The purpose of this study is to explore the lexical system and the practical use of "change of state verbs" in the German language. In particular, by focusing on "causative-inchoative alternation," i.e., concerning the possibility of the causative expression and non-causative expression, the study examines the manner in which the "change of state" events of the real world are construed and lexicalized in the German language.

This paper consists of six chapters. They were summarized as follows:

The first chapter introduces the issues covered in this research and explains their backgrounds. It overviews the trend of the language research in recent times, emphasizes specially the significance of a study on linguistic performance, and places this study as a part of analysis of actual usage of German verbs. The chapter raises the questions concerning the possibility of the causative-inchoative alternation of the "change of state verbs." It is based on the idea that the causative-inchoative alternation depends not only on the verb but also on the noun combined with the verb. In this study, corpus survey has been used as a methodological approach to perceive the types of events that are denoted by the combination of a noun and a verb, examine whether the events are expressed by causative constructions or non-causative constructions, and observe the frequencies of their occurrence.

The second chapter reviews the previous researches on "change of state verbs" and "causative-inchoative alternation." Firstly, it overviews the concept of "change of state" in the semantic classification of the verbs and gives some examples of the semantic classification of German verbs. It also reviews the researches concerning "change of state verbs" in the semantic class classifications of verbs and the discussions of the distinction between "externally caused change of state verbs" and "internally caused change of state verbs." Next, the discussions on the derivation relation in the "causative-inchoative alternation" were summarized. Lastly, it indicates the shortcomings of the previous studies and states the motivations of this study to improve them.
The third chapter provides a range of “change of state” verbs that are vastly covered in this research and their syntactic classification. It discusses the problems that concern the definition of “change of state” and the categorization. Based on the prototype theory, it provides a range of “change of state” verbs including their peripherals. Then, based on the dictionary meanings, a total of 759 “change of state verbs” in the German language were gathered. These verbs were classified into four groups based on the possibility of causative-inchoative alternation and their syntactic forms. The distribution is as follows; 424 transitive only verbs (T-verbs), 147 intransitive only verbs (I-verbs), 97 verbs that are used both transitively and reflexively (TR-verbs), and 78 verbs that are used both transitively and intransitively (TI-verbs). There are 13 other examples as well. We can understand from the above that in “change of state verbs” of the German language, there is more number of verbs not participating in causative-inchoative alternation (particularly, “transitive only verbs”) than the verbs participating in it.

In the fourth chapter, the semantic characteristics of the four groups of “change of state verbs” are analyzed. It also explores the semantic factors that influence the possibility of causative-inchoative alternation and the differences in syntactic forms.

Firstly, regarding “transitive only verbs”, considering the semantic elements included in verbs, the semantic factors restricting the intransitive variants were examined.

1. In case of verbs where the “means”, such as “action” (e.g., drücken as in aufdrücken) or “instrument” (e.g., Riegel as in aufriegeln), is morphologically specified, the non-causative variants are restricted because an “action” or an “instrument” presupposes an agent and blocks the elimination of the agent. However, the “means” does not include an action carried out on the presumption of a repetitive action (e.g., fahren as in abfahren) or an action that has a metaphorical meaning (e.g., schlagen as in zuschlagen).

2. In case of verbs, instead of “means,” where “a moving object” (e.g., Zucker as in zuckern), “result state” (e.g., süß as in süßen) or “a result object” (e.g., Toast as in toasten) is specified, or when an “action” as a secondary meaning (e.g., schleifen) is implied, the non-causative variants are restricted, since a person’s action (using an instrument) is involved in an event denoted by word combination and the elimination of the agent is blocked.

3. In the other cases where it is difficult to assume a human’s direct involvement (e.g., verheeren, zerstören), the nature of the event would denote that an “external factor” is responsible for the event. In other words, the non-causative variants are restricted due to the “external factors” related to an event that can not be eliminated.

Next, regarding “intransitive only verbs,” considering the semantic contents expressed by verbs, the factors restricting the causative variants were examined.
(1) The verbs express events that cannot be assumed by human involvement do not occur in causative constructions. There are "changes in persons, animals: changes owing to physical reasons (e.g., altern), changes owing to emotional reasons (e.g., erröten)," "changes in plants: plant growth, decay (e.g., aufblühen, verbliihen)," "changes in body parts: ripening or curing of a wound (e.g., eitern, abheilen)," "changes in objects: damage, freezing (e.g., rosten, frieren) etc." However, the verbs that denote natural phenomena can also have the causative variants when they take natural forces as the subject of transitive construction.

(2) There are cases where causative variants are restricted irrespective of a human's involvement for an event. In such verbs, a manner of the event are morphologically specified (e.g., fliegen as in auf- fliegen).

Lastly, the semantic attributes of causative-inchoative alternation verbs (TR-verbs and TI-verbs), were examined and the following three patterns of causative-inchoative alternation were extracted.

(1) The pattern that occurs in the verbs wherein a human's involvement is assumable, but the concrete ways of the involvement is not specified (e.g., brechen, öffnen)
(2) The pattern that occurs in the verbs that denote an event of natural phenomena that is impossible to include a human's involvement, but a cause of the event (for example, natural force) is the subject of transitive construction (e.g., reifen, röten)
(3) The pattern of verbs wherein a person's action is specified, but the action is either repetitive or indicates a metaphorical meaning (e.g., abfahren, zuschlagen)

(1) is a typical pattern of a causative-inchoative alternation. However, (2) and (3) can be syntactically referred to as causative-inchoative alternation but the semantic relation between causative and non-causative expression is not identical with that of the pattern (1) and hence they should be distinguished from the typical causative-inchoative alternation.

In the fifth chapter, based on 100 examples each of 22 verbs (first data; 2182 examples) and 10–30 examples each of 144 collocations (second data; 2882 examples) gathered from corpus, focusing on the nouns combined with the verbs, the practical use of causative-inchoative alternation verbs in language performance was observed.

It is obvious that the semantic contents of the nouns combined with the verbs are very closely related to the possibility of causative-inchoative alternation. In other words, even if the verb itself occurs both in causative and non-causative constructions, when the verb is combined with a particular noun to form a collocation, there can be a restriction to either causative or non-causative variant, and a difference in their frequencies can occur.

To be more specific, out of the 144 investigated collocations, there were 63 collocations that occur only in causative expressions, 35 collocations that occur only in non-causative expressions, and 46 collocations that indicated the property of causative-inchoative alternation.
Firstly, in the cases where "only causative expressions" were observed, they share the semantic attributes with "transitive only verbs." In other words, regarding the change of state events, each of them either implies a "human's involvement" or tends to express the "cause" for the events.

Next, in the cases of "only non-causative expressions," there were semantic commonalities found with "intransitive only verbs." In other words, both express a natural phenomena or events that cannot be directly carried out by humans.

Lastly, out of the cases where causative-inchoative alternation is observed, 55 collocations with more than 10 examples were selected and checked the percentage of causative and non-causative expressions. There were 29 collocations with a high percentage (more than 70%) of causative expressions, 20 collocations with a high percentage (more than 70%) of non-causative expressions and only 6 collocations in which there was not much difference in percentages between the two.

Based on these observations, one will find that "causative-inchoative alternation," i.e., detaching the causer from causative expressions and attaching the causer to non-causative expressions, is not carried out too easily. In other words, an event that is denoted by a combination of a noun and a verb tends to be perceived with a constant cognitive pattern (i.e., either causatively or non-causatively) based on its semantic characteristics.

The sixth chapter gives a summary of this research and offers some suggestions for future study in this area.