# Introduction: choice in contemporary systemic functional theory

*Lise Fontaine*

The notion of choice is a core theoretical concept which has played a key role in the development of systemic functional theory since its early stages. It is so deeply integrated that it has been taken as axiomatic. The basic tenet of Systemic Functional Linguistics (SFL) is that language is a system of choices, yet the very nature of choice is rarely considered. As a result, the word 'choice' is pervasive in SFL literature and is used both commonly and technically, often without distinction. This has created problems for the theory. In fact, despite being what makes SFL an attractive theory, 'choice' as a term is also at the source of criticism (see Fontaine, this volume) precisely for the reason that it has not been explicitly debated within SFL literature. Even in the few volumes which highlight the term in their title (e.g. the three-volume festschrift, *Meaning and Choice in Language: Studies for Michael Halliday* (Fries & Gregory, 1995), and the edited volume *Linguistic Choice across Genres: Variation in Spoken and Written English* (Sánchez-Macarro & Carter, 1998)), the notion of choice seems to be taken tacitly as a working assumption behind grammatical description or as an application of the theory rather than as a primary concept to be analysed and debated in its own right. To date, there has not been a publication which explicitly and critically examines the place of choice in Systemic Functional Linguistics. It is precisely the aim of this volume to open the debate on choice and offer a critical examination of its place in systemic functional theory.

Developing dialogue in the SFL community about this issue required a catalyst, and so when, in 2009, we hosted the 21st European Systemic Functional Linguistics Conference and Workshop (ESFLCW) at Cardiff, we made 'choice' the theme. Following on the successful discussions of the conference, we opened a call for contributions for this volume, challenging contributors to deal explicitly with the concept of choice by theorising it and by offering a comprehensive and coherent treatment of its place and use in SFL. The twenty-two chapters offer a thorough and varied examination of choice, which challenges and drives forward our understanding of choice in several key ways, as explained later in this Introduction.

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The centrality of choice within SFL has its roots in Halliday's early development of his theory. 'Choice' is inherent in conceptualising language structure in terms of paradigm. In consequence, choice is closely bound, for Halliday as for Saussure, Malinowski and Firth before him (see Halliday, this volume), into the modelling of meaning as a function of context. As early as 1961, with 'Categories of the Theory of Grammar', Halliday introduced system as a category in order to account for the relation among a group of items (1976c:67). System for Halliday, and following on from Firth, is a representation of paradigmatic relations which "would be a representation of the item in terms of a set of features, each feature being in contrast with a stated set of one or more other features" (Halliday, 1976d:92). This view of system naturally gave rise to the notion of choice since Halliday's insight was to present items in terms of a set of features, which, in contrasting, create paradigmatic choices (1976d:93). Halliday explains this himself in this volume.

By 1969, Halliday was very clear on the importance of choice in his theory: "the underlying notion in the grammar is that of choice" (1976e:6). This position is highlighted well by Halliday in the following:

> The speaker of a language, like a person engaging in any kind of culturally determined behaviour, can be regarded as carrying out, simultaneously and successively, a number of distinct choices. At any given moment, in the environment of the selections made up to that time, a certain range of further choices is available. It is the system that formalizes the notion of choice in language. (Halliday, 1976e:3)

The current status of choice remains central but its meaning and use has spread to an extent that it requires a critical evaluation. Recently a selection of key terms in systemic functional theory were defined in Matthiessen, Teruya and Lam (2010). Choice is included very briefly but it is nevertheless clear from the two definitions they provide that Halliday's original sense of choice as a term in a system is still valid. However, a second sense is also given which defines choice as an act: "selection (of an option in a system), choice is part of the overall account of the process of traversing a system network making selections along the way" (2010:69). As a kind of disclaimer to the definition, Matthiessen *et al.* make a point of adding that the sense of choice as selection does not imply consciousness or intention (2010:69).

This volume has been motivated by a pressing need for theoretical consistency and comprehensiveness in relation to the place of choice in systemic functional theory. We are bringing together a variety of linguistic perspectives, informed by evolutionary theory, psychology, neuroscience, sociology and computational approaches to produce a complex account of choice; one which will create a common ground for further development. We set out to answer five key questions concerning choice; each of these topics is presented below in relation to how it has been addressed.

### What is the concept of choice?

Although the entire volume seeks to answer how we think choice works in a paradigmatic and probabilistic view of language, an important first point of address involves establishing a contemporary theoretical position of choice in systemic functional theory.

Our first step in addressing the nature of choice naturally comes foremost from Halliday himself, yet it is equally important to consider its appropriation and development by others who are contributing to the theory. Halliday's views on choice have developed over these past fifty years but, as he demonstrates here, his original ideas about the importance and centrality of choice are as valid today as they were then. His chapter outlines his key contribution to the debate, namely, that choice, as the core mechanism for expressing meaning, creates a contrast between what is chosen and what is not but could have been. Choice is how meaning is created. Given his view of language as social semiotic, the nature of choice must be interpreted semiotically. Halliday argues that choice has no inherent bias towards the individual meaner (i.e. speaker): choice as semiotic act can be seen as an activity of a whole population. This view gives rise to our understanding of the non-random "quantitative patterns that characterise language as a probabilistic system". Halliday's main point is that speakers are taking part in a social semiotic act, where choice is best viewed in evolutionary terms as analogous to natural selection: "the totality of semiotic activities on the one hand maintains and supports the existing eco-social order while at the same time, on the other hand, nudging it in the directions in which that eco-social order is going to change".

Halliday's discussion is extended in important ways by Butt, Moore and Tuckwell, who use an evolutionary perspective to shed light on our understanding of choice. Drawing on the work of Sapir, Darwin and various biological views of selection, they explain the nature of choice and selection in various systems. More specifically, they consider the opposition introduced by Darwin between natural selection and human selection. As a means of trying to bridge this seeming contradiction, they propose the concept of motivated selection, which is defined as: "those regularities that could not be rationally explained away as random, and whose effects in a semantic ensemble appear to constitute a convergence of diverse resources towards some recognisable end". In order to examine the issues surrounding motivated selection, an analysis of clausal taxis is discussed, and they show how there is an ensemble effect which is both "an extension of the grammar and a rhetorical unit". In their view, choice provides an important role in bridging a gap in our understanding of experience.

Freddi's chapter frames the concept of choice theoretically in terms of paradigmatic and probabilistic views of language. By looking at conditional probabilities, markedness and register variation, she argues that choice is the

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key to understanding the relation between system, instance and practices (register and corpus). One of her main concerns is the oscillation found in the literature between paradigmatic and syntagmatic orientations to language. She explains how this oscillation arises when trying to reconcile the relation between frequencies of occurrence and the probabilities assigned in the system. By exploring the relation of probability to choice, she demonstrates how, within a probabilistic grammar, choice is a fundamental concept in understanding this relation because it is "the way of capturing the relation holding between relative frequency in text and its theoretical significance". She concludes that choice can and should be extended beyond paradigmatic relations to the syntagmatic axis of language.

Going deeper, in a sense, than the concept of choice, Bache questions what a term in the system can or should be, and where it comes from. In answering this question, the very interpretation of choice is taken to task. As Bache notes, the impression given in the literature about choice "implies *more* than the mere availability of features in an inventory but *less* than a deliberate, purposeful communicative act". Bache uses the example of the progressive/nonprogressive distinction in the English tense system to offer a proposal for how features can be identified in the first instance and how their systemic relation can be described. Drawing on Hjelmslev's concept of 'commutation', Bache argues that, while choice in Halliday's sense of paradigmatic relation, or system, is valuable, any feature in a system (i.e. a choice as option) should be communicatively motivated, in other words the terms of a system should satisfy higher-level communicative strategies.

In a similar way to Freddi, Fontaine bases her interpretation of choice on probabilities but, in contrast to Freddi, she offers an account of choice as process. She proposes a view of choice as selection that relies on an interpretation of the significance of probabilities in relation to system networks from a language processing perspective. In doing so, she attempts to reconcile perspectives from psycholinguistics, corpus linguistics and computational approaches to language. Her discussion draws on the distribution frequency of referring expressions in three small corpora. Her position may be seen as controversial in terms of her interpretation of system networks, because in trying to account for the place of choice in a complex system, she exploits the counter-intuitive nature of probabilities to show how choice, in terms of process, could be seen as a complex recursive function.

Fawcett, like Bache, directly addresses the question of what the concept of choice is. This chapter offers a discussion of the main views on how we choose, what choosing is, and how speakers choose. While acknowledging that the everyday meaning of 'choosing' entails 'deciding', Fawcett explains why the system networks are not a mechanism for deciding. What he proposes is that choosing does not happen in the place where the options are modelled (i.e. the

system network). As Fawcett points out, claiming that a grammar can 'choose' would be a misleading personification of a grammar. How speakers choose the features in the system networks, Fawcett claims, is handled in higher-level planning components, which in computational linguistics are referred to as 'microplanners'. In Fawcett's model, a microplanner is needed for each major area of meaning, e.g. the various types of Theme. The two main senses of choice, then, are represented in two different areas of Fawcett's full integrative model of language.

### How does choice contribute to linking language and cognition?

Halliday's systemic functional theory has been developed in terms of an inter-organism orientation (Halliday, Lamb & Regan, 1988:2; see also Halliday, 1978b), where 'organism' in this context refers to an individual. However, there has always been, at least implicitly, a point of contact with an intra-organism orientation, and this has been identified in the literature most notably, as discussed above, in statements which try to insist that the concept of choice does not include active or conscious intention, as in an act of deciding. However, Halliday acknowledges the value of others' focus on the intra-organism orientation:

Linguists tend to be either more interested in what goes on inside the organism, in its head, or more interested in what goes on between one organism and another. I'm almost entirely, myself, concerned with the inter-organism approach to language; equally, I recognize the importance of the other kind, but I don't do it. Therefore, I reciprocate this impression of complementarity, and would add to it that I find in Syd Lamb's work a complementary view which is totally compatible with my own. (Halliday, Lamb & Regan, 1988:2)

In response to this, one of the questions this volume seeks to answer is: How does choice contribute to linking language and cognition? It follows that, in the context of choice, it will be useful to establish whether SFL must remain within, as Halliday puts it, an inter-organism orientation, or whether it could be developed towards bridging across to meet a more intra-organism orientation.

Perhaps the most obvious person to explore any potential common ground is Lamb himself in his contribution here, in which he endeavours to bridge the two orientations. He shows how his neurocognitive linguistic theory can be related to Halliday's systemic functional theory by focusing on the nature of choice as portrayed in systemic networks but viewed from the perspective of relational networks. Lamb offers an enhanced understanding of systemic functional choice, using narrow relational network notation to show how the principle of choice, or contrast in meaning, operates. Through this work, Lamb

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proposes a neurologically plausible justification for Halliday's original insight which led to his systemic functional theory.

Asp offers a very welcome discussion of choice in SFL from a neurolinguistic perspective, arguing that if we consider choice as meaning potential, we are left with "paradoxes of unconscious choice and unintentional agents". She explores in what sense speakers can be seen as agents of our discourse. Using evidence from neurolinguistic imaging, she develops a view of speaker as agent, who is "not only capable of, but continuously making, conscious choices in discourse". This chapter gives a thought-provoking account of the neurolinguistic evidence for agency. After deliberation, Asp concludes that system network notation, in its current form, is not suited to accounting for processing. It must be said that this is not what it was designed for. However, Asp points to evidence which suggests that the cognitive processes of monitoring, selection, inhibition and execution of action are the same ones that enable a view of choice as speaker who chooses (speaker as agent). Asp's broader perspective on choice as a cognitive process allows her to claim that "some of our key meaning choices may originate in action selections 'outside' language areas". This statement captures the essence of the challenges faced when trying to model choice as meaning in social context, as will be discussed further in this Introduction.

Building on Lamb's work on bridging systemic networks and relational networks, Gil tests the extent to which choice, as a concept used in SFL, can be seen to be neurologically plausible. In order to do this, the transitivity and mood networks are interpreted from a neurocognitive perspective and the result is a view of the networks in relational network terms. There are clearly differences in the nature of the two types of network: systemic networks classify meaning potential for social communication (inter-organism oriented) whereas relational networks attempt to provide an operational model of the linguistic system of an individual. The consequence of this distinction is that systemic networks are 'realistic' in terms of an analytical theory, accounting well for potential choice, while relational networks seek to account for what is happening in the brain as a speaker produces language. Consequently, Gil shows that while a system network can be represented in relational terms, the result remains a kind of classification. Gil concludes that more research is required to show how choice, as it is understood in SFL terms, could be represented as operationally plausible.

### How is choice constrained by language use?

In many respects much of the empirical work published within the SFL literature does consider how choice contributes to how a text means what it does, but the assumptions about the nature of choice remain tacit. The particular importance

of the three chapters by Martínez-Insua, Thompson and O'Donnell is that the concept of choice is explicitly theorised in relation to how it is constrained, or indeed enabled, by language use.

Martínez-Insua takes a micro-perspective to consider how textual conditions affect the choice of existential *there*-constructions. Using spoken and written data from late Middle English to Present-Day English, the concepts of choice and choosing are explored in relation to the textual condition that may determine the appropriacy of these expressions by considering their occurrence: (i) in a given context; (ii) with a given output; and (iii) at a given probability. Martínez-Insua offers important considerations to the question of how choice is constrained in use by determining whether the selection of *there*-constructions can be seen to be favoured, enabled and/or constrained by their position in the ongoing text. Her findings show evidence for a progressive grammaticalisation of 'there + singular verb', even with plural Existents. This evidence is used as an example which illustrates that choice can be used to manage diachronic change in language.

Thompson's chapter, 'Picking an Argument: Politicians' Choice of Persuasive Strategies', takes a macro-perspective to consider the effect of choice of conjunctives in the organisation of complete political texts. In doing so, he explores the different strategies employed by a range of contemporary political speakers to organise their discourse so as to maximise the potential persuasive effect. Thompson makes a distinction between choice as constraint and choice as freedom and, as he makes clear, the latter is necessarily and explicitly located within the patterns of choice associated with the register as a whole. The empirical work presented in his chapter allows Thompson to determine to what extent choice, in the system of conjunction, is or is not constrained.

An integrated perspective is taken in O'Donnell's chapter, 'A Dynamic View of Choice in Writing: Composition as Text Evolution', as he draws on computational and psycholinguistic approaches to explore linguistic choice within language. He argues that the proper home of linguistic choice is not in the text/product itself, but rather in the process of production of the text. With the use of keystroke-logging methods, he is able to capture the dynamic process of text composition. "[T]here is no backspace in the spoken world", but there is in digital language production and it marks points in written production that can reveal something about choice. It is well established now that text production is not linear: it is not something that is first conceptualised and then produced in one go. O'Donnell takes an evolutionary approach to the process of writing. Generic Structure Potential, rhetorical structure and thematic progression are used to test which one contributes to decisions about what to include in the text and how to organise it. His chapter is one of the first proposals to empirically test a model of the writing process, rather than simply describing it. He

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concludes that rhetorical structure theory has the greatest explanatory potential
for text production. O'Donnell also points out that if this model of writing
has any resemblance to what humans actually do, then there are significant
implications for the teaching of writing.

### How does choice contribute to linking language and social context?

Having moved from definitions and debates about choice, to views of choice
and cognition, and then to choice in language use, this section addresses the
question of how choice can be defined or explained in relation to the contexts of
situation and culture. The views of choice presented in response to this question
concern the higher or outer strata of language, reflecting the socially oriented
nature of SFL. Each chapter addresses the challenges of making explicit the
nature of paradigmatic choice in social context.

Hasan explores how choice enters into considerations of linguistic interac-
tion. The chapter explores two faces of choice in language: choice in the system
and choice in the process. For Hasan, choice in process cannot be seen entirely
as the individual's choice. As she explains in her work, choice must be seen in
terms of context of culture: "Systemic choice as used in the description of any
*language-internal unit* has no concern with individuality, freedom, will or all
those other qualities that dictionaries assign to the act of choice." For Hasan,
choice in SFL is a theoretical metaphor. It is a central term that "enable[s] the
analyst to enter into an explicit discourse on how language as a semiotic system
becomes a powerful resource for the exchange of meanings in social contexts".

Urbach builds on Hasan's view of context of culture and she explores how
it can motivate language choices. According to Urbach, the notion of 'choice'
needs to be clarified and operationalised more carefully in relation to context
than it has been thus far in the SFL literature. It cannot simply be assumed that
there is a direct match between the notion of choice and the stratum of con-
text. Drawing diachronically on different representations of war in newspaper
reporting, she takes up the challenge presented by Halliday (e.g. this volume),
where he states that some of the context networks that have been proposed seem
more like "taxonomies of semiotic situation types than as options in the context
of culture". Urbach uses the example of tense selection in news reporting to
identify contextual pressures in field, tenor and mode that seem to motivate
the choice of tense. Her work is an important step in integrating context into
linguistic theory.

The relationship between context and choice is further developed by
Bowcher, who develops the network of choices relevant to the system of mate-
rial action within the contextual parameter of field. Her work follows from
Hasan's criticism that the construct of context of situation as it currently stands

is too vague and suffers from the absence of 'checkable criteria' with analyses relying instead on 'common sense'. Bowcher interrogates current context networks and examines whether the material action system does, or should, represent a set of choices in the field network. In doing so, she also takes up the significant challenge of developing and critically working with context system networks. She concludes that keeping material action as a choice in field provides, to some degree, a means of setting out the potential features which play a role in defining the nature of the activity in situations where language is involved.

The contextual parameter of tenor is taken up by Bartlett, who questions the suitability of modelling this aspect of social context with the concept of choice. In pursuing the relationship between them, Bartlett shows that non-contextual features of the environment have their effect on talk and that "it is the speakers' perceptions of such environmental features and how they can be accommodated into their wider worldview that motivate choices in construing contexts". While agreeing that contextual variables themselves fall within the remit of linguistics, he suggests that an integrated approach is needed in order to make connections with other social sciences. By drawing on the methods of these disciplines, we will be better able to model the relationship between the social and environmental and the linguistically construed variables of context.

Berry completes the discussion of contextual parameters with her interpretation of choice in relation to mode by her analysis of choices in Theme in the register of radio news and sports bulletins. In her discussion of her mini-network for Mode, she argues that "in order to choose appropriately from the semantic options, speakers and writers have to make decisions, consciously or subconsciously, about the situation". By examining the referential meaning options for what she calls the Subject Theme, she identifies two useful differences which can serve as distinguishing features for registers. These are interactional reference and vague reference. Registers seem to treat certain features as imperative rather than choice (as identified by Urbach, this volume). Berry has identified a critical area of the grammar which demands an account of the relationship between choice and context; this is the nature of Theme selection and the role of referring in the overall model.

Castel addresses the problem of how to capture genre constraints on the semantic options available in English. As a computational linguist, Castel approaches choice from within a natural language generation (NLG) framework. Using the computational version of Fawcett's Cardiff Grammar, Castel shows how the notion of preference in relation to choice can be extended to capture genre-specific constraints. His chapter outlines a formal mechanism for identifying the constraining effects that genre categories have on language production in a computational model.

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### How can we study choice in text?

Text analysis is one of the main applications of systemic functional theory. The final question asked in this volume relates to how we can study choice in text, and it considers what methodological approaches help our understanding of choice.

Teich proposes a practical methodology for studying choice in relation to register analysis from a specifically quantitative perspective. She distinguishes three views of choice: choice-as-option, in language description; choice-as-result, in text analysis; and choice-as-process, in applications of SFL to 'real-world problems'. Considering how we can study choice in text, Teich provides a digitally enhanced methodological basis for studying SFL's theory of register variation.

Miller and Johnson present results from their research into register-idiosyncratic features of evaluation and stance in institutional deliberative debate. As they point out, evaluation analysis can present some difficulties due to the potential for subjectivity. Their chapter presents a methodology which seeks to limit any lack of validity which might accompany these difficulties. In order to classify instances of evaluation accurately, they explain that "we need to reduce as much as possible the imposition of our own value judgements on others' ways of saying and meaning". Miller and Johnson suggest that the assistance of computer technology can be used to this effect and can help to substantiate the analysis, providing evidence for how identified linguistics patterns can be shown to be statistically 'salient'. They show that speaker choice in terms of evaluation and stance in institutional deliberative debate can be of a 'register-idiosyncratic' nature.

The understanding of the place of choice in characterising and modelling linguistic behaviour is challenged by Kappagoda. He argues that the concept of choice may be better used as a gateway to understanding the complex systems of language and text, rather than an explanatory endpoint. Using Theme analysis and analysing the method of development of the text, he examines the accumulation of Theme choices in ancient Greek. He draws on the interrelated systems of THEME, TAXIS and LOGICO-SEMANTIC RELATIONS. For example, the THEME system is used to test whether the selection of Theme in a given clause can be related to the co-text and context as he demonstrates a method of the practical determination of the Theme. He stresses that the way in which choice is conceptualised and used is very important in terms of our understanding linguistic systems and what we can claim about text.

Praxedes Filho relies on evidence from his study of interlanguage (IL) to determine whether the SFL concept of choice can offer an explanation for fossilisation. His analysis of the 'choice repertoire' of learners' IL allows him to offer a description of the systemic continuum of written IL registers. For