PATTERNS OF DISFLUENCIES
AND
THE PROCESS OF SELF-MONITORING
IN SPONTANEOUS SPEECH

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Declaration of Academic Work

I, **Stefanie Shamila Pillai**, Registration No. **THA99016**, hereby declare that this Thesis entitled: ***Patterns of Disfluencies and the Process of Self-Monitoring in Spontaneous Speech*** is my own academic work with the exception of citations, which have been acknowledged.

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ABSTRACT

This thesis studies the patterns of non-pathological speech disfluencies, such as silent and filled pauses, prolongations, repeats, deletions, insertions and substitutions, in relation to the process of self-monitoring, a process that can lead to error-detection, the self-interruption of speech and repair-planning. Studies on the various aspects of speech disfluencies have shown that these disfluencies commonly occur in speech. Three time intervals related to these disfluencies, that is, error-to-cut off, cut off-to-repair and error-to-repair, have been previously examined to gain insights into the cognitive processes of self-monitoring.

Based on the speech production model put forward by Levelt (1983; 1989), and information derived from other related studies, this thesis set out to discover the patterns of disfluencies that occur in naturally-occurring spontaneous speech. This was done to better understand how speakers self-monitor, self-interrupt, and self-repair their speech, in order to contribute further to the understanding of how these processes function in speech production. In relation to this, speech disfluencies produced by 67 callers to a radio station were categorized and analyzed to determine patterns of occurrences and how these disfluencies fitted into the structure of self-repairs proposed in the literature. Further, the three time intervals associated with self-repairs were acoustically measured and then analyzed to determine the extent to which they corresponded to current understanding of the process of self-monitoring in speech production.

The results show that there are distinct patterns in the use of the different types of hesitation and self-repair. The results also indicate that there is a need to reevaluate the

categorization of disfluencies in relation to their occurrence in the structure of self-repairs, particularly in relation to repeats and prolongations. In addition, the results show that speakers often interrupted their speech, not immediately, but soon after the production of an error, supporting the possibility of prearticulatory monitoring and error-detection. Speakers also regularly produced repairs immediately, or very soon after, speech was interrupted, suggesting that repair-planning must have occurred before, and not after, speech was interrupted, as was previously suggested. Thus, explanations of the process of self-monitoring need to be reformulated to take into consideration the fact that both the processes of error-detection and repair-planning can take place prearticulatory.

ABSTRAK

Tesis ini mengkaji pola-pola ketidaklancaran pertuturan (*speech disfluencies*) bukan patalogikal, seperti jeda senyap dan jeda berbunyi (*silent pauses and filled pauses*), pemanjangan (*prolongations*), pengulangan (*repeats*), penambahan (*insertions*), pengguguran (*deletions*) dan penggantian (*substitutions*) sehubungan dengan proses pengawasan-kendiri (*self-monitoring*), sebuah proses yang boleh membawa kepada pengesanan kesilapan (*error-detection*), selaan pertuturan sendiri (*speech interruption*) and perancangan-pembetulan (*repair-planning*). Kajian mengenai pelbagai aspek ketidaklancaran pertuturan menunjukkan bahawa ketidaklancaran pertuturan ini lazim berlaku dalam pertuturan. Tiga lat masa yang berkaitan dengan ketidaklancaran pertuturan tersebut, iaitu, kesilapan-ke-selaan (*error-to-cut off*), selaan-ke-pembetulan (*cut off-to-repair*), dan kesilapan-ke-pembetulan (*error-to-repair*), pernah dikaji untuk memahami proses kognitif pengawasan-kendiri.

Berdasarkan model pengwujudan bahasa (*speech production*) yang dikemukakan oleh Levelt (1983; 1989) serta maklumat yang diperolehi daripada kajian-kajian lain, tesis ini bertujuan untuk mengesan pola ketidaklancaran pertuturan yang terdapat di dalam pertuturan spontan yang dihasilkan secara semulajadi. Ini dilakukan untuk memahami dengan lebih mendalam lagi bagaimana penutur mengawasi, mencelah dan membetulkan pertuturan mereka, dengan harapan ini dapat menyumbang kepada pemahaman mengenai proses pengawasan-kendiri dan pembetulan-kendiri dalam pengwujudan bahasa. Sehubungan dengan ini, ketidaklancaran pertuturan yang dihasilkan oleh 67 pemanggil kepada sebuah stesen radio telah dikategorikan dan dianalisa untuk menentukan pola kewujudan dan bagaimana ketidaklancaran pertuturan

tersebut dapat disesuaikan ke dalam struktur pembetulan-kendiri yang dikemukakan dalam literatur. Tambahan pula, tiga lat masa yang dikaitkan dengan pembetulan-kendiri telah diukur secara akustik dan dianalisa untuk memastikan setakat mana ukuran masa ini berhubungkait dengan pemahaman masakini mengenai proses pengawasan-kendiri dalam proses pengwujudan bahasa.

Hasil kajian menunjukkan bahawa terdapat pola yang ketara dalam penggunaan pelbagai jenis keadaan teragak-agak (*hesitation*) dan pembetulan-kendiri. Hasil kajian juga menunjukkan bahawa terdapat keperluan untuk meninjau semula cara mengkategori ketidaklancaran pertuturan berhubung dengan kewujudan mereka dalam struktur pembetulan-kendiri, terutamanya untuk pengulangan dan pemanjangan. Tambahan pula, hasil kajian menunjukkan bahawa selaan pertuturan berlaku, bukan serta merta, tetapi tidak lama selepas penutur menghasilkan sesuatu kesilapan. Ini menyokong kemungkinan berlakunya pengawasan dan pengesanan-kesilapan secara praartikulatori (*prearticulatory monitoring and error-detection*). Penutur juga lazim menghasilkan pembetulan serta merta atau tidak lama selepas selaan pertuturan. Ini mencadangkan bahawa perancangan-pembetulan berlaku sebelum, dan bukannya selepas selaan pertuturan, seperti yang dikemukakan sebelum ini. Oleh itu, penerangan mengenai proses pengawasan-kendiri perlu digubal semula untuk memberi pertimbangan kepada hakikat bahawa kedua-dua proses pengesanan-kesilapan dan perancangan-pembetulan boleh berlaku secara praartikulatori.

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