of the human brain tissue which responsible for producing words. People who experience aphasia will have difficulty in remembering a few words and even remembering most letters. They know what they want to say, but they difficult to find and express it into a word. When they tried to convey what they mean, often the words they use cannot be recognized (Khanum, 2014). Another problem that can be recognized as a symptom of aphasia is the difficulties experienced by stroke patients in interacting with people around them.

Most people thought that stroke and similar diseases are only experienced by the elderly. But in fact, certain genetic conditions can be a reason that can make someone have a stroke. As same as the story of the *My Beautiful Broken Brain* movie, which tells of a 34-year-old woman who had a stroke and suffering from aphasia. A stroke occurs when someone's brain is attacked or experiencing

bleeding which effects the disruption in the process of supplying blood to several parts (Cahana & Jenkins, 2018). The reduced ability to produce and understand spoken and written language is a sign that someone is experiencing a disturbance in the functioning of his brain.

Several previous studies on aphasia carried out by Khanum (2014) and Schwartz (2014) discuss the analysis of language skills in patients who experience aphasia. So it was found that people with aphasia have several different problems. One of them is difficult to convey something in a word, while the other is difficult to say the name of an object and memorize the names of those around them. This is caused by differences in the types of brain damage in each individual, when their left hemisphere is inhibited they will have problems in remembering, naming things and uttering sentences in the correct structure (Khanum, 2014).

Another study about aphasia by Puvanedran et al. (2015), Grossman et al. (2018) and Nielsen et al. (2019) discuss the research such as Primary Progressive Aphasia (PPA), Non-Brain Damage (NBD) and Recall Recognition (RR). All research targets are centered on understanding grammar in people with aphasia. Through the application of the test, it was found that the problems experienced by people with aphasia were not only in word production but also in the preparation of sentences, naming objects and even remembering events.

To find and confirm the condition of the object of this study, the author makes a summary of the problem and how people with aphasia deal with their problem. Besides, this research is expected to provide new insights, especially about aphasia caused by a brain hemorrhage. This research will discuss the

difficulties experienced by people with aphasia in producing words and how they interact with people around them.

In this study, the author focuses on analyzing word production by people with Broca's aphasia. The object to be investigated is the main character on *My Beautiful Broken Brain* movie, produced by Netflix and released in 2014. This movie tells about the journey of Sodderland, as a woman who experienced Broca's aphasia that destroyed her language skills and made her lose her sense of perception. This movie represents a true story so that some cases that occur are not made for a person or group. In other words, the symptoms and problems are purely based on the experiences owned by Sodderland.

The reasons why the author uses this movie for doing this research are: First, Broca's aphasia has characteristics that can be recognized by the typical problems that arise in patients. Second, the analysis of this movie can reflect the problems of Broca's aphasia patients in detail based on a true story. To analyze the data, the author used a theory proposed by Gall (2010) about the location and language capacity in the brain and the relationship between the two as well as the most detailed models of speech production and speech errors caused by brain disorders by Reason (2000).

B. Research Question

1. What are the difficulties had by Sodderland in producing words?
2. How does Sodderland have interaction with others?

C. Objectives of the Study

1. To describe the difficulties had by Sodderland in producing words.
2. To explain the way Sodderland has interaction with others.

D. Scope and Limitation

In this study, the author chose to focus on the problem of Broca's aphasia in producing words and the way they interact and talk with others under Psycholinguistics. Besides, to support the analysis the author uses the theory proposed by Gall (2010) about the location of language capacities in the brain and about the most detailed speech production models by Reason (2000).

To observe the object of this research, the author has determined several characteristics to select the data from the movie to be analyzed. Those characteristics are: First, the main character must represent the problem of people with Broca's aphasia. Second, data were taken by the related movie which presented certain topics. In addition, the author chose the object of this study from *My Beautiful Broken Brain* movie which tells the story of Sodderland in facing her condition as people with aphasia.

E. Significance of the Study

This study discusses the difficulties experienced by people with Broca's aphasia in producing words and how they interact with people around them. Theoretically, this research will contribute to the scope of Psycholinguistics studies, especially in word production in people with aphasia. Besides, the author

also provides additional information about the localization of language in the brain. Practically, this research is expected to be useful in several ways. The author expects that this research will contribute to the next researcher as additional information about word production in people with Broca's aphasia. In addition, it is also expected to be useful for students on Psycholinguistic subjects, which will be able to become additional material in studying language production, language disorder and aphasia related to the discussion of brain and language objects.

F. Definition of Key Term

1. Language disorder: a problem owned by Sodderland as an individual who experiences brain hemorrhage. All people who have problems with the brain's function as responsible for the language will also have difficulty in structuring sentences or conveying the message through utterance.
2. Aphasia: a condition that makes people lose the ability to express something verbally and in writing. As a patient who suffered from aphasia caused by a cerebral hemorrhage, Sodderland experienced the loss of several words, letters and even her memories.
3. Language production: the process by which a person creates and expresses messages through spoken and written. But as people with aphasia, Sodderland's ability in producing words was diminishing.

G. Previous Study

To explore the study of aphasia, several previous studies are discussed in this section to expand the information in conducting research and understand various problems on the object. The author obtained several journal articles to compare and as the empirical bases with topics that were certainly appropriate.

Khanum (2014) analyzed the influence of Broca's aphasia and Wernicke's aphasia on language disorders in patients suffering from aphasia. The objects were investigated using the theory proposed by Gall (2010 in Khanum, 2014) about the location of language in the brain and the relationship between the two. This research affirms that the brain is divided into two parts based on the type of anatomy, one of which is responsible for language production. The discussion concludes that the frontal lobe of the brain is the center of language, and if this center is disrupted it will be the main cause of speech disorders in someone who has aphasia.

Based on Schwartz (2014), people with aphasia had naming errors and had different brain function in word production. The subjects studied were several people with aphasia who mostly had errors in speaking. This research uses a method called Voxel-based Lesion-Symptom Mapping (VLSM) to specialize in software that changes lesions by tracing them to standard brain regions. This method was developed by Dell as an adjustment of research data in aphasia patients. This paper has reviewed the study of word production deficits in adult aphasia through a detailed discussion on the process of word production and the location of language functions in the human brain.

While the research conducted by Blumstein (2016) discusses the Psycholinguistic contribution that has made the readers easier to understand the differences between Broca's aphasia and Wernicke's aphasia. This journal article also discusses some ways that can be used in analyzing data of Broca's aphasia and Wernicke's aphasia patients. Therefore, the discussion of this study talks about speech production, speech perception, lexical disorders, and syntactic disorders which are discussed clearly according to Goodglass (1993 in Blumstein 2016). This research concludes that some people with aphasia are still able to have interaction and understand the message in a certain way.

Another study discussed the Working Memory (WM) on the brain that produce words in People With Aphasia (PWA) (Canana & Jenkins, 2018). The data is obtained through an online database known as aphasia Bank (MacWhinney et al., 2011). The data was collected by using theory from Armstrong (2000 in Canana & Jenkins, 2018) that discusses work in patterns of language production in aphasia. Some conclusions obtained show the reduction of WM in PWA which affects their ability to produce words. Individuals with enough word counts will also find it difficult to create suitable and local narratives of global coherence and well-arranged story grammar.

The study by Puvanedran et al. (2015) investigated the use of fact strategies obtained in Recall Recognition (RR) in aphasia patients with impaired working memory. Subjects studied were patients who experienced brain damage with selective mathematical disorders using theory by Baddeley (2000 in Puvanedran et al., 2015). This research shows that sufferers of Broca's aphasia

who experience disorders of the left brain will still be able to RR and implement various strategies in arithmetic such as heredity, division, and multiplication. This shows that certain counting strategies do not depend on the functioning of the human left brain.

Ardila et al. (2016) discuss the understanding of how language is "localized" in the brain that has existed for centuries. According to this research, the interpretation of aphasia Luria has seven different forms of aphasia that can be recognized: efferent or kinetic motor, dynamic, afferent or kinesthetic motor, semantic, acoustic-agnosic, acoustic-amnesic, and amnesic. The results of this study indicate that interest in the potential inclusion of insula in language has almost disappeared. During the last decade of the 20th century, aphasia model was generally used to describe brain and language which also discussed language pathology. So this research shows that certain brain areas are involved in aspects of language.

The last is a study of Nielsen et al. (2019) on language production as a determinant of grammar and lexical in people with Broca's aphasia. This study uses a theory put forward by Chomsky (1986 in Nielsen et al., 2019) about the elements of a case assignment, which is not morphologically expressed and related to NP which shows elements such as verbs. This study analyzes patients who have Broca's aphasia and tests the patients to mention something and ask them to repeat it. Therefore, it was found that the difficulty in naming things and remembering a few words was a problem experienced by people with Broca's aphasia.

The focus of the problem discussed by previous research by Nielsen et al. (2019) is about the grammar and lexical determinants of Broca's aphasia, relating to the focus of the problem discussed in this study. It focuses on the problems experienced by the people with aphasia and how they interact with people around them. This research can be the additional knowledge for the next writers in understanding the difficulties experienced by Sodderland as people who experience Broca's aphasia. Especially difficulties in dealing with problems or disturbances in producing words and difficulties experienced in interacting with people around.

After exploring some of the previous studies, the author assumed that this research is different from some of the previous studies as described above. Some things that characterize this research are; First, this research focuses on linguistic elements, especially psycholinguistics in finding the difficulties by Sodderland in producing word, as a person with Broca's aphasia. Second, this research focuses on how Sodderland interacts and communicates with people around. Finally, the purpose of this research is to gain knowledge and information about what aphasia is, what happens to people with aphasia and how they try to recover from the difficulties they experience.

H. Research Method

This section discussed the methods and steps of the author in collecting and analyzing the data. The purpose of this study is to analyze the difficulties experienced by Sodderland as people with Broca's aphasia in producing words

and how she interacts with people around based on the theory by Gall (2010) and Reason (2000).

1. Research Design

This study used a descriptive qualitative approach because the author tried to have data in the form of sentences produced by the main character in the movie as the object. Therefore, the author collected the data in the form of utterances based on the difficulties experienced by Sodderland as a patient with Broca's aphasia. According to Creswell and Poth (2016: 211), papers using qualitative methods show that the research will explore and understand the message of individuals or groups, this also lays out in detail the problems to be examined. In conducting this research, the data obtained were analyzed using the Psycholinguistics theory by Gall (2010) about the location and capacity of language in the brain and the most detailed speech production models and speech errors caused by brain disorder by Reason (2000).

2. Research Instrument

This study referred to qualitative research, so the instrument used in this study is the researcher herself. The author analyzed and identified the research by herself to provide detailed and easily understood descriptions for this research. Therefore, the author needed a lot of information about the difficulties experienced by people with Broca's aphasia in producing words and interacting with people around them as a way to answer this research. The results of this study were the classification and description of the difficulties

experienced by Sodderland in producing words as people with Broca's aphasia and how she faces those difficulties in interacting with people around.

3. Data Source

The data of this research are in the form of utterances produced by Sodderland as a people with Broca's aphasia. The data source of this research is the movie with the title *My Beautiful Broken Brain*. The movie, which lasts about 1 hour 26 minutes, tells the story of a woman named Sodderland who is 34 years old who is suffering from a brain hemorrhage. Therefore, she has Broca's aphasia and has difficulty in speaking, reading, and writing. This movie was released in 2014 and produced by Netflix. The movie was supporting material in answering the problems of this research, due to Sodderland's difficulties in producing words and interacting with people around as the main character with Broca's aphasia as the focus of this research.

4. Data Collection

In collecting data, the author took several steps. The processes are: First, the author downloaded the movie and the movie's transcripts. Besides, the author also learned and compared transcripts with the scene of the movie. Second, the author investigated parts of the film that fit the focus of the study. Third, the author collected and elaborated on the data that has been obtained through the theory used.

5. Data Analysis

After collecting data, the author conducted an analysis of each section based on the difficulties experienced by Sodderland in producing words.

Especially when Sodderland is trying to talk and interact with people around. Data classified from how Sodderland used the language with her conditions. Besides, to solve the focus of the problem in this research, the classification was also intended to make it easier for readers to understand the difficulties faced by people with aphasia in producing words.

Data that has been analyzed used to increase knowledge about the work of the human brain, word production and disorders experienced by people with a brain disorder. The author discussed and developed the research used the theory by Gall (2010) about the location of language in the brain and the most detailed model of speech production and its problems by Reason (2000). The conclusion and discussion in this study covered several things, specifically what are the difficulties experienced by Sodderland as a character with Broca's aphasia and how she interacts with people around her.

CHAPTER II

REVIEW OF RELATED LITERATURE

To find out the previous studies related to the research topics, this section will discuss a review of related literature. It contains descriptions from discussions of general terms to specific; there are psycholinguistics, language production, language disorders, brain and language, and aphasia.

A. Psycholinguistics

Psycholinguistics is an interdisciplinary field of science that is studied by people in various fields (Indah, 2008). According to Cutler (2017, p. 157), psycholinguistics is a discipline that is studied by various areas, such as two fields of science namely psychology and linguistics. The word psycholinguistics comes from the words psychology and linguistics, which are two different fields and become branches of science that will study language behavior or language processes (Indah & Abdurahman, 2008).

Psycholinguistics is a branch of linguistics that was born based on the object of the research. This field is one of the macro linguistics that discusses the relationship between language and factors outside of language, namely psychology. With the birth of psycholinguistics or psychology of language, this science will discuss psychological and neurobiological factors that examine how humans acquire, use, and understand language (Indah & Abdurahman, 2008).

Psycholinguistics was discovered in the early twentieth century by Wilhelm Wundt, he also revealed that language can be explained by psychological principles (Kess, 1992, p. 22). While the term psycholinguistics was introduced

by Charles E. Osgood and Thomas A. Seboek, in Bloomington, the United States in his book *Psycholinguistics: Survey Theory and Research Problems* in 1954 (Indah & Abdurahman, 2008).

According to Kess (1992, p. 27), the development of psycholinguistics can be seen from several periods. Those are; formative period, linguistic period, cognitive period and psycholinguistic theory period. Psycholinguistics examines psychological processes and discusses the process of using language in a conversation or interaction.

Psycholinguistic research also deals with explanations about the structure of language and how the processes of obtaining the language structure itself. Despite the fact, psychology is a field of science that does not examine the historical phenomena of culture that can influence language, but rather the processes that produce historical changes in the structure of language (Levelt, 2013).

B. Language Production

Language production is the ability to produce words or sentences orally or in writing (Indah, 2018). Generally, everyone can produce words and sentences properly. But some others might have errors or even difficulty in producing words or delivering messages. This makes the production of words related to the topic will be talked and written next. Therefore, word production will not be far away with a pause or slip when talking (Indah, 2017a).

According to Indefrey & Levelt (2000), in functional types, language production has several different functions that are analyzed through components in its processing. This shows the difference between the core processes in word production with specific processes such as the introduction of visual or auditory stimuli. The core process of word production itself is governed by the language production network, namely *lateral-lateralized perisylvian thalamic*. The network shows that there is a functional specialization for the word processing stage of production.

According to Aitchison (2012 in Hall 2018), stated that the development of vocabulary and word production processing has occurred as when someone starts learning. The errors in word production can also occur for various reasons, such as when someone feels tired, nervous, or when they are not concentrating. Some of them will experience errors or even experience difficulty in speaking when they experience brain disorders or brain bleeding. They can even experience a loss of ability to produce words and understand the circumstances around them (Indah, 2018).

C. Language Disorder

According to linguistics, a language disorder is a person's inability to process or produce language. Language disorders that occur can be seen from several types of difficulties experienced, such as problems with fluency and problems with written language. The fluency problems are often caused by psychological problems that result in the speaker experiencing stuttering or

talkative. While in written language problems will be experienced by people with alexia. Aleksia or dyslexia itself is a language disorder where a person will have difficulty reading and writing (Indah, 2017a).

Language disorders are also known as communication disorders when a person has difficulties in learning and using languages such as spoken, written and sign language. Generally, individuals with language disorders will have different language skills. So they will have limitations in communicating and interacting effectively with people around (Diagnostic, 2013).

Meanwhile, when viewed from special conditions, language disorders can occur if several aspects are considered as necessary for language disorders. Such as the function of the sensing system, the central nervous system, mental abilities, emotional stability and language exposure (Indah, 2011). According to Bogdashina (2005 in Indah 2011), explained that if someone has a deficiency or damage to one of those five aspects since childhood, it will be able to cause some disturbances in language.

Language disorders are also known as speech disorders that refer to communication problems and are related to oral motor function. Several causes of speech and language disorders are neurological disorder, mental retardation, brain injury, and many others. A speech disorder is included in language production disorder. People with a speech disorder can understand something however they are difficult to articulate (Leutuang, 2008).

Speech disorders have several types of problems, such as stuttering and echolalia. In general, people with language disorders or speech disorders can or

still have the ability to speak, but not so smoothly and easily understood (Leutuang, 2008). According to Reason (2000 in Indah, 2018), speech disorder has several types of problem.

1. Phonological Error

Table 2.1 Types of phonological error

Type	Definition	Example
Perseveration	"An earlier segment replaces a later item."	Target: black boxes Error: black bloxes
Feature Substitution	The switch between voiced and voiceless sound, etc.	Target: tap stobs (^Voiced]) Error: tab stops
Anticipation	"A later segment takes the place of an earlier segment."	Target: reading list Error: leading list
Metathesis	"Switching of two sounds, each taking the place of the other."	Target: pus pocket Error: pos pucket
Sound-exchange error	Two sounds switch places	Target: Nightlife [nait laif] Error: Knife light [naïf lait]

2. Lexical Error

Table 2.2 Types of lexical error

Type	Definition	Example
Lexical selection error	The speaker has "problems with selecting the correct word".	Target: tennis racquet Error: tennis bat

Blends	<p>More than one item is being considered during speech production.</p> <p>Consequently, the two intended items fuse together.</p>	<p>Target: person/people</p> <p>Error: perple</p>
Malapropism, classical	<p>The speaker produces the intended word which is semantically inadequate. Malapropism refers to a character from Sheridan's eighteenth-century play "The Rivals".</p>	<p>Target: The flood damage was so bad they had to evacuate the city.</p> <p>Error: The flood damage was so bad they had to evaporate the city.</p>
Morpheme stranding	<p>Morphemes remain in place but are attached to the wrong words.</p>	<p>Target: He has already packed two trunks.</p> <p>Error: He has already trunked two packs.</p>
Spoonerism	<p>Switching of initial sounds of two separate words.</p> <p>It is named after Reverend William Archibald Spooner.</p>	<p>Target: I saw you light a fire.</p> <p>Error: I saw you fight a liar.</p>
Substitution	<p>One segment is replaced by an intruder. The source of the intrusion is not in the sentence.</p>	<p>Target: Where is my tennis racquet?</p> <p>Error: Where is my tennis bat?</p>
Exchange	<p>Exchanges are double shifts. Two linguistic units change places.</p>	<p>Target: getting your nose remodeled</p> <p>Error: getting your model renosed</p>
Addition	<p>"Additions add linguistic material."</p>	<p>Target: We</p> <p>Error: We and I</p>
Wordexchange error	<p>A word-exchange error is a subcategory of lexical selection</p>	<p>Target: I must let the cat out of the house.</p> <p>Error: I must let the house out</p>

	errors. Two words are switched.	of the cat.
--	---------------------------------	-------------

3. Morphological Error

Table 2.3 Types of morphological error

Type	Definition	Example
Morphemeexchange error	Morphemes change places.	Target: He has already packed two trunks. Error: He has already packs two trunked.
Deletion	Deletions or omissions leave some linguistic material out.	Target: unanimity of opinion Error: unamity of opinion
Omission	cf. deletions	Target: She can't tell me. Error: She can tell me.
Shift	"One speech segment disappears from its appropriate location and appears somewhere else."	Target: She decides to hit it. Error: She decide to hits it.

D. Brain and Language

The brain and language are two things closely related to each other. If the work of the brain was hampered because of an injury, it will disrupt the process of language production (Khanum, 2014). Several studies have found that certain

parts of the brain are related to language function (Yule, 2016, p. 157). The relationship between the brain and language can be seen from the role of the brain on the process of human communication which is the center of language control and language processing. The relationship between the two can also be marked by the appearance of brain damage that will affect one's ability to produce language (Indah & Abdurahman, 2017).

According to Khanum (2014), the surface of the brain called the cortex and known as a part that represents language knowledge. The cortex becomes a center of the work of the human organs by receiving messages from all sensory organs to act. In the middle of the 19th century, scientists assumed that there was a special area in the brain as a location for language capacity. So Gall (2010) gave birth to the theory of localization and stated that the location of language is in the frontal lobes of the brain.

Gall (2010) proposed that the brain consists of several specific parts, each of them is responsible for the ability to do something. So, according to the functions in certain parts, especially as a language processor, the brain is divided into three parts. There are the forebrain, midbrain, and hindbrain. The forebrain includes the several lobes of the cerebral cortex that control higher functions. Midbrain functions include routing, selecting and mapping information including information perceived from the environment and information that is remembered and processed throughout the cerebral cortex (Sabbatini, 1997).

Other sources said that the brain is known to have four parts and each part has a different role. First, there is the Broca area located in the frontal part of the

left hemisphere of the brain. In 1860, a surgeon from France named Paul Broca treated patients who lost the ability to produce and speak words. Broca found that only one word that could be said by the patient, it was "tan". Then he concluded that Broca's area was very influential on people's difficulty in producing words. In other words, Broca's area is a part that is closely related to the ability to produce words (Yule, 2016, p. 158).

Next is the Wernicke area located on the superior temporal gyrus of the dominant cerebral hemisphere. A German doctor named Carl Wernicke dealt with a patient who had difficulty in producing sentences with the correct structure. Wernicke found that difficulties in structuring sentences correctly were caused by the left hemisphere of the brain responsible for impaired language skills. When the Wernicke area is disturbed, patients will find it difficult to understand something that other people convey and even difficult to deliver messages with the correct sentence structure (Yule, 2016, p. 159).

In addition, the two types of hemispheres in the upper part of the body, there is the motor cortex which is the center of control of muscle movements, such as the movements of the legs, hands and other body parts. The last is a nerve fiber called *arcuate fasciculus*. This fiber is one of Wernicke's findings that has a function as a link between Broca's and Wernicke's areas (Yule, 2016, p. 159).

E. Aphasia

Aphasia is a condition where people experience damage to the brain tissue so that they have difficulty in the language (Indah, 2017b). According to Yule

(2016, p. 162), aphasia is interpreted as a language function disorder caused by brain damage and resulting in difficulties to understand and produce words or sentences. Aphasia is also known as a disorder characterized by a loss of ability to use language (Berthier, 2005).

Individuals experiencing damage to the right side of the right cerebral hemisphere of the brain may have additional difficulties outside the problem of speech and language. While the damage to the left hemisphere will make someone experiencing aphasia, that can make people difficult to speak, listen, read and write, but do not affect their intelligence. An individual with aphasia may also have another problem, such as dysarthria and apraxia (Pearl & Emsellem, 2014, p. 4).

As discussed in the previous point, if one or both hemispheres, namely Broca and Wernicke are disturbed, it will cause a person to experience disturbance, one of those disorders is aphasia. Generally, someone with aphasia will have difficulty expressing what they feel. They will find it difficult to find the words they want to say even they may say words that cannot be recognized at all (Yule, 2016, p. 162).

People who experience aphasia will continue to have the expertise as before, they know what they want to say, but cannot always express the word properly (Indah, 2017b). They are also likely to use subtitles called "Paraphasias". This happens when they are wrong to say something, such as when they say "dog" to "cat", or words that sound similar to "house" and "horse" (Jutt, 2016).

Table 2.4 shows the types of aphasia and the characteristic of each type according to Obler & Gjerlow (2000, in Indah, 2017a, p. 95). **Table 2.4** Types of aphasia

Aphasia	Language production	Comprehension	Word repeating	Labeling	Lesions/ injuries in the brain
Broca	Non-fluent	Good	Bad	Bad	Anterior
Wernicke	Fluent	Bad	Bad	Bad	Posterior
Conduction	Fluent	Good	Bad	Bad	Arcuate fasciculus
Anomic	Fluent	Good	Good	Bad	No settled / in all positions
Global	Not capable	Bad	Bad	Bad	Large
Transcortical Motor	Little	Good	Good	Not bad	Outside the lobe frontal
Transcortical Sensory	Fluent	Bad	Good	Bad	Outside the lobe parietalis

1) Broca aphasia

The damage of one hemisphere of the human brain can make a person suffer from aphasia. If the cortical lesion in the brain is disrupted, then the people will experience Broca aphasia or can also be called "cortical motor aphasia". This situation generally occurs when a person experiences brain hemorrhage, stroke or other brain disorders. The problem faced by people with Broca aphasia is difficulty in expressing language, in other words, they will also have difficulty in labeling an object or noun and job or verb in a word (Yule, 2016, p. 162).

Generally, people with Broca aphasia are difficult to form words or sentences, they will speak spontaneously, stammer, and speak monotonously. Although their listening generally is good, they difficult to understand sentences with complex structures. Most of them are bad in repeating the word and remembering what they have repeated (Indah, 2017b). Often, people with Broca aphasia feel frustrated because of their difficulty in producing words. Some of them can say a few words, which they use to communicate in the type of speech characteristics known as telegraphic utterances (Samiadi, 2019).

2) Wernicke aphasia

Conversely, if the posterior lesion in the brain becomes disrupted, then the person will experience Wernicke aphasia or can also be called "subcortical motor aphasia". This situation can be characterized by a reduction in one's ability to understand something. Someone with Wernicke aphasia has good speaking skills but it is difficult to arrange diction properly or even control the direction of the conversation. Most people with Wernicke aphasia cannot recognize the speech errors they experience (Yule, 2016, p. 163).

People with aphasia Wernicke find it difficult to understand the messages conveyed by others. Most of them are difficult to control and make sense of what they are talking about (Yule, 2016, p. 163). Over time, people with Wernicke aphasia will realize that they are the people who have difficulty understanding their utterances, so they will become angry, paranoid, even depressed (Samiadi, 2019).

3) Conduction aphasia

This type of aphasia is characterized by the disturbance in their repetition. Their speech is spontaneous and sometimes disturbed by pausing in order to look up words (Pearl & Emsellem, 2014, p. 19). While according to Indah (2017b) people with conduction aphasia will experience disturbance in connecting their understanding of language to the language expression. For example, when they are asked to take a pen, they will recognize the object and took it. But if they are asked to name the object, they will say it as the function of its object, such as a pen is a tool for writing so they will label that pen as write (Indah, 2017a, p. 93).

4) Anomic aphasia

The lesion area of anomic aphasia is in the temporoparietal cortex or the substantia nigra. This type of aphasia is characterized by naming the object and looking for correct words. They are able to talk spontaneously and fluently and their ability to repeat and understand words is quite good (Pearl & Emsellem, 2014, p. 19).

5) Global aphasia

The next type of aphasia is Global aphasia. This type of aphasia is the impact of brain damage involving both parts of the brain both are the area of Broca and Wernicke. People with Global aphasia will find it difficult to understand speech clearly. However, sufferers of this type of aphasia are able to communicate using written language (Samiadi, 2019).

6) Transcortical motor aphasia

Furthermore, this disorder is generally caused by a stroke on the front of the Broca area. This type of aphasia is similar to Broca aphasia, where the people with transcortical motor aphasia difficult to produce speech spontaneously. They are also difficult to say what they want to say like people with Broca aphasia. However, they are able to repeat a word without difficulty (Samiadi, 2019).

7) Transcortical sensory aphasia

Another type of aphasia is sensory transcortical aphasia. This type of aphasia is caused by injury to the part of the brain around the Wernicke area, the part of the brain as an important role in understanding language. This disorder has difficulty in understanding what others say but can speak fluently. For example, if people with this type of aphasia are asked the question, "Are you ok?" they might repeat a few words from the sentence, like, "You're good" in response (Samiadi, 2019).

People with aphasia may have normal vocal inflections but often use words that are incomprehensible and even have no meaning. While some people who experience another type of aphasia will have difficulty in understanding other people's words. This disorder can also be seen and classified based on the problem experienced by the patient (Jutt, 2016).

Based on the problems experienced by people with aphasia, it can be divided into two types, fluent (receptive) and non-fluent (expressive) aphasia. Patients with fluent aphasia will have difficulty understanding something. They

are also known as patients who are easy to produce words, but the words they say are difficult to understand. According to Pearl & Emsellem (2014, p. 19), the types of aphasia included in this Receptive aphasia are Wernicke aphasia, Sensory aphasia. There are some characteristics known by this type of aphasia, such as normal in producing speech or sometimes volume may be increased, and comprehension severely disturbed.

Patients with non-fluent aphasia will have a pretty good understanding. However, they will spend a lot of time to arrange a sentence to the correct structure. This is caused by their difficulty in finding words that they want to say (Lose words, 2019). According to Pearl & Emsellem (2014, p. 19), the types of aphasia included in this expressive aphasia is Broca aphasia. There are some characteristics known by this type of aphasia, such as the speech is hesitant while the comprehension is intact and effortful in attempting to expend words verbally.

CHAPTER III

FINDING AND DISCUSSION

This chapter discusses the finding and discussion based on all the explanations in the previous chapters. The findings are obtained to answer the existing research question through the results of the data analysis of *My Beautiful Broken Brain* movie. The data is converted into a sentence in the form of utterances produced by Sodderland as people with Broca's aphasia. Furthermore, the discussion explores the analysis of the research finding.

A. Research Finding

In order to get the data, the author classified some scenes in the movie and compared it with the movie's transcript, which shows the problems of Sodderland in producing word as people with Broca's aphasia. Not only focus on Sodderland's problems in producing words, but the author also analyzed how the way Sodderland has an interaction with people around her.

The author found twenty problems produced by Sodderland in producing words, as people with Broca's aphasia on *My Beautiful Broken Brain* movie as data. Some types of error found based on Reason (2000), those are; lexical selection error, substitution, malapropism, shift, and omission. While in this section, the author will present fourteen data based on the utterances produced by Sodderland on *My Beautiful Broken Brain* movie.

The error produced by Sodderland as people with Broca's aphasia is explained in details below:

Datum 1

"It would be a new plate... mm place"

Sodderland uttered the utterance above as people with Broca's aphasia in *My Beautiful Broken Brain* movie. It had occurred when Sodderland did a monologue and recorded it with her iPhone shortly after she woke up from a stroke. She tried to tell some things that she remembered before she fell and was unconscious. So, she said that her current condition like bring her to a new place and situation that she had never experienced before. However, when she would like to say the phrase *"new place"*, she instead produced *"new plate"*.

Based on the context above, it is clear that Sodderland wanted to say the word *"place"*, but instead, she said the word *"plate"*. In this case, Sodderland produced an error in the last part of her utterance when she wanted to say the word *"place"*, but she produced another word that sounds similar and categorized the same as a noun. Although she said the wrong word before, she could repeat and realize that the word she should say is *"place"* not *"plate"*. It is caused by the intelligence that had by Sodderland as the sufferer of Broca's aphasia is continue as before, even the ability in using a language was hampered (Indah, 2017). This error is categorized as a **malapropism**, which means that Sodderland, as a speaker, produced the intended word, which is semantically inadequate. So, she produced errors while speaking by saying a word that is not related to the context discussed. Besides, it also made her interlocutors confused about what she was talking about.

Datum 2

"I can say it"

As people with Broca's aphasia, Sodderland uttered that phrase and made an error. It has occurred in Sodderland and Sophie's conversation. When Sodderland wanted to say that she could not say the word *"record"* by pointing at the camera while trying to produce any sentence, which shows that she could not say that word. However, the sentence she delivered was, *"I can say it"*, which is contrary to her condition that she could not say the word *"record"*.

Based on the context above, it is clear that Sodderland wanted to say the word *"can't"*, but instead, she said the word *"can"*. In this case, Sodderland produced an error while conveying her actual problem in saying the word *"record"*. The word that should be delivered by Sodderland is the word *"can't"*, as a modal or auxiliary. It happens because of Sodderland's ability to use a language, especially in her production was hampered. This error is categorized as **omission**, which means Sodderland as a speaker deleted or left some linguistics material out. So, it makes her produce the wrong word while conveying the messages without realizing that she produced the wrong phrase.

Datum 3

"I can't... (pen writing), I can't say it now. But I can't... um... you know, I can't speak or... no, not speak. I can't be clever"

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sodderland and Sophie had a conversation and started to record Sodderland's story in experiencing a stroke. When Sodderland tried to

convey to Sophie that she could not write, she used a gesture, like “*I can’t (pen writing)*”. Furthermore, when she tried to remember what thing she wanted to say, she mentioned another word that same as a verb such as “*speak*”. In this context, Sodderland wanted to say the word “*write*”, but she could not remember its word and started making a gesture and saying another word as her effort in order to make Sophie understand.

Based on the context above, it is clear that Sodderland wanted to say the word “*write*”, but she could not remember and say that word. In this case, Sodderland produced an error and said the word “*speak*” in the middle of her utterance. Moreover, she also made a gesture while she was trying to say the word “*write*” as a verb and instead produced another word, that is “*speak*”. It happens because of Sodderland’s difficulty in finding the right words, that is a problem that cannot be avoided by Broca's aphasia sufferers. This kind of error is classified as a **lexical selection error**, which means that Sodderland as a speaker, has problems in selecting the correct word. So, it makes her often produce the wrong word in mentioning or naming some things.

Datum 4

”And extror... extraordinary”

Sodderland also uttered the utterance above as people with a language disorder. It had occurred when Sodderland recorded for sending a video to David Lynch as a film director in order to tell about her story. She said that the circumstances she experienced are like a nightmare. Nevertheless, she said that she was also grateful because of lost in the extraordinary circumstances that had

found in a brain that she had. When she would say the word "*extraordinary*" to show her feeling, she experienced an error and said "*extror*". Although she had a mistake in saying that word, she could repeat it correctly after realizing her mistake, and it made people could understand her easily.

The context above showed that Sodderland wanted to say the word "*extraordinary*", but instead, she said the word "*extror*". In this case, Sodderland produced an error in the middle of her utterance while saying the word "*extraordinary*" as an adjective, become "*extror*" that sounds adjacent to the word she wanted to say. It happens because of her condition which hampered her ability to use a language, especially in her production and pronunciation. However, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. This kind of error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segments that disappears from its appropriate location. So, it makes Sodderland produce the strange words in her phrase or sentence.

Datum 5

"Nov... nov... noval... normal... normality"

As people with Broca's aphasia, Sodderland had difficulty to produce words and speak properly. She uttered several words and made an error, and it had occurred when Sodderland had a conversation with Sophie. Sodderland tried to tell about her complaints in facing her condition as a loss of ability in using a language to Sophie. Sodderland said that she had lost her normality as a person in

some ways. When she tried to say the word "*normality*" she instead produced the words "*nov*" and "*noval*". As her effort to convey the message, Sodderland is not only making a gesture to show what she wanted to say but also produced several words that sound similar. She did those options as her effort to make Sophie and the people around her understand what she was talking about.

Based on the context above shows that Sodderland wanted to say the word "*normality*" but instead, she said the word "*nov*" and "*noval*". In this case, Sodderland produced words that seem similar in how it pronounces in the middle of her utterance. It is caused by the disturbance of Sodderland's ability to use a language, such as in pronouncing words and finding words. As people with aphasia, Sodderland still have intelligence as before, so she could realize her error in saying that word and repeat it correctly (Indah, 2017). This error is categorized as a **substitution**, which means an intruder replaces a segment of the sentence, and the word produced is not related to the topic discussed. So, it makes Sodderland produce some words that cannot be recognized.

Datum 6

"Clev... kind of clever person"

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sophie started to record Sodderland's story in experiencing a stroke. Sophie asked Sodderland to tell about her story live before and after having a stroke. When Sodderland wanted to say the phrase "*kind of clever person*" in order to inform Sophie that before having a stroke, she was an intelligent person as in general, she encountered an error while saying that phrase.

The word "*clev*" interrupted the beginning of her sentence, although she had an error in saying the phrase, she could repeat it correctly. It made her easy to be understood by people who communicate or listen to her.

Based on the context above, it is clear that Sodderland wanted to say the phrase "*kind of clever person*", but instead, she said the word "*clev*" as the interruption at the beginning of her utterance. In this case, Sodderland produced an error at the beginning of her utterance while uttering a phrase and generated the word that is actually "*clever*" as an adjective, become "*clev*". It happens because of the condition of Sodderland, which hampered her ability to use a language, especially in her production. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize the error produced and conveying that phrase accurately. This kind of error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segment that disappears from its appropriate location.

Datum 7

"A nephew? Neef... niece. I mean niece"

As people with Broca's aphasia, Sodderland uttered that phrase and made an error. It had occurred when Sophie asked Sodderland about who is the girl in the picture. Sodderland was able to say "*nephew*", but she still tried to say the more appropriate words to show who is in the picture. She tried to say the word "*niece*" as the answer to Sophie's question, but as people with Broca's aphasia,

Sodderland was hard to find that word. Thus, this problem made her produce another word that sounds similar to the actual words which supposed to say. Such as when she wanted to say the word “*niece*” became “*neef*”. However, she could repeat it shortly after realizing her error correctly, and it made her speech could be understood by people who communicate with her.

Based on the context above, it is clear that Sodderland wanted to say the word “*niece*”, but instead, she said the word “*neef*”. In other words, Sodderland made a mistake in mentioning a word as a noun in the middle of her utterance that has a similar sound with the word she would say. It happens because of the Sodderland’s difficulty to use a language and finding the right word. It affected her often made an error to produce and pronounce some words. However, as mentioned in the previous chapter, those people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize the error she produced and find that word correctly. This kind of error is categorized as a **malapropism**, and it means that Sodderland, as the speaker, produced the intended word, which is semantically inadequate.

Datum 8

“This could read tale, mm not tale”

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sodderland learned to read some words and sentences. As she tried to read the word “*the*”, she reads it as “*tale*”. Sodderland was doubting to read the word “*the*” so it becomes “*tale*”, then she questioned it to Sophie about

how the way to read that word. Sophie told her that it should be read as *"the"*, so she tried to repeat it and began to realize that she had a problem in reading the word *"the"*. As people with Broca's aphasia, this error is one of Sodderland's problems in producing words. She often produced different words from the object or something which is not relevant to the topic.

Based on the context above shows that Sodderland wanted to say or read the word *"the"*, but instead, she said the word *"tale"*. In this case, Sodderland produced the word that seems similar in how it pronounces in the middle of her utterance. Moreover, the word she produced is should be a preposition *"the"*, but instead become a noun that is *"tale"*. It is caused by the disturbance of Sodderland's ability to use a language, such as in pronouncing words and finding the right words. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize that she produced an error even she was confused about how the way to read that word. This kind of error is categorized as a **substitution**, which means there is a segment of the sentence replaced by an intruder, and the word produced is not related to the topic discussed.

Datum 9

"Stew... where did that come from?"

The utterance above is uttered by Sodderland as people with Broca's aphasia. It had occurred when Sodderland tried to do an exercise that accompanied by her brother, Jan. The exercise is about guessing the name of some nouns and verbs. One of the questions is naming the object as a picture of

the baseball bat. When Sodderland tried to remember the name of that picture, she instead named the baseball bat as *"stew"*. After guessing the name of that object, Sodderland often questioned her answers to Jan, in order to ensure her ability in remembering and finding the right words.

Based on the context above, it is clear that Sodderland has a problem to say the word *"baseball bat"*, and it made her produce the word *"stew"*. In this case, Sodderland produced an error to say the word *"baseball bat"* as a noun, becomes *"stew"* at the beginning of her utterance in guessing a picture. As people with Broca's aphasia, Sodderland has difficulty in finding the right words, and it was a problem that cannot be avoided by Broca's aphasia sufferers. In this case, Sodderland produced the word *"stew"* while the picture she saw actually is a *"baseball bat"*. However, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize that she produced an error, even she could not remember the name of that object. This kind of error classified as a **lexical selection error**, which means that as a speaker, Sodderland has problems in selecting the correct word. So, it makes her produce the wrong or unrelated word to the context.

Datum 10

"So, now I am twent... thirty ... thirty... four"

As people with Broca's aphasia, Sodderland uttered that phrase and made an error. It had occurred when Sodderland did a monologue and recorded a video with her iPhone. In the video, she said that she did not live with her mother since she was at 18 years old. However, due to her condition after experiencing a

stroke, she returned to live with her mother. At that time, Sodderland tried to inform about her actual age, but she was confused about how she could say the word, which indicates her age correctly. Sodderland said that her age is *"twenty"*, but afterward, she began to say *"thirty"*. However, she paused several times to recall and tried to make sure about how old she was.

Based on the context above, it is clear that Sodderland wanted to say the word *"thirty"*, but instead, she said the word *"twenty"*. In this case, Sodderland produced an error in mentioning her age as a noun in the middle of her utterance. As people with Broca's aphasia, Sodderland's problem in finding the right word is becoming her main problem. However, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. She often made this kind of error, which is classified as a **lexical selection error**, which means that Sodderland, as a speaker, has problems in selecting the correct word.

Datum 11

"I am rec... I am obsessed to record"

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sodderland and Sophie have a conversation. Sophie asked Sodderland why she wanted to record her recovery, and Sodderland answered that she was obsessed with recording everything. Sodderland also told Sophie that she and her family were accustomed to recording anything before experiencing her current condition. Although she had an error in saying the phrase, she could repeat

the correct phrase, and it made her speech could be understood by people who communicate with her.

Based on the context above, it is clear that Sodderland wanted to say the phrase *"I am obsessed to record"*, but instead, she said the phrase *"I am rec"*. The word *"obsessed"*, which supposed to say in order to show the main reason why she wanted to record her recovery story is disappeared. In this case, Sodderland wanted to say the phrase *"I am obsessed to record"* but produce an interruption with the phrase *"I am rec"*. In other words, Sodderland produced an error in saying the word *"obsessed"* as a verb, which supposed to show the main reason to Sophie about why she wanted to record her recovery story is disappeared in the middle of her utterance. It happens due to the condition of Sodderland, which hampered her ability to use a language, especially in her production and pronunciation. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. This error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segment that disappears from its appropriate location.

Datum 12

"It is like a dimen... a new dimension"

The utterance above is uttered by Sodderland as people with Broca's aphasia. It had occurred when Sodderland recorded a video for David Lynch in order to tell her story. She said something strange happened to her vision, so it

seemed there was a new dimension in her view. According to Mr. Andrew Elsmore, Sodderland as a sufferer of Broca's aphasia will experience homonym hemianopsia, which affects her cognitive abilities and communication. In other words, Sodderland has vision problems in her right eye. As a result of these visual disturbances, she experienced blurred vision and fusion of several types of color that she saw through her right eye.

Based on the context above, it is clear that Sodderland wanted to say the phrase *"like a new dimension"*, but instead, she said the word *"like a dimen"*. The word *"new"*, which is supposed to say in order to convey something strange is disappeared. In this case, Sodderland left the word *"new"* as an adjective in the middle of her utterance. It happens because of the condition of Sodderland, which hampered her ability to use a language, especially in her production and pronunciation. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat the phrase that she would say properly. This error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segment that disappears from its appropriate location.

Datum 13

"Maybe I will be an impre... improved specimen"

The utterance above is uttered by Sodderland as people with Broca's aphasia. It had occurred when Sodderland's brother, Jan, accompanied her to attend treatment in the Neurological rehabilitation unit for psychological,

linguistic treatment and psychotherapy for the next three months. When they arrived at their destination, Sodderland said something to Jan that she would try to improve her abilities in using a language. However, when Sodderland would say the word "*improved*", she instead said "*impre*". Sodderland's mistake in saying the word "*improved*" became "*impre*" is influenced by the similarity of the sound of those two words. Although she had an error in saying that word, she could repeat it correctly. It made her speech could be understood by people who listen to her.

Based on the context above, it is clear that Sodderland wanted to say the word "*improved*", but instead, she said the word "*impre*". In other words, Sodderland made a mistake in mentioning the word as a verb in the middle of her utterance that has a similar sound with the word she would say. It happens because of Sodderland's inability to use a language and finding the right word. It affected her often made an error to produce and pronounce some words. However, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. This error is categorized as a **malapropism**. It means that as a speaker, Sodderland produced the intended word, which is semantically inadequate.

Datum 14

"Other people's properly... property"

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sodderland talked with her brother Jan, about her word reading speed after doing a reading test to improve her ability in reading text. Jan

asked Sodderland to explain about her test results shown in a graph. She explained that there is about 40% progress in reading ability in the first week, and she also told Jan that she would have the ability that had by most people soon. When Sodderland wanted to say “*people’s property*” to make sure Jan that she would be an average person with the ability to use a language, she experienced an error and said, “*people’s properly*”.

Based on the context above, it is clear that Sodderland wanted to say the word “*property*”, but instead, she said the word “*properly*”. In other words, Sodderland made a mistake in mentioning a word as a noun to become an adverb, which has a similar sound with the word she would say in the middle of her utterance. This happens because of Sodderland’s inability to use a language and finding the right word. It made her often made an error to produce and pronounce some words. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. This error is categorized as a **malapropism**. It means that as a speaker, Sodderland produced the intended word, which is semantically inadequate and it made her interlocutors confused about what she was talking about.

B. Discussion

In this discussion, the author shows the identification aspects after presenting the finding. According to the research question, two questions must be answered in this discussion. The first question is about the difficulties of

Sodderland as a people with Broca's aphasia in producing word, and the second is how Sodderland has an interaction with people around. From the data analysis above, the author found that Sodderland has some difficulties in producing words. Thus, those difficulties can be seen from the error had by Sodderland in uttering messages that influenced people's understanding about what she is talking about.

1. What are the difficulties had by Sodderland in producing words

The author found some Sodderland's problems in producing words on how she did a monologue and interacted with people around her. Based on Yule (2016, p. 162), Broca's aphasia characterized by a reduced number of words spoken, often experience pauses when speaking, slower in speaking, and experience the loss of some words, both nouns, and verbs. People with Broca's aphasia are known as patients who difficult to speak fluently even though they are good at their comprehension. In this research, every single data is found from Sodderland's utterances and has three characteristics that show people's error with Broca's aphasia according to several aspects. Those are; the word choice, the pronunciation, and the way Sodderland conveying the message. The author classified the fourteen errors found of Sodderland's utterances into several types based on Reason (2000).

In this case, the errors produced by Sodderland as people with a speech disorder, especially Broca's aphasia, are represented the difficulties she had in producing words. Those errors will be classified by several aspects; lexical error, morphological error, and phonological error.

a. Lexical error

The lexical error occurs when people with language disorders are difficult in selecting the right words, so they will often produce words that are not related to the topic talk about and produce some words with a slip of the tongue. Those problems are the main reason why people with language disorder often make a mistake in producing words. According to Reason (2000), a lexical error has nine types of problems, and those are; lexical selection error, blends, malapropism, morpheme stranding, spoonerism, substitution, exchange, addition, and wordexchange error.

From the analysis above, not all the phenomena of a lexical error can be found on Sodderlands utterances, such as blends, moprheme stranding, spoonerism, exchange, adition and wordexchange error. While, the types of a lexical error found in Sodderland's utterances are lexical selection error, malapropism, and substitution. The expositions of the errors found are below:

1) Lexical selection error

In psycholinguistics, lexical selection error means that the speaker with a language disorder has a problem in finding or selecting the correct words (Reason, 2000). As happened to Sodderland, that she often made errors in producing the appropriate words cause her condition. This type of error appears in **datum 3, datum 9, and datum 10**. In datum 3, Sodderland produces the word "*speak*", whereas she wants to say the word "*write*". The next type is found in datum 9; it occurred when Sodderland guessed the name of an object as "*baseball bat*", but instead, she named it "*stew*".

The last type is found in datum 10; in this case, Sodderland wants to say the word “*thirty*” to inform her actual age, but instead, she says “*twenty*”. Those errors produced by Sodderland indicate to the difficulties she had, such as hard to find and produce the right words. The lexical selection error happened when Sodderland tried to utter a message and name something. As people with Broca’s aphasia, she has difficulty in her language production. This kind of error mostly appears in the middle of Sodderland’s utterances. Moreover, it also happened when she produced a verb and a noun. For instance, when she wanted to say the word *write* become *speak*, *baseball bat* becomes *stew*, and the word *thirty* become *twenty*.

Sodderland produced this kind of error while she was communicating with people around. For example, when she had a conversation with Sophie that talked about her condition after a stroke. When she wanted to say the word “*write*”, but she was challenging to say that word and make her produce the wrong word as “*speak*”. Then, Sodderland made a gesture like “*pen writing*”, as her effort in order to make Sophie understand about what she wanted to say. However, as mentioned in the previous chapter, those people with aphasia will continue to have intelligence as before (Indah, 2017). So, usually, Sodderland would realize and repeat that word correctly, and sometimes she just realized her error without being able to improve it.

2) Malapropism

In psycholinguistics, malapropism means that the speaker produces the intended words, which are semantically inadequate (Reason, 2000). As happened to Sodderland, most of the words she produced are not related to the topic talk about and also have similar sound with the word she supposed to say. This type of error appears in **datum 1, datum 7, datum 13, and datum 14**. In datum 1, Sodderland produces the word “*plate*”, whereas she wants to say the word “*place*”. The second type is found in datum 7; it occurred when Sodderland wanted to say the word “*niece*”, but instead, she said the word “*neef*”.

The third type is found in datum 13; Sodderland says the word “*impre*”, whereas she wants to say the word “*improved*”. The last type of malapropism is found in datum 14, and it occurred when Sodderland wanted to say the word “*property*”, but instead, she said the word “*properly*”. Those errors indicate the Sodderland’s difficulties, such as hard in producing the words correctly. The malapropism error happened when Sodderland produced the wrong word or different word from what she supposed to say.

This kind of error mostly appears in the middle of her utterances. Moreover, it also happened when she produced a noun, verb, and adverb. For instance, when she wanted to say the word *place* become *plate*, *niece* becomes *neef*, *improved* becomes *impre*, and the word *property* become *properly*. Sodderland produced this kind of error when she was

communicating with people around. For example, when she had a conversation with Jan as her brother, and produce errors in producing the word properly become properly. As people with Broca's aphasia, Sodderland still has the ability to realize what she wanted to say, but cannot always adequately express the word (Indah, 2017).

3) Substitution

In psycholinguistics, substitution means that another segment replaces one segment as an interruption, and the interruption of that one segment is not related to the topic talk about (Reason, 2000). While, according to (Halliday & Hasab 1994:88), it is different from the substitution in discourse analysis. In discourse analysis, substitution means as another type of cohesive relation as the process of replacing one item within a text or discourse by another, and the reference has a relation on the semantic level also not categorized as an interruption.

As happened to Sodderland, she often produces the wrong words as an interruption while trying to say the actual word, and it sounds similar although it has no relation to the word she should say. According to the analysis of this research, the author found 2 of Sodderland's utterances that categorized as substitution, and those are **datum 5 and datum 8**. The first type is showed by datum 5; it occurred when Sodderland wanted to say the word "*normality*", but instead, she said the word "*nov*" and "*noval*". The next error is found in datum 8, Sodderland produces the word "*tale*" while reading the word "*the*".

These errors produced by Sodderland, indicate to the difficulties she had, such as hard in finding and producing the words. The substitution error happened when Sodderland produced the wrong word, which sounds similar to the word she supposed to say. This kind of error mostly appears in the middle of her utterances. Moreover, it also happened when she produced a noun and preposition in the middle of her utterances. For instance, when she wanted to say the word, *normality* becomes *nov/noval*, and the word *the* becomes *tale*. However, as mentioned in the previous chapter, those people with aphasia will continue to have intelligence as before (Indah, 2017). So, usually, Sodderland would realize and repeat that word correctly, and sometimes she just realized her error without being able to improve it.

b. Morphological error

Morphological error is the error which formed by the ruined of the morphological aspects in grammar. As we know, morphology is about the structure of the words. In other words, the relation of words and how the words are formed is the main focus of morphology. So, if the speakers made an error in how they arrange the words and convey their messages, it is called a morphological error. According to Reason (2000), a morphological error has four types of error, and those are; morpheme exchange error, deletion, omission, and shift.

From the analysis above, not all the phenomena of a morphological error can be found on Sodderland's utterances, such as morphemeexchange error and

deletion. While, the types of a morphological error that produced by Sodderland are omission and shift. The expositions of the errors found are below:

1) Omission

In psycholinguistics, omission means there are some linguistics that has been left out. In other words, the omission is the act of someone in excluding something that should be included (Reason, 2000). As happened to Sodderland that she deleted a linguistics material out while producing the word. According to the finding of this research, the author found 1 of Sodderland's utterances categorized as an omission. This type of error appears in **datum 2**; it shows that Sodderland should produce the word "*can't*", but instead, she said the word "*can*".

The omission error happened when Sodderland produced the word that left one aspect of her utterances, and it indicates to the difficulties she had. It happens when Sodderland, as a speaker, produced the wrong modal or auxiliary in the middle of her utterances. For instance, when she wanted to say the word *can't* become *can*. However, as mentioned in the previous chapter, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, usually, Sodderland would realize and repeat that word correctly, and sometimes she just realized her error without being able to improve it.

2) Shift

In psycholinguistics, shift means there is one speech segment that disappears from its appropriate location and appears elsewhere (Reason, 2000). As happened to Sodderland, that she often produced strange words. The author found this kind of error on Sodderland's utterances; it appears in **datum 4, datum 6, datum 11, and datum 12**. The first datum, which categorized as a shift, is the utterance in datum 4. It occurred when Sodderland wanted to say the word "*extraordinary*," but instead said the word "*extror*." The second is datum 6, which occurred when Sodderland produced the word "*clev*" whereas she wants to say the phrase "*kind of clever person*." It means the word "*clev*" interrupts the phrase she wanted to say.

In datum 11, Sodderland wanted to say the phrase "*I am obsessed to record*" as her response to Sophie's question. She makes an error and says, "*I am rec*" as an interruption of her actual phrase as a reply. The last was datum 12; it occurred when Sodderland tried to say the phrase that can be used as representative of her feeling in facing stroke, which is "*like a new dimension*," but instead, she said, "*like a dimen*." These errors indicate Sodderland's difficulties, such as hard to produce the words correctly.

The shift error happened when Sodderland produced utterances with some interruptions. Moreover, Sodderland, as a speaker, produced an error adjective, verb, and noun in the middle of her utterances. For instance, when she wanted to say the word *extraordinary* become *extror*, and the

phrase *kind of clever person* but interrupted by the word *clev*, *I am obsessed to record* but interrupted by the phrase *I am rec*, and the last is the phrase *like a new dimension* becomes *like a dimen*. However, as mentioned in the previous chapter, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, usually, Sodderland would realize and repeat that word correctly, and sometimes she just realized her error without being able to improve it.

c. Phonological error

Phonological error is an example of sound mistakes that normally created by people with language disorders that use in rearranging a message or utterance as how they are figuring out the way to talk and convey it. Therefore, the phonological error is a speech disorder that can affect the lexemes. It is caused by people with language disorders do not be able to organize the lips, tongue, teeth, and sense of taste. Their ability to arrange words is also disturbed, so they are hard to produce and convey clear utterance (Reason, 2000).

Concerning *My Beautiful Broken Brain* movie, Sodderland, as the main character who has a language disorder, often produces the word incorrectly. According to Reason (2000), a phonological error has five types of problems, and those are; a perseveration, feature substitution, anticipation, metathesis, and sound exchange error. From the analysis above, there is no problem found on Sodderland's utterances based on this phonological error.

However, there are six errors of Sodderland's utterances which are not included on the types of problem in people with language disorder proposed by Reason (2000). So the author will discuss those six errors using the theory proposed by Yule (2016).

According to Yule (2016), people with Broca's aphasia are known to lose their ability in producing language. The problem had by them is not only about the deleting of functional morphemes and inflection, but they also lose several words and memories on their mind. As the previous discussion proposed by Reason (2000), those kinds of problem is totally appropriate. Another problem had by people with Broca's aphasia is produce speech with a lot of hesitations and a long pause, difficult in finding and articulating words, and bad at their word production (Yule, 2016, p. 162).

Besides, the problems had by people with Broca's aphasia can be classified into three aspects. Those are effortful speech, distortion of articulation, and stutter (Yule, 2016, p. 162). Those problems are appeared by the data found through Sodderland's utterances, the explanation of the problems found are below:

a. Effortful Speech

According to Yule (2016), people with Broca's aphasia have much better comprehension than their language production. This kind of problem influences their ability to find and produce the right word. As people with Broca's aphasia, they are known as patients who often had errors in their speech. This kind of problem is found on Sodderland's utterances, and it

appears in **datum 15, datum 17, datum 18, datum 19, and datum 20**. Datum 15 shows that Sodderland is hard to produce words that begin with the letter “S”. When she realized that her ability in language become worse, she looks frustrated because of it.

Datum 17 shows that Sodderland tries to inform Sophie that she cannot say the word “*record*” by pointing toward the camera. According to the case of the problem, we can see that Sodderland had a problem in finding and producing the right word. Next is datum 18; in this case, Sodderland is not able to repeat the word “*record*” which uttered by Sophie, although she has produced that word before. This problem is also influenced by her difficulties in producing words.

The next is datum 19; it shows the same case of Sodderland's problem, which shows that she was difficult to find and produce some words. In this case, Sodderland makes a gesture like “*pen writing*” to represent the actual word she wants to say. It makes Sophie understand, so she informs Sodderland that the word actually is “*write*”. The last is datum 20, which showed Sodderland's response to Sophie's question. When she tried to produce the word “*nephew*,” she has a lot of hesitations and pauses. It is because of her inability to find the right word.

b. Stutter

According to Yule (2016), stutter means that people with Broca's aphasia would have some obstacles which make them hard to speak fluently. Their speech is known as full of hesitations and long pauses. Those two problems are

not the only reason why people with Broca's aphasia are making it hard to articulate and deliver messages. It is just one of the problems that make them feeling hard to communicate with others.

The author found this kind of problem in **datum 16 and datum 20**. In datum 16, Sodderland, as people with Broca's aphasia, produces the phrase that full of hesitations and long pauses, so she delivers her message just like a stutterer. The second is found in datum 20. In this case, Sodderland tries to produce the word "*nephew*," but in order to get to produce that word, Sodderland has a lot of long pauses. It is because of her difficulty in producing and articulating the right word.

c. Distortion of Articulation

Another kind of problem had by people with Broca's aphasia is distortion articulation. Distortion articulation in people with language disorders means that they will have a problem in uttering words. According to Yule (2016), this problem means that people with language disorders will produce a sound in an unfamiliar way. This kind of problem can be seen as lisp sounds in a child or people who have a problem with their tongue. In Sodeerland's utterances, the author does not found any sounds or words produced by Sodderland in an unfamiliar way.

2. How does Sodderland have interaction with others

Finally, the last discussion is about the way Sodderland has an interaction with the people around her. In order to answer this research question, the author

uses a theory proposed by Gall (2010) about the relation between brain and language.

According to Gall (2010), people with brain injury, especially on the left hemisphere, would have problems with their language processing. It is caused by the brain's role as the processing of human communication, which is the center of language control and language processing. It shows that the relation between the brain and language can also be marked by the appearance of brain damage that will affect one's ability to produce language (Indah & Abdurahman, 2017). Thus, if people have an injury that makes the work of her brain hampered, it would disrupt the process of language production in her brain.

According to Gall's theory (2010), the brain consists of several specific parts, and each is responsible for its ability as a language processor. The actual part of the brain that represents language knowledge is the surface of the brain called the cortex. Another source that shows that the brain consists of several specific parts is Yule (2016). According to Yule (2016), said that the brain has four parts, and each part has a different role. One of those parts is the Broca area, which located in the frontal part of the left hemisphere of the brain. In 1860, a surgeon from France named Paul Broca treated patients who lost the ability to produce and speak words. Then he concluded that Broca's area was very influential on people's difficulty in producing words. In other words, Broca's area is a part that is closely related to the ability to produce words (Yule, 2016, p. 158).

As discussed in the analysis before, Sodderland made many errors while interacting with people. Such as, in datum 3 shows that Sodderland made an error

which classified as lexical selection error. It happened caused by that she had difficulties in finding or selecting the correct words. Sodderland made errors when she was communicated with Sophie and talked about some topics about Sodderland's condition in facing aphasia. For example, when she wanted to say that she cannot write, but she was hard to say the word "*write*" itself. So, she made a gesture like "*pen writing*" as an effort to make Sophie understand that the word she wanted to say actually is "*write*". As we can see, in this context, Sodderland's interaction with Sophie is also disturbed by her difficulties in using a language.

Another example that shows that the difficulties had by Sodderland affect her interaction with others is showed by datum 14. In datum 14 shows that Sodderland made an error, which is classified as a malapropism. It happened when Sodderland produced the intended words, which are semantically inadequate. When she discussed her results of word reading speed test with her brother Jan and wanted to say that she would have a better ability to use her language as others, she said "*people's properly*", whereas what she should say is "*people's property*". This situation shows that Sodderland, as people with Broca's aphasia, still have intelligence as before, so she could realize that she made an error and repeated that word correctly (Indah, 2017). However, those errors produced by Sodderland affected to her interaction with others. That causes it her errors would make her interlocutors are confused about what she was talking about.

In addition, some people could understand her message, although there are many errors produced by her. It is showed by the analysis of datum 2 that is classified as an omission. It happened caused by Sodderland excluding something that should be included in her utterance. When she said that she could say the word “*record*” to Sophie, even though it is contrary to what happened to her, that is she could not say that word. Nevertheless, some people who communicate with Sodderland could not understand; that is why Sodderland often made a gesture for representing what she wanted to say. Another analysis of data indicates to the problems she had while interacting with people around, such as in data 5 as substitution, data 6 as shift, data 7 as a malapropism, data 11 as shift, and the last is data 13 as malapropism.

Besides, Sodderland also produced errors while doing a monologue. As showed in datum 1, that is classified as malapropism shows that Sodderland produced the wrong word while conveying her message. When she wanted to say the word “*place*”, it becomes “*plate*”. Even those two words have similar sounds, but the word “*plate*” is not related to the context she was as talking about. But, as people with Broca’s aphasia, Sodderland still has intelligence as before, so she could realize her error and repeat it properly (Indah, 2017). Another error produced by Sodderland while having a monologue is showed by datum 4 as shift, datum 8 as substitution, datum 9 as lexical selection error, datum 10 as lexical selection error too, and the last is in datum 12 as a shift. However, these errors cannot answer the second research question, cause it does not happen in the Sodderland’s interaction with people around her.

If we look at the errors produced by Sodderland, there are noticeable disorders that showed her as people with Broca's aphasia. Those problems are; severe in finding and producing the right word and speech full of hesitations and long pauses. Generally, people with Broca aphasia are difficult to form words or sentences, they will speak spontaneously, stammer, and speak monotonously. Although their listening generally is good, they difficult to understand sentences with complex structures. Most of them are bad in repeating the word and remembering what they have repeated (Indah, 2017b). Often, people with Broca aphasia feel frustrated because of their difficulties in producing words. Some of them can say a few words, which they use to communicate in the type of speech characteristics known as telegraphic utterances (Samiadi, 2019).

Besides, we can see that Sodderland, as people with Broca's aphasia, or known as people with brain injury, would have problems with her language production. So, her ability to communicate and produce words is hampered. People who experience aphasia will continue to have the expertise as before, they know what they want to say, but cannot always express the words adequately (Indah, 2017b). They are also likely to use subtitles called "Paraphasias". It happened when they were wrong to say something, such as when they said "dog" to "cat", or words that sound similar to "house" and "horse" (Jutt, 2016).

Based on the problem had by people with language disorders, especially Broca's aphasia, their difficulties are dominantly in producing words. For instance, hard to find and produce some actual words, hard to speak fluently while creating a lot of hesitations and long pauses. According to this research finding,

the difficulties had by Sodderland as people with Broca's aphasia became the main reason there were many errors produced by her in producing words. Besides, those difficulties are also affect to her interaction with people around her. So, the finding of this research shows that the prominent problem had by people with Broca's aphasia is their language production.

Another research finding by Khanum (2014) that analyzed Broca's aphasia and Wernicke's aphasia on three patients in language and cognitive behaviors concluded that if the left hemisphere of the human brain disturbed, they will experience aphasia and it makes their language production become hampered. According to Khanum's analysis, the three people with Broca's aphasia showed different problems. One of them is challenging to respond to the question as the observation, for instance, when they answer the question with something that is out of the topic. Moreover, another patient has also had a problem related to their ability to use a language. If seen from the finding in this study and Khanum research, it shows the same thing that generally, people with aphasia will experience problems using their language, especially language production.

Besides, according to another study by Schwartz (2014), stated that people with aphasia have naming errors and have different brain functions in word production. The subjects studied by Schwartz (2014) were several people with aphasia who mostly have errors in speaking. As a comparison of Schwartz's findings with the discussion of this research, it shows the same conclusion that people with aphasia mostly have similar difficulties as their main problem is their

language production. It is caused by brain function, which is closely related to the human ability to produce a language.

Another study that discusses this topic is conducted by Blumstein (2016). Different from the two previous studies, Blumstein's finding is still related to the problems of people with aphasia, such as speech production, speech perception, lexical disorders, and syntactic disorders. People with aphasia are still able to have interaction and understand the message in a certain way. It could happen caused by their language comprehension that is better than their language production. Blumstein's finding concluded that people with aphasia had difficulties in using a language; it means that these three previous studies summarized the same conclusion.

Thus, those three studies showed that, if people have a brain injury, it might disturb most of the process of their language production. The difficulties had by people with Broca's aphasia is also talked by the three previous studies, those are; hard in finding and producing the right words, and hard to speak fluent although they are good at their comprehension. So, the author concluded that the main problem had by people with Broca's aphasia is their language production.

Language ability on people who have aphasia disrupted; it is because the brain of humans are damaged when they had a stroke. However, in some cases, people's ability to use a language will return as usual or just near-normal. Their recovery takes time, such as several weeks or months to make their brains recover well from their condition before. However, each people has a different type of recovery from language disorder caused by brain injury. Mostly, children are

likely to recover faster than adults. In this case, speech therapy can be beneficial to those with language problems. The therapists can train patients to relearn and use the language skills that more effectively. They can teach both patients and families about the alternative way of communicating. Thus, through this research, the author takes a conclusion that Sodderland, as the main character on *My Beautiful Broken Brain* movie, has dealt with the problem had as Broca's aphasic.

Based on the explanation above, here is a summary of the analysis results in the form of images. Figure 1 explains the errors produced by Sodderland in producing words so that it can be concluded some of the difficulties she experienced based on the theory by Reason (2000).

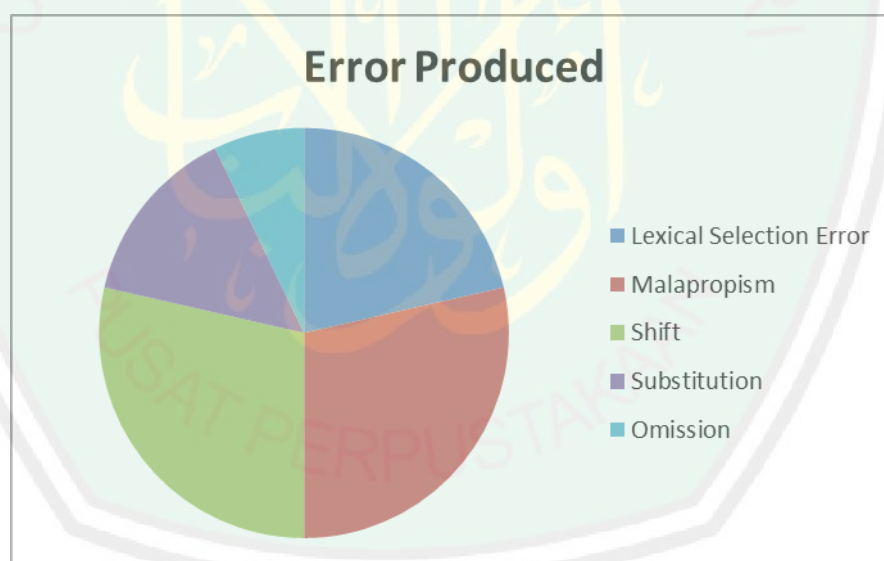


Figure 1. The Difficulties of Sodderland in Producing Words

Figure 2 explains the difficulties experienced by Sodderland as people with Broca's aphasia in using language based on Yule's theory (2016).

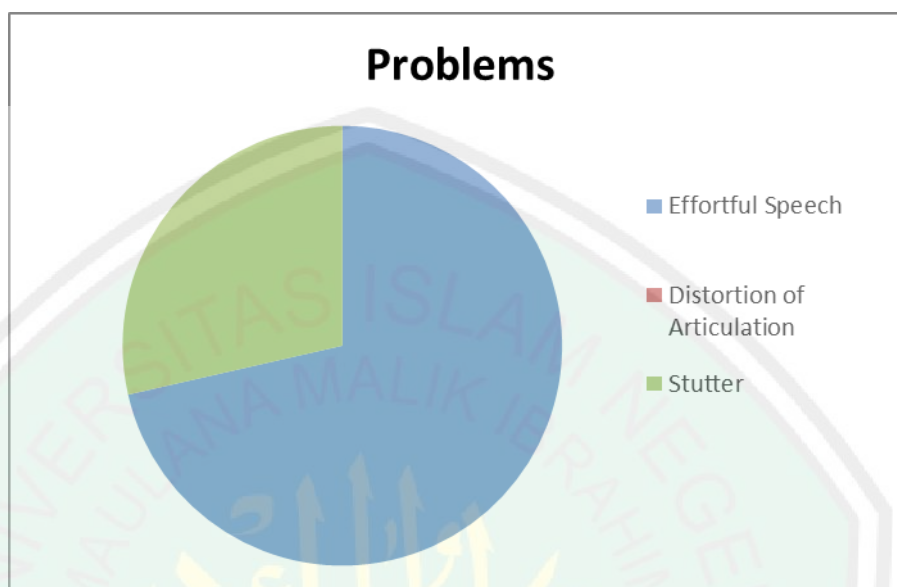


Figure 2. The Problem of Sodderland in Producing Words

The readers need to know that the findings of this study might find different results if using other theories, and this is one of the limitations of this research. Another limitation is that the author only observed the problems had by Sodderland as a Broca's aphasia sufferer from the movie without confirming the original form of difficulties experienced by Broca's aphasia sufferers in the real world. These two limitations are things that are expected to be followed up by subsequent researchers who have the same concentration and interest in the study.

CHAPTER IV

CONCLUSION AND SUGGESTION

This chapter contains the conclusion of the thesis and suggestions given by the author. After presenting the findings and discussion in the previous chapter, the author concludes and gives some suggestions to the readers and also to the next researcher, which concern with Broca's aphasia language production. The conclusion and suggestion below are based on the result of the data analysis on language production of Sodderland as people with Broca's aphasia in *My Beautiful Broken Brain* movie.

A. Conclusion

The following conclusion contains the explanation that related to the statement of the research problem, the result of the analysis, and the finding and the discussion of this research.

Based on the analysis of this research, the author concluded that Sodderland had some difficulties in producing words, and the errors produced by her shows it. Those difficulties are; hard in finding and producing the right words, bad at word repeating, and it happened even she was good at her comprehension. In other words, Sodderland, as people with Broca's aphasia face the challenge to produce words, remember the name of things, and finding the right word. With those difficulties, Sodderland often made errors while producing words. The error words she often produces are noun, verb, preposition, and the way of arranging the words into a sentence. As people with language disorders, primarily Broca's aphasia, Sodderland is also known as a patient with effortful speech. She also

produces many hesitations and long pauses and speaks like a stutterer. The condition of Sodderland causes those problems as a people with Broca's aphasia as the main character in *My Beautiful Broken Brain* movie

Through the utterances produced by Sodderland, the author found fourteen errors related to the several types of error in language disorder based on Reason (2000). The author concluded that the most dominant type found is malapropism and shift. The next type, which often produced by Sodderland, is lexical selection error and substitution. Then the other types produced by Sodderland is an omission. Another Sodderland's utterances are not categorized as any error proposed by Reason (2000), those are six utterances produced by Sodderland, which discussed using the theory proposed by Yule (2016). According to Yule (2016), people with Broca's aphasia have some problems which have classified through their ability to use a language. Those problems are; effortful speech, distortion of articulation, and stutter.

The next finding is about how Sodderland had interaction with people around her based on the theory proposed by Gall (2010). According to Gall (2010), people with brain injury will experience some difficulties in their ability to use a language. Therefore, Sodderland, as people with Broca's aphasia, made many errors while interacting with people. However, it is not only occurred in her conversation but also her monologue. Some people could understand what she is talking about, although she had several errors. Nevertheless, some of them could not understand; that is why Sodderland often made a gesture for representing what

she wanted to say. It is because each of the several specific parts of the human brain had responsibilities for the ability to do something, and one of those specific aspects is for processing the use of language.

B. Suggestion

In this study, the author found that Sodderland, as people with Broca's aphasia, had some difficulties in producing words, which affected her ability to interact with people around her. However, Sodderland's difficulties in producing words affected her ability to communicate with people around her. Therefore, the author applies the suggestion for the people who are facing and taking care of people with aphasia. As mentioned above, people with aphasia have some difficulties and problems in producing words. Thus, the people must be calm in understanding what they are conveying about. It is caused by their limited ability to use a language correctly.

The author also applies the suggestion offered for the next researchers who have the same interest in language production of people with a language disorder, especially Broca's aphasia. The author suggests to the next researcher to choose the previous study carefully. It occurs since the study about aphasia is not only pertaining to psycholinguistics but also neurolinguistics. Accordingly, the discussion should focus on the scope of psycholinguistics.

REFERENCES

- Berthier, M. L. (2005). Poststroke aphasia. *Drugs & aging. Epidemiology, Pathophysiology, and Treatment. Volume 22 (2)*, 163-182. Retrieved from <https://link.springer.com/article/10.2165/00002512-200522020-00006>
- Blumstein, S. E. (2016). *Psycholinguistic approaches to the study of syndromes and symptoms of aphasia*. Author links open overlay panel in Sheila E. Blumstein (Ed.), *Neurobiology of Language* (pp. 923-933). Retrieved from <https://doi.org/10.1016/B978-0-12-407794-2.00074-2>
- Cahana-Amitay, D., & Jenkins, T. (2018). Working memory and discourse production in people with aphasia. *Journal of Neurolinguistics*, 48, 90-103. doi: [org/10.1016/j.jneuroling.2018.04.007](https://doi.org/10.1016/j.jneuroling.2018.04.007)
- Cutler, A. (2017). *Twenty-first century psycholinguistics: Four cornerstones*. London; Routledge.
- Diagnostic, A. P. A. (2013). *Statistical manual of mental disorders: DSM-5™*. Arlington. VA American Psychiatric Publishing. Retrieved from https://scholar.google.com/scholar?cites=9036677881224840690&as_sdt=2005&sciodt=0,5&hl=id
- Finger, S. (2009). The birth of localization theory. In *Handbook of clinical neurology* (Vol. 95, pp. 117-128). Elsevier. Doi: [https://doi.org/10.1016/S0072-9752\(08\)02110-6](https://doi.org/10.1016/S0072-9752(08)02110-6)

Hall, C. J. (2018). *The psycholinguistics of English*. York St John University.

Retrieved from <https://orcid.org/0000-0001-9038-1238>

Indah, R. N. (2008). *Psikolinguistik: Konsep & Isu Umum*. Malang: UIN Press.

Retrieved from <http://repository.uin-malang.ac.id/id/eprint/513>

Indah, R.N. and Abdurrahman. (2008). What psycholinguistics is. Indah, R. N.

(Ed.), *Psikolinguistik: Konsep & Isu Umum*, Malang: UIN Press.

Indah, R. N. (2011). *Proses Pemerolehan Bahasa: dari Kemampuan hingga Kekurangmampuan Berbahasa*. *LiNGUA: Jurnal Ilmu Bahasa dan Sastra*, 3(1). Retrieved from

<http://103.17.76.13/index.php/humbud/article/viewFile/570/941>

Indah, R. N. (2017a). Gangguan berbahasa: Kajian pengantar. *Repository UIN Malang*. Retrieved from [http://repository.uin-](http://repository.uin-malang.ac.id/1296/6/1296.pdf)

[malang.ac.id/1296/6/1296.pdf](http://repository.uin-malang.ac.id/1296/6/1296.pdf)

Indah, R. N. (2017b). Language and brain. *Repository UIN Malang*. Retrieved from <http://repository.uin-malang.ac.id/1141/2/language%26brain.pdf>

Indah, R. N. (2018). Teori-teori psikolinguistik. *Sekolah Linguistik – Self Access Center*. Fakultas Humanioora Universitas Islam Negeri Maulana Malik

Ibrahim Malang. Retrieved from <http://repository.uin-malang.ac.id/2510/2/2510.pdf>

Indefrey, P., & Levelt, W. J. (2000). The neural correlates of language production.

In *The new cognitive neurosciences*; 2nd ed. (pp. 845-865). MIT press.

Retrieved from <http://hdl.handle.net/11858/00-001M-0000-0013-46FD-9>

Jutt, S. W. (2016) *Aphasia: The disorder that makes you lose your words*.

Retrieved from <https://youtu.be/-GsVhbmeCJA>

Khanum, F. (2014). Influence of Broca's aphasia and Wernick's aphasia on

Language. *Global Journal of HUMAN-SOCIAL SCIENCE: A Arts & Humanities - Psychology, Volume 14* (9), 53-56. Retrieved from

https://globaljournals.org/GJHSS_Volume14/6-Influence-of-Brocas-aphasia.pdf

Kess, J. F. (1992). *Psycholinguistics: Psychology, linguistics, and the study of natural language* (Vol. 86). Amsterdam: John Benjamins Publishing.

Leutuang, R. (2008). Psycholinguistic analysis on the utterances produced by an autistic character in "Rain Man" movie (Doctoral dissertation, Universitas Islam Negeri Maulana Malik Ibrahim). Retrieved from <http://etheses.uin-malang.ac.id/4580/>

Levelt, W. J. (2013). *A history of psycholinguistics: The pre-Chomskyan era*.

Inggris: Oxford University Press.

Nielsen, S. R., Boye, K., Bastiaanse, R., & Lange, V. M. (2019).

The production of grammatical and lexical determiners in Broca's aphasia. *Language, Cognition and Neuroscience*,

Volume 34(8), 1027-1040.

<https://doi.org/10.1080/23273798.2019.1616104>

Pearl, P. L., & Emsellem, H. (2014). *Neuro-logic: a primer on localization*. New York: Demos Medical Publishing.

Puvanendran, K., Dowker, A., & Demeyere, N. (2016). Compensating arithmetic ability with derived fact strategies in Broca's aphasia: a case report. *Neurocase, Volume 22* (2), 205-214. doi: 10.1080/13554794.2015.1120311

Reason, J. (2000). The Freudian slip revisited. *PSYCHOLOGIST-LEICESTER-*, 13(12), 610-611.

Sabbatini, R. M. (1997). Phrenology: The history of brain localization. *Brain and mind*, 1. Retrieved from <https://scholar.google.co.id/citations?user=sacC1FAAAAJ&hl=id&oi=sra>

Samiadi, L. A. (2019). Jenis Afasia Bisa Terjadi Pasca Stroke. Retrieved from <https://hellosehat.com/pusat-kesehatan/stroke/jenis-afasia-bisa-terjadi-pasca-stroke/>

Schwartz, M. F. (2014). Theoretical analysis of word production deficits in adult aphasia. *Philosophical Transactions of the Royal Society B: Biological Sciences, Volume 369*(1634), 20120390. doi: 10.1098/rstb.2012.0390

Yule, G. (2016). *The study of language*. Cambridge: Cambridge University Press.



Warda Humairoh Syarifah was born in Lumajang on June 18, 1997. She graduated from SMA An-Nur Malang in 2015. During her study, she was active in a Calligraphy course and got several achievements in this art. Furthermore, since 2017 she was working as a coach of drum band on some schools in Pasirian Lumajang. She started her higher education

in 2016 at the English Literature Department of Faculty Humanities in Universitas Islam Negeri Maulana Malik Ibrahim Malang.



APPENDIX

Datum 1

“It would be a new plate... mm place”

Sodderland uttered the utterance above as people with Broca's aphasia in *My Beautiful Broken Brain* movie. It had occurred when Sodderland did a monologue and recorded it with her iPhone shortly after she woke up from a stroke. She tried to tell some things that she remembered before she fell and was unconscious. So, she said that her current condition like bring her to a new place and situation that she had never experienced before. However, when she would like to say the phrase *"new place"*, she instead produced *"new plate"*.

Based on the context above, it is clear that Sodderland wanted to say the word *"place"*, but instead, she said the word *"plate"*. In this case, Sodderland produced an error in the last part of her utterance when she wanted to say the word *"place"*, but she produced another word that sounds similar and categorized the same as a noun. Although she said the wrong word before, she could repeat and realize that the word she should say is *"place"* not *"plate"*. It is caused by the intelligence that had by Sodderland as the sufferer of Broca's aphasia is continue as before, even the ability in using a language was hampered (Indah, 2017). This error is categorized as a **malapropism**, which means that Sodderland, as a speaker, produced the intended word, which is semantically inadequate. So, she produced errors while speaking by saying a word that is not related to the context

discussed. Besides, it also made her interlocutors confused about what she was talking about.

Datum 2

"I can say it"

As people with Broca's aphasia, Sodderland uttered that phrase and made an error. It has occurred in Sodderland and Sophie's conversation. When Sodderland wanted to say that she could not say the word "*record*" by pointing at the camera while trying to produce any sentence, which shows that she could not say that word. However, the sentence she delivered was, "*I can say it*", which is contrary to her condition that she could not say the word "*record*".

Based on the context above, it is clear that Sodderland wanted to say the word "*can't*", but instead, she said the word "*can*". In this case, Sodderland produced an error while conveying her actual problem in saying the word "*record*". The word that should be delivered by Sodderland is the word "*can't*", as a modal or auxiliary. It happens because of Sodderland's ability to use a language, especially in her production was hampered. This error is categorized as **omission**, which means Sodderland as a speaker deleted or left some linguistics material out. So, it makes her produce the wrong word while conveying the messages without realizing that she produced the wrong phrase.

Datum 3

"I can't... (pen writing), I can't say it now. But I can't... um... you know, I can't speak or... no, not speak. I can't be clever"

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sodderland and Sophie had a conversation and started to record Sodderland's story in experiencing a stroke. When Sodderland tried to convey to Sophie that she could not write, she used a gesture, like *"I can't (pen writing)"*. Furthermore, when she tried to remember what thing she wanted to say, she mentioned another word that same as a verb such as *"speak"*. In this context, Sodderland wanted to say the word *"write"*, but she could not remember its word and started making a gesture and saying another word as her effort in order to make Sophie understand.

Based on the context above, it is clear that Sodderland wanted to say the word *"write"*, but she could not remember and say that word. In this case, Sodderland produced an error and said the word *"speak"* in the middle of her utterance. Moreover, she also made a gesture while she was trying to say the word *"write"* as a verb and instead produced another word, that is *"speak"*. It happens because of Sodderland's difficulty in finding the right words, that is a problem that cannot be avoided by Broca's aphasia sufferers. This kind of error is classified as a **lexical selection error**, which means that Sodderland as a speaker, has problems in selecting the correct word. So, it makes her often produce the wrong word in mentioning or naming some things.

Datum 4

"And extror... extraordinary"

Sodderland also uttered the utterance above as people with a language disorder. It had occurred when Sodderland recorded for sending a video to David Lynch as a film director in order to tell about her story. She said that the circumstances she experienced are like a nightmare. Nevertheless, she said that she was also grateful because of lost in the extraordinary circumstances that had found in a brain that she had. When she would say the word "*extraordinary*" to show her feeling, she experienced an error and said "*extror*". Although she had a mistake in saying that word, she could repeat it correctly after realizing her mistake, and it made people could understand her easily.

The context above showed that Sodderland wanted to say the word "*extraordinary*", but instead, she said the word "*extror*". In this case, Sodderland produced an error in the middle of her utterance while saying the word "*extraordinary*" as an adjective, become "*extror*" that sounds adjacent to the word she wanted to say. It happens because of her condition which hampered her ability to use a language, especially in her production and pronunciation. However, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. This kind of error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segments that disappears from its appropriate location. So, it makes Sodderland produce the strange words in her phrase or sentence.

Datum 5

"Nov... nov... noval... normal... normality"

As people with Broca's aphasia, Sodderland had difficulty to produce words and speak properly. She uttered several words and made an error, and it had occurred when Sodderland had a conversation with Sophie. Sodderland tried to tell about her complaints in facing her condition as a loss of ability in using a language to Sophie. Sodderland said that she had lost her normality as a person in some ways. When she tried to say the word *"normality"* she instead produced the words *"nov"* and *"noval"*. As her effort to convey the message, Sodderland is not only making a gesture to show what she wanted to say but also produced several words that sound similar. She did those options as her effort to make Sophie and the people around her understand what she was talking about.

Based on the context above shows that Sodderland wanted to say the word *"normality"* but instead, she said the word *"nov"* and *"noval"*. In this case, Sodderland produced words that seem similar in how it pronounces in the middle of her utterance. It is caused by the disturbance of Sodderland's ability to use a language, such as in pronouncing words and finding words. As people with aphasia, Sodderland still have intelligence as before, so she could realize her error in saying that word and repeat it correctly (Indah, 2017). This error is categorized as a **substitution**, which means an intruder replaces a segment of the sentence, and the word produced is not related to the topic discussed. So, it makes Sodderland produce some words that cannot be recognized.

Datum 6

"Clev... kind of clever person"

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sophie started to record Sodderland's story in experiencing a stroke. Sophie asked Sodderland to tell about her story live before and after having a stroke. When Sodderland wanted to say the phrase *"kind of clever person"* in order to inform Sophie that before having a stroke, she was an intelligent person as in general, she encountered an error while saying that phrase. The word *"clev"* interrupted the beginning of her sentence, although she had an error in saying the phrase, she could repeat it correctly. It made her easy to be understood by people who communicate or listen to her.

Based on the context above, it is clear that Sodderland wanted to say the phrase *"kind of clever person"*, but instead, she said the word *"clev"* as the interruption at the beginning of her utterance. In this case, Sodderland produced an error at the beginning of her utterance while uttering a phrase and generated the word that is actually *"clever"* as an adjective, become *"clev"*. It happens because of the condition of Sodderland, which hampered her ability to use a language, especially in her production. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize the error produced and conveying that phrase accurately. This kind of error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segment that disappears from its appropriate location.

Datum 7

“A nephew? Neef... niece. I mean niece”

As people with Broca’s aphasia, Sodderland uttered that phrase and made an error. It had occurred when Sophie asked Sodderland about who is the girl in the picture. Sodderland was able to say *“nephew”*, but she still tried to say the more appropriate words to show who is in the picture. She tried to say the word *“niece”* as the answer to Sophie’s question, but as people with Broca’s aphasia, Sodderland was hard to find that word. Thus, this problem made her produce another word that sounds similar to the actual words which supposed to say. Such as when she wanted to say the word *“niece”* became *“neef”*. However, she could repeat it shortly after realizing her error correctly, and it made her speech could be understood by people who communicate with her.

Based on the context above, it is clear that Sodderland wanted to say the word *“niece”*, but instead, she said the word *“neef”*. In other words, Sodderland made a mistake in mentioning a word as a noun in the middle of her utterance that has a similar sound with the word she would say. It happens because of the Sodderland’s difficulty to use a language and finding the right word. It affected her often made an error to produce and pronounce some words. However, as mentioned in the previous chapter, those people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize the error she produced and find that word correctly. This kind of error is categorized as a

malapropism, and it means that Sodderland, as the speaker, produced the intended word, which is semantically inadequate.

Datum 8

“This could read tale, mm not tale”

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Soddderland learned to read some words and sentences. As she tried to read the word *“the”*, she reads it as *“tale”*. Sodderland was doubting to read the word *“the”* so it becomes *“tale”*, then she questioned it to Sophie about how the way to read that word. Sophie told her that it should be read as *“the”*, so she tried to repeat it and began to realize that she had a problem in reading the word *“the”*. As people with Broca's aphasia, this error is one of Sodderland's problems in producing words. She often produced different words from the object or something which is not relevant to the topic.

Based on the context above shows that Sodderland wanted to say or read the word *“the”*, but instead, she said the word *“tale”*. In this case, Sodderland produced the word that seems similar in how it pronounces in the middle of her utterance. Moreover, the word she produced is should be a preposition *“the”*, but instead become a noun that is *“tale”*. It is caused by the disturbance of Sodderland's ability to use a language, such as in pronouncing words and finding the right words. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize that she produced an error even she was confused about how the way to read that word. This kind of error is categorized as a **substitution**, which means

there is a segment of the sentence replaced by an intruder, and the word produced is not related to the topic discussed.

Datum 9

“Stew... where did that come from?”

The utterance above is uttered by Sodderland as people with Broca’s aphasia. It had occurred when Sodderland tried to do an exercise that accompanied by her brother, Jan. The exercise is about guessing the name of some nouns and verbs. One of the questions is naming the object as a picture of the baseball bat. When Sodderland tried to remember the name of that picture, she instead named the baseball bat as *“stew”*. After guessing the name of that object, Sodderland often questioned her answers to Jan, in order to ensure her ability in remembering and finding the right words.

Based on the context above, it is clear that Sodderland has a problem to say the word *“baseball bat”*, and it made her produce the word *“stew”*. In this case, Sodderland produced an error to say the word *“baseball bat”* as a noun, becomes *“stew”* at the beginning of her utterance in guessing a picture. As people with Broca’s aphasia, Sodderland has difficulty in finding the right words, and it was a problem that cannot be avoided by Broca’s aphasia sufferers. In this case, Sodderland produced the word *“stew”* while the picture she saw actually is a *“baseball bat”*. However, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize that she produced an error, even she could not remember the name of that object. This kind of error classified as a **lexical selection error**, which means that

as a speaker, Sodderland has problems in selecting the correct word. So, it makes her produce the wrong or unrelated word to the context.

Datum 10

“So, now I am twent... thirty ... thirty... four”

As people with Broca’s aphasia, Sodderland uttered that phrase and made an error. It had occurred when Sodderland did a monologue and recorded a video with her iPhone. In the video, she said that she did not live with her mother since she was at 18 years old. However, due to her condition after experiencing a stroke, she returned to live with her mother. At that time, Sodderland tried to inform about her actual age, but she was confused about how she could say the word, which indicates her age correctly. Sodderland said that her age is *“twenty”*, but afterward, she began to say *“thirty”*. However, she paused several times to recall and tried to make sure about how old she was.

Based on the context above, it is clear that Sodderland wanted to say the word *“thirty”*, but instead, she said the word *“twenty”*. In this case, Sodderland produced an error in mentioning her age as a noun in the middle of her utterance. As people with Broca’s aphasia, Sodderland’s problem in finding the right word is becoming her main problem. However, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. She often made this kind of error, which is classified as a **lexical selection error**, which means that Sodderland, as a speaker, has problems in selecting the correct word.

Datum 11

"I am rec... I am obsessed to record"

Sodderland uttered the utterance above as people with Broca's aphasia. It had occurred when Sodderland and Sophie have a conversation. Sophie asked Sodderland why she wanted to record her recovery, and Sodderland answered that she was obsessed with recording everything. Sodderland also told Sophie that she and her family were accustomed to recording anything before experiencing her current condition. Although she had an error in saying the phrase, she could repeat the correct phrase, and it made her speech could be understood by people who communicate with her.

Based on the context above, it is clear that Sodderland wanted to say the phrase *"I am obsessed to record"*, but instead, she said the phrase *"I am rec"*. The word *"obsessed"*, which supposed to say in order to show the main reason why she wanted to record her recovery story is disappeared. In this case, Sodderland wanted to say the phrase *"I am obsessed to record"* but produce an interruption with the phrase *"I am rec"*. In other words, Sodderland produced an error in saying the word *"obsessed"* as a verb, which supposed to show the main reason to Sophie about why she wanted to record her recovery story is disappeared in the middle of her utterance. It happens due to the condition of Sodderland, which hampered her ability to use a language, especially in her production and pronunciation. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could

realize and repeat that word correctly. This error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segment that disappears from its appropriate location.

Datum 12

"It is like a dimen... a new dimension"

The utterance above is uttered by Sodderland as people with Broca's aphasia. It had occurred when Sodderland recorded a video for David Lynch in order to tell her story. She said something strange happened to her vision, so it seemed there was a new dimension in her view. According to Mr. Andrew Elsmore, Sodderland as a sufferer of Broca's aphasia will experience homonym hemianopsia, which affects her cognitive abilities and communication. In other words, Sodderland has vision problems in her right eye. As a result of these visual disturbances, she experienced blurred vision and fusion of several types of color that she saw through her right eye.

Based on the context above, it is clear that Sodderland wanted to say the phrase *"like a new dimension"*, but instead, she said the word *"like a dimen"*. The word *"new"*, which is supposed to say in order to convey something strange is disappeared. In this case, Sodderland left the word *"new"* as an adjective in the middle of her utterance. It happens because of the condition of Sodderland, which hampered her ability to use a language, especially in her production and pronunciation. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could

realize and repeat the phrase that she would say properly. This error is categorized as a **shift**, which means the utterance produced by Sodderland have one of the speech segment that disappears from its appropriate location.

Datum 13

“Maybe I will be an impre... improved specimen”

The utterance above is uttered by Sodderland as people with Broca’s aphasia. It had occurred when Sodderland’s brother, Jan, accompanied her to attend treatment in the Neurological rehabilitation unit for psychological, linguistic treatment and psychotherapy for the next three months. When they arrived at their destination, Sodderland said something to Jan that she would try to improve her abilities in using a language. However, when Sodderland would say the word “*improved*”, she instead said “*impre*”. Sodderland's mistake in saying the word “*improved*” became “*impre*” is influenced by the similarity of the sound of those two words. Although she had an error in saying that word, she could repeat it correctly. It made her speech could be understood by people who listen to her.

Based on the context above, it is clear that Sodderland wanted to say the word “*improved*”, but instead, she said the word “*impre*”. In other words, Sodderland made a mistake in mentioning the word as a verb in the middle of her utterance that has a similar sound with the word she would say. It happens because of Sodderland’s inability to use a language and finding the right word. It affected her often made an error to produce and pronounce some words. However, as mentioned before, that people with aphasia will continue to have intelligence as

before (Indah, 2017). So, Sodderland could realize and repeat that word correctly. This error is categorized as a **malapropism**. It means that as a speaker, Sodderland produced the intended word, which is semantically inadequate.

Datum 14

“Other people’s peroperly... property”

Sodderland uttered the utterance above as people with Broca’s aphasia. It had occurred when Sodderland talked with her brother Jan, about her word reading speed after doing a reading test to improve her ability in reading text. Jan asked Sodderland to explain about her test results shown in a graph. She explained that there is about 40% progress in reading ability in the first week, and she also told Jan that she would have the ability that had by most people soon. When Sodderland wanted to say *“people’s property”* to make sure Jan that she would be an average person with the ability to use a language, she experienced an error and said, *“people’s properly”*.

Based on the context above, it is clear that Sodderland wanted to say the word *“property”*, but instead, she said the word *“properly”*. In other words, Sodderland made a mistake in mentioning a word as a noun to become an adverb, which has a similar sound with the word she would say in the middle of her utterance. This happens because of Sodderland’s inability to use a language and finding the right word. It made her often made an error to produce and pronounce some words. Nevertheless, as mentioned before, that people with aphasia will continue to have intelligence as before (Indah, 2017). So, Sodderland could

realize and repeat that word correctly. This error is categorized as a **malapropism**. It means that as a speaker, Sodderland produced the intended word, which is semantically inadequate and it made her interlocutors confused about what she was talking about.

Datum 15

"Mmm, or did I already? S... Okay (emphasizing S), Seed (emphasizing S) I get... I get to..."

The utterance above is uttered by Sodderland as people with Broca's aphasia. It had occurred when Sodderland had a test in order to know her ability to produce words. When the therapist asked Sodderland to produce words she remembered that began with the letter "S", she was confused to say what words began with the letter "S". After a few moments of silence, the therapist gave examples by saying the words "Sit" and "Summer". Then Sodderland began to emphasize the letter "S" and said the word "Seed". However, after that, she began to look frustrated because she was challenging to say a word beginning with the letter "S".

Based on the context above, it is clear that Sodderland wanted to produce words that began with the letter "S" in order to do the test, but she was challenging to do it. This kind of Sodderland's difficulty has reflected the problems had by people with Broca's aphasia as **effortful speech**. People with Broca's aphasia will be hard to find and articulate single words. It happens caused by the problems had by Sodderland in finding the right word, and it affected her often made an error to produce and pronounce some words.

Datum 16

“I was in pretty normal,...very ...busy... normal...”

The utterance above is uttered by Sodderland as people with Broca’s aphasia. It had occurred when Sodderland tried to let Sophie know that she was healthy people like others before she has a stroke. However, when she conveyed what she thought, her speech is almost full of hesitation like a stammerer. It is not only full of hesitation, but also full of pauses that made her speech look like not arrange properly. This problem has presented the difficulties had by people with a language disorder.

Based on the context above, it is clear that Sodderland wanted to convey the message in order to inform people around her about her condition. Nevertheless, she had difficulty in delivering it because she had a lot of hesitations and pauses in her speech. This kind of Sodderland’s difficulty has reflected the problems had by people with Broca’s aphasia as a **stutter**. Although Sophie could understand Sodderland’s utterance, it makes Sophie a little bit confused about what Sodderland is talking about. It happens because of her loss of ability to use language.

Datum 17

“For some reasons, I can’t say the actual word itself. This word (pointing the camera)”

Sodderland utters the utterance above as people with Broca's aphasia. It had occurred when Sodderland tried to inform Sophie that she could not produce the name of an activity. Sodderland used a gesture to make Sophie understand that she could not find and articulate the name of that kind of activity. She pointed to the camera while saying that she could not produce that word. This kind of problem is one of the problems which often done by Sodderland. It caused her as people with language disorders, and she would have difficulties in producing and articulating words.

Based on the context above, it is clear that Sodderland wanted to say the name of an activity, and it can be said like the word "record". This kind of Sodderland's difficulty has reflected the problems had by people with Broca's aphasia as **effortful speech**. People with Broca's aphasia will be hard to find and articulate single words. It happens caused by the problems had by Sodderland in finding the right word. It affected her often made an error to produce and pronounce some words.

Datum 18

"Record, yeah. You say it again"

The utterance above is uttered by Sodderland as people with Broca's aphasia. It had occurred when Sodderland tried to repeat the word which produced by Sophie. Cause Sodderland could not produce the word "record", Sophie said that word and asked Sodderland to repeat it. However, Sodderland is hard to

repeat that word more than once, so she said the phrase “you say it again” in order to inform Sophie that she could not repeat it.

Based on the context above, it is clear that Sodderland wanted to repeat what Sophie said, but she had difficulty to do it more than once. This kind of Sodderland’s difficulty is reflected the problems had by people with Broca’s aphasia as **effortful speech**. It caused by the difficulty had by people with Broca’s aphasia in finding and repeating words. Thus, it affected her often made an error to produce and pronounce words.

Datum 19

”I can’t... (pen writing), I can’t say it now. But I can’t... um... you know, I can’t speak or... no, not speak. I can’t be clever”

Sodderland utters the utterance above as people with Broca’s aphasia. It had occurred when Sodderland tried to inform Sophie that she could not produce the name of an activity. Sodderland used a gesture to make Sophie understand that she could not find and articulate the name of that kind of activity. She made a gesture like “pen writing” to inform Sophie about what word she wanted to say. This kind of problem is often produced by Sodderland because as people with language disorders, she would have difficulties in producing and articulating words.

Based on the context above, it is clear that Sodderland wanted to say the name of an activity, it is the word “write”. This kind of Sodderland’s difficulty is reflected the problems had by people with Broca’s aphasia as **effortful speech**.

People with Broca's aphasia will be hard to find and articulate single words. It happens caused by the problems had by Sodderland in finding the right word. It affected her often made an error to produce and pronounce words.

Datum 20

“Matilda is, um, my... is (sighs) my... she is... (sighs) I can't... my... nephew, yeah nephew”

The utterance above is uttered by Sodderland as people with Broca's aphasia. It had occurred when Sodderland tried to respond to Sophie's question about who is in the picture. Sodderland's response is full of hesitation and long pauses, and this happens because of her condition, which made her difficult to talk properly. This kind of problem is not only about the hesitation she had, but also about her difficulty in finding the right word to answer Sophie's question.

Based on the context above, it is clear that Sodderland wanted to say the word “nephew”, but in order to produce that word, Sodderland had much of hesitations and long pauses on her speech. This kind of Sodderland's difficulty has reflected the problems had by people with Broca's aphasia as **effortful speech** and **stutter**. The problem she had is not only on her fluency but also on her ability to produce the right word. It happens because Sodderland had lost her ability to use a language, such as in finding the right word, in articulating a single word, and talk fluently.

A. Table of error produced by Sodderland (Reason, 2000)

No	Utterances	Lexical Selection error	Malapropism	Shift	Substitution	Omission
1.	It would be a new <i>plate</i> ... mm place		✓			
2.	I <i>can</i> say it					✓
3.	I can't... (pen writing), I can't say it now. But I can't... um... you know, I can't <i>speak</i> or... no, not speak. I can't <i>be clever</i>	✓				
4.	And <i>extror</i> ... extraordinary			✓		
5.	<i>Nov</i> ... <i>nov</i> ... <i>noval</i> ... normal... normality				✓	
6.	<i>Clev</i> ... kind of clever person			✓		
7.	A nephew? <i>Neef</i> ... niece. I mean niece		✓		✓	
8.	This could read <i>tale</i> , mm not tale					
9.	<i>Stew</i> ... where did that come from?	✓				
10.	So, now I am <i>twent</i> ... thirty ... thirty... four	✓				
11.	I am <i>rec</i> ... I am obsessed to record			✓		
12.	It is like a <i>dimen</i> ... a new dimension			✓		
13.	Maybe I will be an <i>impre</i> ... improved specimen		✓			
14.	Other people's <i>peroperly</i> ... property		✓			

B. Table of difficulties had by Sodderland (Yule, 2016)

No.	Utterances	Effortful Speech	Distortion articulation	Stutter
1.	Mmm, or did I already? S... Okay (emphasizing S), Seed (emphasizing S) I get... I get to..."	✓		
2.	I was in pretty normal,...very ...busy... normal...			✓
3.	For some reasons, I can't say the actual word itself. This word (pointing the camera)	✓		
4.	Record, yeah. You say it again	✓		
5.	I can't... (pen writing), I can't say it now. But I can't... um... you know, I can't speak or... no, not speak. I can't be clever	✓		
6.	Matilda is, um, my... is (sighs) my... she is... (sighs) I can't... my... nephew, yeah nephew	✓		✓