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2020 年に発生した新型コロナウィルスはワクチン接種の開始によって微かな光が差しつつも、いまだ終息する気配を感じることができません。オンライン授業への対応、あるいは対面とオンライン授業の混在など、教育現場では多くの混乱と負担が求められ、研究に注力する時間とエネルギーを確保することが難しい状況が続いています。

そのような厳しい中、精力的に研究を行う会員諸氏にその成果の発表を確保するため、本学会は昨年 Web 開催というこれまでにない対応をすることといたしました。そして、こんな状況や条件の中、発表された研究成果を Proceedings of JASFL 第 15 巻として発行することができましたことは、これまでにない喜びであり、また、学会を代表するものとして、改めて会員諸氏の精力的な研究活動と学会活動へのご尽力に感謝を表します。

今回発行されました Proceedings of JASFL Vol. 15 2021 は昨年 10 月 17 日から 23 日まで Web 上で行われた日本機能言語学会第 28 回秋期大会の研究発表内容を論文に改定した論文集です。Web 上でのオンデマンド式の発表というこれまでにない形式に対応していただいた発表者の方々には改めて謝意を表します。

さて、本論文集には、３編収録され、小学生への読み聞かせというマルチモダリティーと教育の融合に関するもの、ICT 技術を応用したインストラクションがどのように動機付けと関連するかをマルチモダリティーの観点から分析するもの、そして現在使用される日本語の敬語について英語でどのように語句注解を表示するべきかを論じたものです。

これらの研究は最新の技術革新やそれに伴う社会変化と言語機能がどのように相互作用をもたらすのかを示すものと言えるでしょう。

コロナウィルス禍にあっても研究活動の歩みを止めず、言語機能の探求が記された Proceedings of JASFL Vol. 15 2021 が会員諸氏にとって今後の SFL 研究の一助になれば、本学会を代表するものとして、これにまさる喜びはありません。

日本機能言語学会会長
ヴァージニア・パン

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英語絵本読み聞かせに活用できる英語表現集の開発：小学校外国語教育における読み聞かせ技術の向上を目指して

Developing an English Expression Textbook for Picturebook Storytelling: Improving the Picturebook Storytelling Skill of Foreign Language Teachers in Elementary School

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Abstract

English education in elementary school is becoming more and more important as the new subject "Foreign Language (English)" becomes obligatory for 5th and 6th graders from 2020. This paper tries to develop an English expression textbook to improve the English picturebook storytelling skill for college students in the elementary school teacher training course.

Effective picturebook storytelling requires more than just good pronunciation and fluent reading of words. It also includes the commentary technique to prompt students' reaction. This paper focuses on teacher's ability to make English comments and questions during the storytelling so that they can expose students to larger amount of English and prompt them to comment back in English.

This paper tries to develop an effective English expression textbook using the framework of the Systemic Functional Linguistics. It i) categorizes English expressions according to the Speech Functions they realize (e.g. to praise, to question, and to order) and ii) includes not only the starting expressions, but also the responses and feedbacks teachers would need based on the idea of Expected / Discretionary Response (Halliday and Matthiessen 2004: 108). These two points will help (future) English teachers to find suitable expressions to continue conversation with students in English.

1. はじめに

2020 年度から 5、6 年生で「外国語（英語）」が教科化されるなど、小学校での英語教育が重要性を増す流れの中、本稿は、小学校教師を目指す大学生の英語絵本読み聞かせ技術の向上を念頭に、読み聞かせの現場ですぐに活用できる英語表現集の提案を試みる。

絵本読み聞かせは、単に本文が淀みなく、正しい発音で読めればいいわけではない。適切な間の取り方、声音の使い分け、児童の興味を引く適切な解説、児童の発話を促す問いかけなど、さまざまな技術を複合的に用いる。本稿では特に、児童が英語を聞く機会を増やし、かつ児童の英語による返答を促すため、教師自身が、読み聞かせの合間に英語によるコメントや問いかけを発せられるようになることを目指す。

小学校教師を目指す大学生にとって、どのような指導や教材があると、こうした英語コメント能力が身につくのだろうか。このことを確かめるため、早川(2021)では、筆者が担当する小学校教員養成課程科目「外国語科指導法」の受講生に協力を仰ぎ、既存の小学校教室英語表現集を学習する前と後に同じ絵本を読み聞かせしてもらった。学習後、教師役学生の英語による発話は確かに増えるが、全体的な英語発話量は僅かで、似た場面（例：児童を褒める）ではいつも同じ表現になってしまい、かつ児童の英語による返答にさらに英語で返答し返すことが困難という結果を得た。

本稿はこの研究に基づき、Systemic Functional Linguistics (以下 SFL) の枠組みから、より効果的な英語表現集を提案するものである。その際のポイントは以下の通り：①英語表現を、使用が想定される活動（例：挨拶、ゲーム、テスト）によってではなく、Speech Function（発話役割；例：褒める、指示する、情報を求める）によって分類する ②各 Speech Function に対する Expected / Discretionary Response の概念 (Halliday and Matthiessen 2004: 108) に基づき、教師の発話に対して想定される児童の返答と、それにさらに返答する際に教師が使用可能な英語表現をまとめる。この 2 点の工夫により、実際の読み聞かせ場面で求められる発話役割に合わせた表現がすぐに思い出せ、かつ、そこから始まるやりとりにも対応できる実践的英語力を培うことを目指す。

このように、SFL の理論枠組みを読み聞かせ用英語表現集開発に応用することで、(1) 小学校教師を目指す大学生の読み聞かせ技術を向上させる、(2) SFL が小学校英語教育の質向上に有効であることを示す、という 2 つが本稿の目的である。

2. 現在の小学校英語教育と大学の小学校教員養成課程

2020 年度からの小学校英語教育の概要を表 1 にまとめた。小学校の外国語教育は大きく分けて、「外国語活動」と「外国語（英語）」という科目で扱われる。正確には、「外国語活動」は教科ではなく領域と呼ばれ、「道徳」と同じように、文科省検定済教科書がなく、成績評価もない。一方の「外国語（英語）」は教科で、「国語」「算数」と同様に成績評価される。

2020 年度実施の指導要領からこの両方がすべての公立小学校で必修となったが、実はその前 2011 年度から、「外国語活動」はすでに必修だった。この時、5-6 年生で行われていた「外国語活動」が、2020 年度からは 3-4 年生での実施にスライドし、5-6 年生で新たに「外国語（英語）」が導入された。それぞれ時間数も内容も違っており、「外国語活動」は年間 35 単位時間（小学校の 1 単位時間は 45 分）で、聞く・話すのみを扱うのに対し、「外国語

（英語）」は年間 70 単位時間で、聞く・読む・話す・書くの 4 技能すべてを扱う。

表 1：小学校「外国語活動」「外国語(英語)」（2020 年度より）

	「外国語活動」（領域）	「外国語（英語）」（教科）
実施学年	3-4 年生	5-6 年生
年間授業時間数	35 単位時間（週 1 単位時間*）＊小学校の 1 単位時間は 45 分	70 単位時間（週 2 単位時間）
目標	外国語によるコミュニケーションにおける見方・考え方を働かせ、外国語による聞くこと、話すことの言語活動を通して、コミュニケーションを図る素地となる資質・能力を育成する	外国語によるコミュニケーションにおける見方・考え方を働かせ、外国語による聞くこと、読むこと、話すこと、書くことの言語活動を通して、コミュニケーションを図る基礎となる資質・能力を育成する
扱う言語領域	聞くこと・話すこと［やり取り］・話すこと［発表］	聞くこと・読むこと・話すこと［やり取り］・話すこと［発表］・書くこと

こうした変更に合わせ、大学における小学校教員免許状取得課程（以下、小免課程）で身につけるべき知識・技能の内容（コア・カリキュラム）も変わってきている。以下に表 2 として、外国語教育に関わる小免課程のコア・カリキュラムの一部を示す。このうち、「外国語科（英語）」とは、主に「外国語活動」「外国語（英語）」で教えるべき内容や、授業実践に必要な英語運用力を身につけるための小免課程科目であり、「外国語科指導法」は、主に「外国語活動」「外国語（英語）」を担当するための指導技術を身につけるための科目である。

表 2 の中で、本稿の議論に特に関わる部分を下線で示した。注目したいのは、「外国語科（英語）」で身につけるべき必須の知識として、「児童文学（絵本、子供向けの歌や詩等）」が挙げられていること、および「外国語科指導法」で身につけるべき指導技術として「児童の発話につながるよう、効果的に英語で語りかけることができる」「児童の英語での発話を引き出し、やり取りを進めることができる」の 2 点が挙げられていることである。

これらの点を総合すると、小学校で英語教育を担当するには、単に英語の絵本について知識がある、読み聞かせができる、というだけでなく、絵本読み聞かせ時に、児童の英語による発話を引き出すような語りかけができる能力が重要になってくるといえるだろう。

表 2：大学の小学校教員免許状取得課程（外国語関連；下線は早川による）

科目名称	内容（コア・カリキュラム）＊一部
外国語科（英語）	「外国語活動」「外国語(英語)」の授業実践に必要な、実践的な英語運用力と英語に関する背景的な知識を身に付ける ・英語の音声、語彙、文構造、文法、正書法等 ・第二言語習得理論 ・児童文学（絵本、子供向けの歌や詩等） ・異文化理解
外国語科指導法	「外国語活動」「外国語(英語)」の学習、指導、評価に関する基本的な知識や指導技術を身に付ける ・小学校外国語教育（変遷・教材・中学校との連携 etc） ・児童期の第二言語習得の特徴 ・指導技術 児童の発話につながるよう、効果的に英語で語りかけることができる 児童の英語での発話を引き出し、やり取りを進めることができる ・授業づくり（教材選定・指導計画作成・ICT の活用・ALT との連携・評価）

3. 先行研究：萬谷（2009）

前節に見たような「児童の英語による発話を引き出すような読み聞かせ」に関する先行研究として、萬谷（2009）の絵本読み聞かせにおける発話カテゴリーの研究について概観したい。この研究は、早川（2020）における調査研究の基礎になったものであり、そこでもより詳しい概要が紹介されている。

萬谷は、小学校の授業における英語絵本読み聞かせ時に、教師と児童が用いた発話カテゴリーを調査した。そして教師の用いた発話カテゴリーの種類と、その直後の児童の発話頻度の相関を見ることで、教師のどのような発話が児童の（できれば英語の）発話を促すか分析した。

発話カテゴリーとは、Arnold. et al. (1994) や Boom-Hoffman et al. (2006)、Yorozuya (1998)で提案・使用された、発話を文法構造によってではなく機能（＝発話で何を行っているか）によって分類するカテゴリーであり、以下のような種類（一部）がある：

・Yes-No Q：Yes か No かを問いかける
・Wh Q：中身（誰が・いつ・どこで・なぜ・どのように）を問いかける
・Acceptance：児童の発話を受け入れる
・Negation：児童の発話を否定したり、誤りを指摘する
・Doubt：児童の発話の真偽を疑う
・Recast：児童の発話を正しい英語で言い換える

・Answer Confirmation：児童の発話を繰り返し、正しいことを確認する

萬谷の調査の結果、最も児童の発話を引き出した（つまりそのカテゴリーを教師が用いた直後に児童の発話が増えた）カテゴリーは、児童の発言を褒めたり認めたりする Acceptance だった。2 番目に児童の発話を引き出したのは、内容を問いかける Wh Q、4 番目が Yes か No かを問いかける Yes-No Q であった。このように、褒められたり、質問されると発話したくなるというのは直感的にも予想できることであるが、それが実際のデータで明らかに示されたのは興味深い。

それ以外の発話カテゴリーのいくつかも、児童の発話を促すよう効果的に使いうる。例えば、児童の発話が正解でも、教師が意図的に Doubt を用いて「本当かな？」などと「とぼける」ことで、児童のさらなる発言意欲を刺激するという。

また、注目に値するのは、日本語による問いかけより英語による問いかけの方が、児童の英語による発話を引き出すという結果である。萬谷自身はこの現象を、「教師ができるだけ英語で話す努力が子供の英語発話の増加に貢献する（2009: 77）」とまとめている。

4. 早川（2021）から見る課題：学生の「英語での発話力」の不足

早川（2021）は、前節の研究を元に、小学校教師を目指す大学生に効果的に絵本読み聞かせ能力を向上させるための指導法の確立を目指し、調査を行なった。具体的には、筆者の勤務する名古屋芸術大学の人間発達学部 小免課程科目「外国語科指導法」において、受講生が「教師役」「児童役」に分かれ、手順に沿って訓練を受けながら、英語絵本の読み聞かせをするというものである（調査の具体的な手順・結果の詳細は早川（2021）を参照のこと）。読み聞かせ絵本としては、Eric Carl の *The Very Hungry Caterpillar* を使用した。

調査の手順は概略、以下の通りである：

1. 受講生による絵本読み聞かせ ①（訓練・指導前）
2. 手本となる読み聞かせ鑑賞
3. 受講生による絵本読み聞かせ ②
4. 既存の教室英語表現集を用い、読み聞かせに使える表現を学習・暗記
5. 受講生による絵本読み聞かせ ③

つまり、読み聞かせ①は、あらゆる訓練・指導を受ける前、読み聞かせ②は手本となる読み聞かせのみ鑑賞した後、読み聞かせ③は教室英語表現集を学習・暗記した後、ということになる。この 3 段階の読み聞かせを学生の許可を得て録音・分析し、それぞれの段階で学生が用いた発話カテゴリーを比較分析することで、どの段階で学生の読み聞かせ能力が向上するかを調査したものである。

なお、上記手順 2. の「手本となる読み聞かせ」とは、萬谷（2009）の研究

に照らして「手本」となる読み聞かせであり、児童の発話を引き出す発話カテゴリー（日本語・英語両方）を効果的に用いている。具体的には、コスモピア株式会社が運営するウェブサイト「英語の絵本クラブ」（https://www.e-ehonclub.com）より、外山節子氏の *The Very Hungry Caterpillar* の読み聞かせ動画（https://www.e-ehonclub.com/video/otehon/）を使用した。

またここで、手順 4. の「既存の教室英語表現集」について説明しておきたい。小学校での英語教育が義務化されるのに伴い、小学校教師のための教室英語表現集がさまざまな形で公開・出版されている。以下がその一例である：

- 大学の「外国語科」「外国語科指導法」での使用を想定した教科書やその付録（例：南雲堂 *Let's Have Fun Teaching English*）
- 県教育委員会や教育センターが提供するウェブサイト
  - 長崎県教育委員会の「教育英語表現集」サイト：https://www.pref.nagasaki.jp/shared/uploads/2013/07/1374196308.pdf
  - 山口県義務教育課の「小学校外国語活動だより」サイト内「教室英語表現集」：https://www.pref.yamaguchi.lg.jp/cmsdata/b/a/6/ba67831e3c03861d8ff7f0f486aca245.pdf
  - 愛知県総合教育センターの「教室英語集」サイト：https://apec.aichi-c.ed.jp/kenkyu/chousa/kiyo/98syuu/kyouka_eigo/part3all.pdf　など
- 市販の児童教育教本

これら既存の教室英語表現集の特徴として、共通して以下のことがいえる：

- さまざまな「見出し」の下に、そこで使える英語表現をリストアップしている
- 見出しは、教室で想定される「場面」（例：授業の始まり、終わり、ゲームをする時 など）、または「機能」（例：褒める、指示する、注意する など）を示す
- 多くの教材で、見出しに「場面」と「機能」が混在している
- 「場面」として「絵本読み聞かせ」を設定した表現集は（現在探した限りでは）ない

もちろん、これらの教材は実用的な表現集として優れた点を多く持っているが、「英語絵本読み聞かせ」という場面での使用に特化して見ると、後の本稿の議論に関わる問題点として、「読み聞かせで使用する表現があちこちに散在する」という欠点を持っている。例としては、以下の通りである：

- 読み聞かせを始める Is everybody ready? は、「授業の開始」の見出し下に

- 挿絵中のものの名前を英語で尋ねる What do you say it in English? は、「前時の復習」の見出し下に
- 質問する Who~? / How~? / What~? は、 Who's absent today? / How's the weather today? / What's the date today? などの形で「授業前に」の見出し下に
- 児童の発言を褒める Good. / Nice. / Fine. / Right. は、「賞賛する」の見出し下に
- 児童の発言を確認する Are you sure? は、「理解等を確認する」の見出し下に

このことが学生の読み聞かせ能力向上の訓練にどのような問題を引き起こすか、またそれをどう改善しうるかについては後述する。

ここで早川（2021）の調査に戻ると、その結果は以下の通りだった：

- 読み聞かせ①では、本文朗読以外の発話はなし
- 読み聞かせ② （＝手本となる読み聞かせ鑑賞後）では、児童役学生の発話を引き出すような発話カテゴリーを巧みに使用
- ただし教師役学生の発話はほぼすべて日本語。児童役学生の発話もほぼすべて日本語
- 読み聞かせ③（＝教室英語表現集を学習・暗記した後）、教師役・児童役とも学生の英語の発話が増える
- ただし日本語に対しての英語の使用頻度は低い
- 英語で発話する場合、同じ発話カテゴリーは、ほぼ毎回同じ表現となる（例：Acceptance は常に Good! か Good job!）
- 必要な発話カテゴリーの英語表現を咄嗟に思いつけない場面がある
- 児童の返答にさらに反応するための表現を思いつけない場面がある

上記のように、効果的な読み聞かせについてなんの訓練も学習も行わない時点では、学生はどのように読み聞かせを行うか戸惑い、単に絵本の英語本文を読み上げるにとどまった。しかし「手本となる読み聞かせ」を 1 度鑑賞した後すぐに、教師役学生は児童役学生の発話を引き出すようなコメントを多く取り入れるようになる。ただし、この時点では「それを英語でどういうか」が分からないため、教師役学生の発話はほぼ全て日本語に限られた。それにつられるように、児童役学生の発話も日本語のみであった。次に、既存の教室英語表現集の中から絵本読み聞かせに使いうる表現を抜き出して学習・暗記した後には、教師役学生による英語の発話が増え、児童役の英語の発話も増えた（教師役学生の英語発話を単に繰り返す場面も多かった）。このように、訓練を重ね、読み聞かせ①→②→③と進むにつれ、徐々に児童の発話を引き出すような効果的な読み聞かせに近づいてはいくが、結果的に「必要な発話カテゴリーの英語表現を咄嗟に思いつけない」「児童の返答にさらに反応するための表現を思いつけない」などの課題が残り、まだ充分な

読み聞かせ能力が身についたとはいいがたい。

上記の調査結果から明らかになった教育上の課題は、次の 3 点にまとめられるだろう：

【課題①】学生には、絵本読み聞かせに必要な英語表現のストックがない
【課題②】発話カテゴリーごとに使える表現を集めた表現集が必要
【課題③】会話を「始める」だけでなく、想定される児童の返答にさらにフィードバックするための表現を教えることが必要

【課題①】の根拠となるのは、手本となる読み聞かせを鑑賞後、教師役学生は児童役学生の発話を引き出すような発話カテゴリーを巧みに使用するようになるが、その発話はほぼ日本語だったことである。このことから、読み聞かせに特化した英語指導を行わない時点では、多くの学生には、絵本読み聞かせに必要な英語表現のストックがないことが窺える。

そのため、なんらかの教室英語表現集を用いて学習することが必要になるが、その上で【課題②】の根拠となるのは、教室英語表現集を学習・暗記した後、英語の発話が増えるが、同じ発話カテゴリーは同じ表現ばかりだったことと、必要な発話カテゴリーの表現を咄嗟に思いつけない場面があったことである。この現象は、既存の教室英語表現集について上記に述べた「読み聞かせで使用する表現があちこちに散在する」という問題点から生じたものと考えられる。つまり、単に表現集を暗記しただけでは、ある発話カテゴリーに属する表現を思い出そうとしても、それを具現する表現が教材のあちこちに散らばっていたために、整理した形で思い出せないのである。そのため、同じ発話カテゴリーの異なる選択肢をスムーズに思い出したり、必要な表現がどの「知識の引き出し」に入っているのか咄嗟に思い出せないのだろう。このことから、発話カテゴリーごとに使える表現を整理した表現集が必要となってくる。

また、既存の教室英語表現集に対するもう 1 つの問題として【課題③】がある。その根拠となるのは、教師役学生の発話に対して児童役学生が返答したとしても、その返答にさらに反応するための表現が思いつけない場面が多かったことである。ほとんどの教室英語表現集は、教師が会話を「始める」ための表現は載せているが、「その先」がない。会話というのは、発話があれば相手がそれに応じ、それに対してまた適切な発話役割で返すという、いわゆる「キャッチボール」である。したがって、想定される児童の返答にさらにフィードバックするための表現を教える必要がある。

5. SFL の枠組みを利用した英語表現集（提案）

前節のように、早川（2021）の調査からさまざまな課題が明らかになり、それに伴って新しい教室英語表現集の必要性が浮き彫りになった。本節では最後に、これらの課題に対応する教室英語表現集を提案したい。

その作成方針として、前節に見た課題①～③に対応するため、SFL の Speech

Function の考え方に基づき、読み聞かせで使う発話カテゴリーとその具現表現を整理する。Speech Function とは、人がことばを使って対人的にやり取りするときの目的を、role と commodity の組み合わせで整理したものである。

以下に表 3 として、Halliday and Matthiessen (2004: 108 Table 4(1))を元にした各 Speech Function とそれを具現する語彙-文法資源を示す。commodity の欄に示したのは、会話において相手とやり取りする素材を示す。goods-&-services は物理的なモノや行為であり、information は情報である。role の欄が示すのは、その commodity を「どうするか」という方向性である。例えば goods-&-services を give する場合とは、「窓を開けましょうか」「水はいかがですか」のように、「窓を開ける」という行為や「水」というモノを相手に与える場合であり、Halliday and Matthiessen はこれを offer（申し出）と呼んでいる。逆に goods-&services を demand するの場合とは、「窓を開けてください」「水がほしい」のように、「窓を開ける」という行為や「水」というモノを相手に要求する場合で、command（命令）と呼ばれる。information を give するのは、「私は学生です」「あれは犬だ」のように、話す（or 書く）ことで情報を相手に与える場合で、これを statement（陳述）と呼ぶ。最後に information を demand するとは、「あなたは学生ですか」「あれは何ですか」のように相手から情報を得ようとするものである。これを question（質問）と呼ぶ。

表 3：Speech Function（↘ は具現関係を示す）

role	commodity	initiation	response	
			expected	discretionary
give	goods-&-services	offer ↘ I'll… / Shall I…?	acceptance ↘ yes, do	rejection ↘ no, don't
demand		command ↘ imperative	undertaking ↘ yes, I will	refusal ↘ no, I won't
give	information	statement ↘ declarative	acknowledgement ↘ is it?	contradiction ↘ no, it isn't
demand		question ↘ interrogative: yes/no or WH-	answer ↘ yes/no or group/phrase	disclaimer ↘ don't know / won't say

Speech Function 理論のポイントは、まず各 Speech Function とそれを具現する文法カテゴリーの関係が整理されていることである。表 3 ではその具現関係を SFL の慣行に倣い「↘」で表した。例えば、offer という Speech Function を具現するためには、ことばとしては I'll…（私は…しましょう）、Shall I…?（…しましょうか？）などの語彙-文法を用いることができる。あるいは command を具現するには imperative（命令法）が使える。これにより、発話カテゴリー（＝機能）ごとに使える表現（＝語彙-文法）を整理できる。

Speech Function 理論の第二のポイントは、各 Speech Function に関し、

initiation（＝会話の始まり）だけでなく、それに続く response（＝想定される反応）がまとめられていることである。例えば、「窓を開けましょうか」という offer があったら、そこで会話が終わることはまずなく、offer された相手は通常、それを accept する（「はい、開けてください」）か、reject する（「いや、開けないでください」）という Speech Function で答えるだろう。こうした考えにより、会話を始めるだけでなく、想定される児童の返答にさらにフィードバックするための方策が考えられる。

しかしこの Speech Function 理論も、そのまま絵本読み聞かせにおける教師-児童のやりとりに応用できるわけではない。課題①〜③に対応するような新しい教室英語表現集作成のためには、以下のような手順が必要だろう：

1. Speech Function の表を、initiation → response だけでなく、initiation（教師）→ response（児童）→ feedback（教師）の 3 段階に拡充
2. 読み聞かせに用いる発話カテゴリーを Speech Function の表に分類・整理
3. 各発話カテゴリーを具現する表現を、既存の教室英語表現集からピックアップ

以下で、手順 1-3 について詳しく述べるとともに、表 3 をどう拡充しうるかを見ていく。

まず、「1. Speech Function の表を initiation→ response → feedback の 3 段階に拡充」した場合を表 4 に示した。

表 4：initiation→ response → feedback を含む教室の Speech Function

<table>
<tr><th rowspan="2">role</th><th rowspan="2">commodity</th><th rowspan="2">initiation
（教師）</th><th colspan="2">response（児童）</th><th rowspan="2">feedback
（教師）</th></tr>
<tr><th>expected</th><th>discretionary</th></tr>
<tr><td>give</td><td rowspan="2">goods-&-services</td><td>offer</td><td>--*</td><td>--*</td><td rowspan="2">acknowledge-ment</td></tr>
<tr><td>demand</td><td>command</td><td>under-taking</td><td rowspan="2">refusal</td></tr>
<tr><td rowspan="2">give</td><td rowspan="3">infor-mation</td><td>statement</td><td>--*</td><td rowspan="2">--*</td><td>encouragement</td></tr>
<tr><td rowspan="2">question</td><td rowspan="2">answer：correct / incorrect</td><td rowspan="2">contradiction</td></tr>
<tr><td>demand</td><td>disclaimer</td></tr>
</table>

表 4 では教師が initiation の Speech Function を取った際に児童が返すと想定される反応を response としている。そして、児童の 2 種類の反応、つまり expected（期待通りの反応）と discretionary（期待と異なる反応）に対してさらに教師が反応するための Speech Function を feedback としてまとめている。

例えば、教師が initiation で「ネコを指差してね」という command を与えたのに対して児童が response として実際にネコを指差すという undertaking を

行なった場合、あるいは教師が「これは何？」という question を与えたのに対して児童が response として「ネコです」という answer: correct を返した場合、教師のさらなる feedback としては、「よくできました」という acknowledgement を取ることが予想される。

逆に、教師が initiation で「ネコを指差してね」という command を与えたのに対して児童が response として何も答えないという refusal を行なった場合や、あるいは教師が「これは何？」と question を与えたのに対して、児童が response として「イヌです」という answer: incorrect を返した場合、教師のさらなる feedback は、「もっとよく見てみて」という encouragement になるだろう。

なお、表 4 中に「＊」で示したのは、教室では response が想定されない場合である。例えば、教師が「もう 1 冊絵本を読みますね」と goods-&-service を offer した際、通常児童は「そうして」「やめといて」などの反応は返さない。

このように、単に会話を始めるだけでなく、それに対する児童の反応およびそこにさらに feedback するための選択肢を予想しておくことで、教師はそこで用いる表現をあらかじめ学習・準備することが可能になる。

次に、「2. 読み聞かせに用いる発話カテゴリーを、Speech Function の表上に分類・整理」したものを、表 5 に示した。

表 5：読み聞かせに用いる発話カテゴリーを Speech Function に位置付け

<table>
<tr><th rowspan="2">role</th><th rowspan="2">commodity</th><th rowspan="2">initiation
（教師）</th><th colspan="2">response（児童）</th><th rowspan="2">feedback（教師）</th></tr>
<tr><th>expected</th><th>discretionary</th></tr>
<tr><td>give</td><td rowspan="4">goods-&-services</td><td>offer</td><td>--*</td><td>--*</td><td rowspan="4">acknowledgement
[Acceptance]
[Answer Confirmation]
encouragement
[Encouragement]
[Alternative Clues]
contradiction
[Negation] [Doubt]
[Recast]
[Answer Provision]</td></tr>
<tr><td>demand</td><td>command
[Repeat Prompt]
[Completion Prompt]</td><td>under-taking</td><td rowspan="3">refusal
disclaimer</td></tr>
<tr><td>give</td><td>statement
[Statement]
[Confirmation]</td><td>--*</td><td>--*</td></tr>
<tr><td>demand</td><td>question
[Yes-No Q]
[Wh Q]
[Challenge]</td><td>answer:
correct /
incorrect</td></tr>
</table>

基本的に、これまでの議論のベースとなってきた「発話カテゴリー」と、今回参考にした Speech Function は異なる理論体系の用語であるが、「機能をもとにした発話の分類」という点では親和性が高い。実際には発話カテゴリーの方が細密度の高い分類であり、各 Speech Function を上位概念として、その下位の Speech Function として整理・位置づけることが可能だろう。

表 5 はそれを示したものである。例えば、Repeat Prompt（繰り返して発話することを要求）や Completion Prompt（教師がわざと途中で発話を終わることで、児童に続きを言わせる）という発話カテゴリーはいずれも、「繰り返して発話する」「続きを言う」という行為を要求している点で command の一種と位置づけることができる。これにより、各 Speech Function が、教室での目的に基づく発話カテゴリーと結びつき、読み聞かせという状況により適応した形になる。

最後に、「3. 各発話カテゴリーを具現する表現を、既存の教室英語表現集からピックアップ」する具体例を見ていく。ここでは紙面の都合上、question から始まる Speech Function のみ例示する。

まず教員が児童に information を demand したい場合、その Speech Function は question となるが、そこに含まれる発話カテゴリーにはさらに [Yes-No Q]（Yes か No かを尋ねる）[Wh Q]（中身を尋ねる）[Challenge]（相手がどの程度の service ができるか、その力量を尋ねる）の 3 種がある。それぞれの発話カテゴリーを具現する教室英語を既存の教室英語表現集から抜き出すと、以下のようになる：

[Yes-No Q]
↘ Yes-No Question
　Is this…? / Do you see…?
[Wh Q]
↘ Wh Question
　How many…? / What's this? / What do you see? / Who's this?
[Challenge]
↘ Can you…?

ここまできてやっと、教師は実際に自分が使用しうる語彙-文法表現のリストにたどり着く。またこのリストは、教師が行いたい発話カテゴリーに基づいて整理されているため、その表現を思い出してしようすることはずっと容易になっているだろう。

やりとりを進めると、教員の question という initiation に対し、児童はどのような response を返す可能性があるだろうか。正しい返答 (answer: correct) の場合、教師はそこにさらに acknowledgement という feedback を返すことになる。その場合の発話カテゴリーと、それを具現する表現は以下の通り：

[Acceptance]
↘ That's right! /That's it! / Exactly. / All right. / Correct. / Right on! / Good. / Very Good. / Great! / Excellent! / Wonderful! / Super! / Fantastic! / Marvelous! / Tremendous! / Terrific! / Nice. / Superb. / Impressive. / Splendid. / Perfect! / (That's a) good idea! / Sounds nice.
[Answer Confirmation]
↘ (Repeat student's answer)

しかし児童は常に正解を答えるとは限らない。児童の response が「分かりません」とか黙っているとかの場合 (disclaimer) 、教師は当然 encouragement という異なる feedback を返すことになる。この Speech Function に当てはまる発話カテゴリーとして、[Encouragement]は文字通り児童を励ます発話、[Alternative Clues]は、ヒントを与えて正答を引き出そうとする発話である：

[Encouragement]
↘ Close. / That's interesting! / Good try! / Nice try! / Don't give up. / Don't worry. / It's OK to make a mistake.
[Alternative Clues]
↘ How about… / You mean A or B?

最後に、児童の返答が間違っている (answer: incorrect) という可能性もある。その場合の feedback としては、contradiction という Speech Function に属する発話カテゴリーで応じることになるだろう。[Negation]は児童の発話内容を否定するもの、[Doubt]は児童の発話内容に疑問を呈するもの、[Recast]は児童の発言内容を訂正するものである。通常、教育的に[Negation]や[Doubt]だけで終わることはなく、続けて[Recast]を行ったり、encouragement に戻ったりするだろう：

[Negation]
↘ No. / Wrong. / Not exactly. / Not quite. / Close.
[Doubt]
↘ Really? / Are you sure? / Is it ? / Does it?
[Recast]
↘ (Restate student's answer correctly) / Any other ideas? / Anyone else?

6. まとめと今後の課題

以上のように、Speech Function の理論枠組みに基づきながら、実際の教室における絵本読み聞かせ時のやりとりに合うように様々に拡張させてきた。

まず、やりとりを initiation → response だけでなく、initiation（教師）→ response（児童）→ feedback（教師）の 3 段階に拡充することで、児童の返答にさらにフィードバックするための表現を教師に教える必要があるという【課題③】に対応した。

さらに、読み聞かせに用いる発話カテゴリーを Speech Function の表に統合し、各発話カテゴリーを具現する表現を既存の教室英語表現集からピックアップしてまとめることで、発話カテゴリーごとに使える表現を集めた表現集が必要という【課題②】に応じた。

これらの改良を経た教室英語表現集を用いることで、より効果的に実用的な英語表現の学習が可能になり、小学校教員を目指す学生が、絵本読み聞か

せに必要な英語表現のストックがない（【課題①】）状態から、自信をもって小学校の英語教育が担当できるようになることが本稿の目的である。

最後に、今後の研究課題として、提案した「絵本読み聞かせ用 教室英語表現集」を実際の読み聞かせ練習で使用し、学生の英語発話力の向上度合いを確認することと、選択の細密度を上げて、より適切な表現が選択できるようにする（例：同じ Acceptance でも、question に対する回答が合っていた時と、command に対する行動が適切だった時とでは使える表現が異なる）ことが必要と考える。

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Interpersonal Language and Motivation in Zwift
An analysis of motivational language in an online cycle training program

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Abstract

The verbal language used by teachers and coaches to guide learners and provide encouragement and feedback to evaluate progress, is central to learner motivation (Ushioda & Dörnyei, 2009; Zhang, Solomon, & Gu, 2012) and may appear to be exactly the kind of skill with which technology cannot compete. However, this paper explores the possibility that effective motivational language may be remarkably susceptible to computerized automation, even in the form of an on-screen written monologue. To explore automated motivational language, the paper introduces a functional analysis of instructional language and the multimodal features which support users in physical training programs on the online virtual cycling platform Zwift. The workouts on training programs on Zwift were recorded and the on-screen language was transcribed. The paper provides an overview of the multimodal context of Zwift and various modalities through which the program "communicates" with the user. It then offers an analysis of instructional language that appears on screen with a particular focus on the interpersonal features and the role that they may play in supporting motivation, drawing on Appraisal Theory (Martin & White, 2005).

1. Introduction

"WOOT WOOT!!! You did it, my friend! So proud of you…" This may not be a familiar utterance, but even without context it is easy to imagine the addressee would be happy to read it and perhaps even feel some sense of accomplishment. "Woot" is an informal online expression of excitement with repetition, capitalization, and exclamation marks used for emphasis. The utterance quoted above marks the end of the final interval of a workout of an indoor cycle-training app called Zwift.

The COVID-19 pandemic has led to the reorganization of social activity around "social distancing" raising concerns as to whether people can remain motivated when face-to-face communication is mediated or replaced by digital technology. While meetings and classes shifted online, I also found myself replacing my commute to work by bicycle with cycling indoors on a static "smart" trainer in a digital fantasy world called Zwift. I discovered that the on-screen instructions of the Zwift training programs were surprisingly motivating causing me to consider afresh the remarkable power of words.

This paper explores the possibility that language, in conjunction with other semiotic resources, can motivate people, even when that language consists of automated on-screen instructions in a fantasy virtual world. Remarkably, the script on Zwift is fixed and does not vary in accordance with the user's performance yet my experience of using these programs was that this on-screen text can motivate and support what might otherwise be a painful or tedious experience by supporting a

positive inner voice.

To explore how the language of Zwift training programs shapes user experience, this paper offers an analysis of the multimodal context of Zwift itself as well as of the language of the on-screen guidance. Drawing on a Hallidean framework (Halliday, 2003), the analysis considers the *ideational, textual,* and *interpersonal* features of the texts as well as the multimodal context of Zwift. It is hoped that this analysis might offer insights relevant to writers of such training programs or even have implications for the role of language in motivation in sporting, educational or other contexts. Therefore, the following section provides a brief overview of research into language and motivation.

2. Language and motivation research

Applied linguistic research has tended to be preoccupied with how motivation enables language learning (Dörnyei & Ushioda, 2009), yet there is also a growing body of research into the role of language in promoting motivation, grounded in general psychology (Barwood, Corbett, Wagstaff, McVeigh, & Thelwell, 2015; Sullivan, 1988). While there is not space to review this literature here, it is worth mentioning some key studies which help explain the motivating features of Zwift. Specifically, it is suggested that language constitutes an important interface between intrinsic and extrinsic motivation, by promoting a positive self-talk.

Motivation is intimately related to identity. It is about maintaining who we are and who we want to become. This position is implicit in Maslow's (1943) model of motivation which was described in relation to a hierarchy of needs. Maslow (ibid) characterized motivation as closely related to the nature of human beings as concerned first with survival and social acceptance but ultimately with some higher form of self-development. Halliday (2004 (1975)) also suggests that first language learning for children is motivated by the practical and social needs of the child. According to Maslow (ibid), once the more fundamental needs are satisfied, the principal goal is self-fulfillment, something which by its nature varies according to the individual.

Csikszentmihalyi's (1992) work on "flow" offers a more specific account of what developing self-fulfillment looks like in practice. He has suggested that challenging activities to which human beings commit themselves to becoming skillful in lead to a heightened state of consciousness which he called "flow". Both Maslow's (1943) self-fulfillment, and Csikszentmihalyi's (ibid) flow, describe *intrinsic* motivation in the sense that the activity is self-determined and self-motivated. Flow is also intrinsically motivated in the sense that the activity itself is motivating irrespective of any external goals. Nevertheless, the positive experience of flow is dependent on external circumstances in the sense that flow requires engaging with a level of challenge that is neither too difficult (leading to frustration) or too easy (leading to boredom). Taken together, one would expect that motivating activities should contribute to fulfilling a human need in Maslow's sense, present an appropriate level of challenge and, ideally, be self-fulfilling.

In contrast to such accounts of intrinsic motivation, extrinsic motivation explored how motivation could be manipulated through reward and punishment. This approach suggests an obvious role for language to make promises of rewards or threats of punishment. Extrinsic motivation based on behaviorism as advocated by researchers

such as Skinner (1991 (1938)) has often been discredited as ignoring the complex interactions between intrinsic motivations and any attempt to manipulate them using a carrot and stick approach (Palmer, 2006). Importantly, "carrots" turn out to be more useful than "sticks" since, as Ryan and Deci concluded, "conditions supportive of autonomy and competence…facilitated human growth…whereas conditions that controlled behavior…undermined its expression. (Ryan & Deci, 2000, p. 76).

Moreover, game-theory (Myerson, 1991) and games in general (Richter, Raban, & Rafael, 2015; Uysal & Yildirim, 2016) focus on providing attainable goals and rewards much as Skinner (2003 (1968)) had proposed. Indeed, language may impact motivation in a variety of ways. Sullivan (1988), for example, argues that, from a pragmatic perspective, motivational theory has focused too much on *perlocution* (the real world effects of words), overlooking the importance of *locutionary* and *illocutionary acts* (Austin, 1975*)* as contributing to meaning making in terms of identity construction and empathetic "humanness" respectively, which are crucial to self-determination and engaging intrinsic motivation.

Robertson (2021b) used an anecdote about the Irish golfer Padraig Harrington to illustrate how language shapes confidence and performance. According to Robertson, Harrington had a brief crisis of self-confidence during his final game of the British Open in 2007 which caused some uncharacteristic mishits that nearly lost him the game. However, he was able to restore his confidence and concentration due to his caddy repeating to him the words, "One shot at a time, you're the best chip and putter in the world." Robertson went on to explain that Harrington credited the win to his caddy's confidence in him, while the caddy himself, said that he was sure Harrington would lose the game. Robertson proposes that words themselves promote confidence and help shut out negative thoughts, or what Peters (2012) has called the "Chimp". Anecdotal as this is, research into self-talk suggests that it can improve endurance and reduce perceived effort (Amado, Maestre, Montero-Carretero, Sánchez-Miguel, & Cervelló, 2019; Barwood et al., 2015; Robertson, 2021a). Therefore, an important role for coaches may be the cultivation of positive self-talk through positive guidance.

3. SFL and functional approaches to the language of motivation

One of the key tenets of SFL is that language is organized around function and that the motivation to learn language evolves out of the need to do things with language (Halliday, 1979). In the case of child language acquisition, this may begin as a way for the child to satisfy its needs through the assistance of the parent (Halliday, 2004). Nevertheless, as language develops it is also internalized as a tool for thought, identity construction, and so on, including the kind of motivational (or damaging) self-talk described above. Although psychological studies tend to stop short of exploring language itself in relation to motivation, SFL provides an account of language that is functional and therefore particularly well suited to this (Halliday, 2003). In particular, the three metafunctions of *textual, ideational,* and *interpersonal,* identified by Halliday (1994), elucidate the ways in which structure, content, and relational evaluative choices in language shape meaning. In addition, the differentiation between the language strata of graphological, lexico-grammatical, discourse semantic, and genre enable a more detailed analysis by separating out language resources according to the scale at which a text is being examined. While features of all *metafunctions* and

strata are relevant and feature in the analysis below, the focus here is limited to the *discourse semantic strata* as the most salient starting point. The description of the multimodal context of Zwift draws on Multimodal Analysis, particularly the work of Kress and van Leeuwen (Kress, 2003, 2010; Kress & van Leeuwen, 2006) exploring visual resources.

4. Zwift as a motivating context for virtual cycling

Zwift (Zwift, 2021) is a massive multiplayer online (MMO) virtual world for cyclists to ride in that runs on PCs, tablets, or smart phones in conjunction with a road bike attached to a "smart" trainer. The smart trainer communicates with Zwift through Bluetooth so that the user progresses through the landscape in accordance with the power exerted on the pedals. Just as when riding outside, to travers steep hills, the rider must change to a low gear and pedal harder, and while going downhill it is possible to ease off or even coast.

Riding indoors on a bicycle attached to a trainer has long been considered an efficient and effective way to monitor and improve fitness, but the development of indoor training apps has helped make the experience more enjoyable. There are now several apps offering virtual rides and training programs that work in conjunction with smart trainers including BKool Simulator, Sufferfest, Trainerroad, FulGaz and GoldenCheetah, yet Zwift is by far the most popular. Founded in 2014, Zwift has 2.5 million users and is valued at over $1 billion dollars (Liozos, 2020; Schlange, 2021). Like these other online platforms, Zwift experienced a significant rise in the number of users during the early months of the COVID-19 pandemic.

The distinctive features of Zwift compared with these other platforms are (1) the way that it has been gamified to offer a wealth of challenges (with the training programs effectively a part of this); (2) a varied (and growing) fantasy landscape populated by avatars that can be customized with clothing and bikes; (3) socially oriented features including a full program of events (all day, every day) such as races and group rides, ability to give "ride ons" (in-game "likes" to show encouragement), and follow other "Zwifters" (as users are known). These three features respectively enable personal goal setting, self-expression, and positive social interaction, contributing to the motivation to ride.

Zwifters can ride in-game courses to earn route badges or focus on other tasks involving speed, skill, power, or even social aspects to acquire challenge badges. When a challenge is achieved, a banner appears briefly on screen and the badge is added to the user's collection stored in the app. Users accumulate points and "drops" (of sweat) as they ride. Points reflect distance and are used to progress through the game's levels; while drops represent power/intensity and vertical meters climbed and constitute the currency used to purchase bikes and wheels in the "drop shop." These gaming features provide Zwifters with a range of short-term and long-term in-game goals.

Zwift has been designed to be accessible to cyclists without special gaming computers. It does not have the graphic polish of games designed for the latest graphic cards and gaming consoles, but it is still beautiful. The worlds of Zwift consist of car-free cycling paradises inspired by iconic cycling destinations (Paris, France, London, Yorkshire, and Innsbruck) and the complete fantasy worlds of Watopia and Yumeji.

Yumeji, for example, is a Japan-inspired fantasy with shrines, castles, wooden bridges, ancient forests, and cherry blossoms, populated by people and mythical animals from Japan folklore. Zwifters can therefore enjoy the exploration of fantasy worlds by bicycle unlike any ride they could experience outside.

When riding on Zwift, users are represented by an avatar—a virtual representation of the cyclist. The Avatars are assigned automatically according to gender, height, and weight, but hair can be customized. A basic choice of kit and bikes are provided to users initially, but new items of clothing can be unlocked by progressing through the game levels, or participation in in-game specific events. New virtual bikes or wheels from prominent cycling brands can be purchased from the drop shop with the more prestigious equipment costing more and being unlocked at higher game levels. The choice of frame and wheels affect speed in game loosely reflecting the reputation of the products in real life—lighter frames and wheels are quicker up climbs, aerodynamic equipment is faster on the flats, and mountain or gravel bikes travel quicker on rougher road surfaces (Schlange, 2021). While IRL equipement can be expensive, virtual bikes and clothing on Zwift can be bought simply by riding more.

Even though the fantasy "worlds" in Zwift are continually growing, the available worlds on any day are restricted to ensure that users never ride alone. Other social aspects include giving "ride ons" to nearby Zwifters (which appear as giant blue thumbs ups that accumulate in the rider's back pockets) and sending public text messages. Users can also follow other Zwifters through the Zwift smart phone app, just like other social media. In addition, there are group rides and races which enable competition, camaraderie, and the feeling of being part of something worthwhile, further adding to motivation.

Though Zwift is one of several apps available for cyclists riding on smart trainers, the distinctive features of gaming elements to provide short and long-term goals, a beautiful fantasy landscape to explore, customizable avatar and bike, and social features build around online events all contribute to making Zwift a generally motivating virtual context.

The training programs on Zwift all take place in this virtual world but, besides those set up as events, are individual activities. The programs are designed by professional coaches including Zwift's Shane Gaffney and consist of interval training workouts demanding alternating intensities of effort to maximize training effort (Gaffney, 2021). The effort level is matched to the user based on a fitness test taken before the program begins. Workouts are challenging but incorporate features to stimulate motivation described below.

5. Data collection and analysis

The description below is part of an ongoing project exploring the language of Zwift training programs. The video recordings used in the analysis are screen recordings of the training sessions made using QuickTime Player. Each session is transcribed and marked up to highlight salient features and recurrent patterns. At the time of writing, seven of the fourteen plans on Zwift have been recorded with the eighth in progress. The original analysis was based on three of these: *Build Me Up* (12 weeks x 5 hours); *Zwift Racing* (6x4); and *Gran Fond*o (8x5). This constitutes 124 hours of training over six months but most workouts contain less than 1000 words. It may seem a tiny corpus

on which to base an analysis, but the texts are short, repetitive, and so, highly predictable. The analysis reveals a unique digital genre, reflecting functional needs, but also evoking a positive tongue in cheek ambience to further promote motivation.

6. The multimodal context of Zwift and the language of training programs

The motivation for this study was to explore the written on-screen instructions of the training program however the meanings of this mode are interrelated with the other modes in the context. Therefore, these modes will be introduced first through a multimodal description of the screen. A mode has been defined by Kress as "a socially shaped culturally given semiotic resource for meaning making." (Kress, 2010, p. 75). He suggested general examples such as "image" and "writing" but, for the purposes of this analysis, *modes* will be considered more specifically as the meaning making resources which directly contextualize the on-screen instructions. Most of these appear on the actual screen but since the level of resistance on the trainer is controlled by the app via Bluetooth, this is also considered a mode.

Erg mode as a semiotic mode

Training programs are designed to run in "*erg mode*" whereby the training program controls the trainer directly to require the user to output a fixed amount of power irrespective of the virtual terrain. Whether the rider pedals fast or slow the trainer will automatically adjust resistance so that this power level is maintained. If the user tries to ease up or coast and does not maintain the power, the resistance will ramp up until the feet stop and erg mode disengages. Hence, when a harder or easier interval begins, users can "feel" the shift and are forced to adjust their effort level accordingly (or stop altogether). Interval training programs alternate between hard efforts and easier recovery periods. The power requirement change communicated by erg mode could be considered semiotically as a point on cline from easy to hard that can also be expressed by the amount of power in watts required. The rider, in turn, communicates the pedal speed or "cadence" (revolutions per minute-RPM) by pedaling. In principle, the training session could be done without any visuals using erg mode because of this direct communication between rider and "smart" trainer. In this sense, *erg mode* can also be considered a semiotic mode. However, the information available through the visual modes help contextualize the experience and enabling users to stay focused and motivated.

Zone Colors and Characterizations

The interval training sessions in Zwift are designed around effort levels that are tailored to the individual. This is communicated through a visually and verbally defined semiosis into zones. The Zones are calculated automatically by the program as percentages of a figure called Functional Threshold Power (or FTP) based on an initial fitness test. Zwift uses five zones which have each been assigned a color but are also characterized verbally as shown in Table 1. The verbal characterizations quoted here are derived from a workout called Welcome Workout. The colors range from cool to hot reflecting the intensity of the workout but have a concrete meanings. These colors appear as glowing arches on the road marking the beginning of the upcoming interval and are also used on the workout screen as described below.

Zone	Color, name % of FTP	Characterization of the workout
Zone 1	**Grey, recovery: below 60% FTP**	"The warm-up starts I Zone 1 –Active Recovery – which should be a really easy conversational pace."
Zone 2	**Blue, endurance: 60-75% FTP**	"the basic endurance zone – that should be your all day effort... it should feel like a 2 or 3 out of 10 for such a short period of time." "You should be sweating here but heart rate and breathing should be controlled."
Zone 3	**Green, tempo: 76-89% FTP**	"...should feel like 4-5 for most of it and maybe 6 by the end. This is often referred to as tempo work, and you should still have a good rhythm here." "Your breathing should have shifted a bit and this should not be conversational pace anymore. This is a good race pace for a longer race"
Zone 4	**Yellow, threshold 90-104% FTP**	"This is starting to get quite tough ...and should feel like 7 out of 10 the whole. And you should be glad to stop." "Your breathing and HR really should have made a distinct shift. Still steady, but labored. This is hard work."
Zone 5	**Orange, VO2 Max 105-118% FTP**	"Now we are into the really tough stuff. You probably don't want to read this message. And you definitely do not want to talk to anyone." "This sort of power should be sustainable for about 5min, but that should be really unpleasant. 8-9 out of 10 here."
Zone 6	**Red, Anaerobic: Above 118% FTP**	Now we are in Zone 6 -Maximal Aerobic Power. Mostly you should just want me to shut up...10 out of 10.

Table 1: The six training zones in Zwift and their designated colors and descriptions.

Screen layout

As shown in Figure 1, although the screen is dominated by the rider and virtual landscape, it is overlaid with graphical resources each with its own semiotic conventions and meaning potential. Describing each in turn will help to make clear the contribution of each mode as well as the interaction among them.

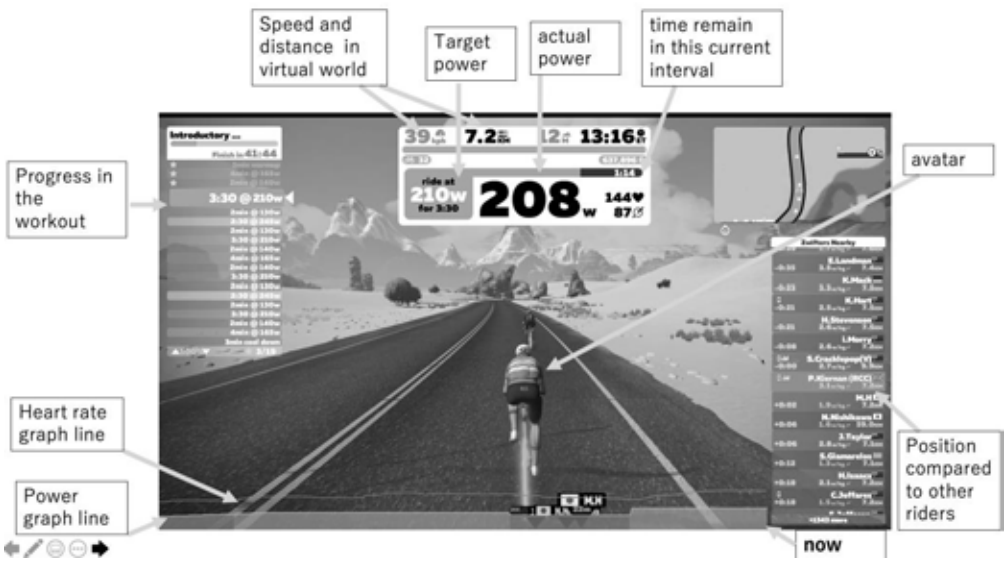

Figure 1. A screen shot showing the visual resources of Zwift during a training session.

The Nearby Zwifters panel (right) shows the usernames of nearby riders with a country flag, current power output and distance travelled. The user appears in the middle of the list (highlighted in blue) with users ahead on the course above and those behind below. The distances ahead or behind are shown in seconds (minus indicates seconds ahead, and plus seconds behind). These conventions of time ahead and behind and ordering top to bottom are borrowed from race results and televised road races.

Above the Nearby Zwifters panel is an arial view of the course with a horizontal representation of the elevation profile superimposed on it. In Figure 1, the profile is difficult to see as this course (through a sandstone desert) is flat. Both the arial map and elevation profile have dots representing riders with an orange arrow to show the user on the map and an orange pin to show progress along the elevation profile. Again, these are semiotic conventions borrowed from representations used in televised road races. The information in these panels therefore draws on available visual conventions to provide general information that is less important during a workout.

At the top of the center of the screen there is panel which combines further general ride data with the workout specific data from top left to right: current speed, distance travelled, vertical meters climbed, and elapsed time. Below is an orange game progress bar that shows the how far the user has progressed through the game with numbers showing the level (left) and accumulated drops (right). The same convention of a bar extending left to right is also used to show progress through the current interval. The interval bar is colored (green) to match the zone (3) of the interval as shown in Table 1. It shows the interval target power and total time on the left. Target cadence would also appear here. The right side of the progress bar contains a timer showing the remaining time. Below the bar, in the center of the panel is the actual power being produced. It is the largest number reflecting its importance as the workout target. Heartrate and cadence are on the right. If the power or cadence deviate from the target the numbers change from black to red as a warning.

The left panel displays the workout plan with each interval colored by zone and showing the target power. The ongoing interval band is larger and brightly colored. correctly completed intervals are rewarded with gold star at the left and count towards total stars for the program.

At the bottom of the screen is a visual of the actual power (a height and zone color variable block) and heartrate (a red line) of the most recent intervals which constantly moves to the right with the previous intervals disappearing off screen on the left. This allows the user to see how increases and decreases in power are affecting heartrate.

These visual panels that form the screen of Zwift draw on a range of multimodal conventions to provide the user with detailed information not only about location in the virtual world and in relation to other riders but also progress through the workout and effectively providing a meaningful realization of the changing power demands made by erg mode, providing clear goals and targets and a sense of progress towards them. What is still missing is the human voice provided by the on-screen instructions described below in terms of textual, ideational, and interpersonal resources.

6.1 Textual resources

The textual organization of on-screen instructions is highly predictable reflecting the predictable organization of workouts themselves. When intervals are repeated within

a workout, and even workouts within a plan, the instructions are generally the same. This predictability provides reassurance and familiarity to the user but is also potentially monotonous. To avoid monotony and increase the training benefit, incremental changes are made to increase the target power or length of work intervals and/or decrease rest periods from one week to the next. This information is added to previews of the workout provided during the warmup or rest periods immediately preceding a work interval. In this sense, the workout instructions could be considered as part of the larger text of the training plan. Workouts are assigned on a week-by-week basis but only one workout can be completed each day and any uncompleted workouts expire once the new week begins. This temporal positioning is sometimes marked using expressions such as "Welcome to week 5." Since users decide the order of workouts within a week, references to day-to-day progress are rare. The overall structure within workouts follows a fixed macro structure as summarized in Table 2. In beginner plans all stages are followed, though in advanced ones, such as the TT Tune up, there is more ellipsis and instructions and evaluation were often delayed.

Function	**Example**
Welcome	Welcome, friend! Let's start with a 10 minute warm-up.
Preview	Half-way through today's warm-up, let's go over what today's workout features...
Guidance	This last one is at 115 RPM (or as fast as you can pedal without bouncing in the saddle)...
Evaluation	Great job today! That was a tough one, you should be proud of yourself:-)...
Goodbye	Enjoy the last few minutes of the cool down, and we'll see you next time.

Table 2: The macrostructure of on-screen instructions across a workout

The welcome and preview occur during the warmup (typically a ramp up from low zone 1 to low zone 2). The evaluation occurs at the beginning of the cooldown (a ramp down) after the final interval and the goodbye halfway through the cooldown. The guidance instructions for each specific interval also follow a four-part microstructure as shown in Table 3.

Function	**Example**
Pre-interval	Threshold interval #2 is just ahead. This time I want to progressively increase the cadence each minute starting at 90 RPM.
Beginning	Nice and easy cadence-wise to start off here. We'll raise the cadence by 5 RPM every minute.
Mid-interval	Halfway through here! Keep digging and pushing yourself!
Closing	C'mon! All the way to the arch.
Evaluation	Beauty! That's the first of 5 for those efforts. Let's take a quick rest here again.

Table 3: The microstructure of on-screen instructions for each interval

As can be seen from the examples in Tables 2 and 3, the workout and interval instructions combine functions. For example, “Nice and easy cadence-wise here.” This both informs the user of the leg speed and evaluates how it should feel. As such it tells the user what to do (spin but not too quickly) and shapes how it should feel. That the feeling is limited to “cadence-wise” implies that the effort level itself is not easy. The second half of this utterance “We’ll raise the cadence by 5 RPM every minute” provides information about how the interval will proceed. Cadence targets are shown on-screen during the interval but not in the workout summary, so such instructions help to make the upcoming intervals predictable. Similarly, workout previews are organized into functional stages as show in Table 4.

Function	Example
Introduction	Let’s chat about what we have in store for today…
Overview	Today, we’re going to do a mixture of zone 3 and zone 4 intervals.
Specific	And more specifically, 5, 4min intervals of each.
Training goal	This is targeting the increase in lactate threshold (FTP).
Focus	We’ll also have fun with cadence work, position changes, etc. to break up the intervals.
Closing	For now though, let’s keep warming up :-)

Table 4: Summary of the functional stages of the workout preview

The overview, specific, training goal, and focus all relate to the workout content which is best considered from the perspective of ideational resources.

6.2 Ideational resources

Ideational resources constitute meaning in the traditional sense as they are concerned with the world and ideas are realized in language. The world of Zwift workouts is generally a narrow one consisting of the description of intervals and workouts and how the rider will or should feel about them. As the examples in Table 4 and Table 1 illustrate, an important part of the meaning making in the on-screen instructions is translating the power demands of erg mode and the colors and numbers in the on-screen panels into something meaningful to the user. Table 1 provides a cognitive overview of the zones. The recognition of the zones is further shaped by the repeated experience of riding them over the course of the workout and program. The training goal provides a function for the whole workout which is implicitly related to the goals of the program. The example in Table 4 is part of a workout called Threshold and program called FTP Builder so this preview of the workout situates the workout as focused on the core goal of the program. In contrast, the focus part is more about peripheral goals that are designed to keep the user focused during long sessions. “We’ll also have some fun” indicates that these will be secondary objectives of the workout. Much of the information about workout targets provided live on-screen and listed in the workout summary is loosely duplicated by the on-screen instructions but what makes them particularly effective is their timely appearance. The glowing arch, a bell as the arch is passed and even a special distortion effect meant to mimic hallucinations at the end of particularly long or hard interval, all provide markers

highlight transitions, but the on-screen instructions do so more explicitly by providing time-checks, contextualization, and encouragement: "Halfway through! Awesome work!"

One of the most interesting programs from an ideational perspective is *Zwift Racing* which is aimed at preparing to participate in races on Zwift. It is different from all other programs because the voice of the coach takes the user through the narrative of a Zwift race creating another "virtual" level. Besides general advice such as "That's a tough one but will prepare you for the demands of Zwift racing." It includes expressions such as "And heading past the waterfall over the cobbles towards the sprint again." describing the imaginary course, or race situation: "Don't follow the green jersey attempts...you won't see them again after the Esses, hang on!" Such visualization may be effective when not riding in a virtual world but was confusing as whether riding the course or not it conflicts with what is shown on screen. Still, if it were possible to sync the instructions to match the landscape this would potentially be the most immersive experience of all.

Besides making the workout itself more tangible and meaningful, the on-screen instructions also position and evaluate the user, providing a direct form of motivation and a shaping the kind of self-talk that Robertson (2021b) claimed is essential for success. This dimension is best understood from the perspective of interpersonal resources.

6.3 Interpersonal resources

The interpersonal metafunction is concerned with resources for identity construction, positioning, and evaluation. It is the dimension that brings a human perspective or voice to language. Despite the minimal and disembodied nature of the on-screen instructions of Zwift training programs, interpersonal resources are particularly rich. Moreover, evaluations are invariably positive and complimentary, a strategy that fits with Ryan and Deci's (2000, p.76) observation quoted above that support of autonomy and competence contributes to human development. This can be best understood by considering how evaluations map onto Martin and White's (Martin & White, 2005; White, 2005) model of Appraisal. Appraisal consists of three kinds of resources known as *Attitude, Engagement,* and *Gradation.* It is worth considering each in turn.

Attitude is concerned with positioning, establishing a stance towards some phenomenon. Within Zwift, the evaluated phenomenon consists of (1) the workouts, (2) the users performance of the workouts, (3) the user, and (4) the voice of the instructions. Judgement evaluates human actors so that praise of the user performance ("you ROCKED IT!" or "You're doing amazing work today :-)") is an evaluation of positive social esteem. Affect reflects the feelings of the speaker. It includes un/happiness, in/security, and dis/satisfaction. However, in Zwift, realizations are limited to happiness and satisfaction. Hence the choice of expression "rocked it" and use of capital letters express satisfaction while the smiley implies happiness. Likewise, other things such as the workout ("a great mixture of zone 3, and zone 4") itself are evaluated through *appreciation*, representing a positive *valuation*. Though attitude is marked throughout, realizations were limited to *judgements of social esteem* (+ve), *affect* as *happiness* or *satisfaction;* and *appreciation* as *positive valuation.*

Engagement draws on Bhaktin's notion of heteroglossia to describe the degree to

which a proposition is presented as negotiable. Appraisal categorizes non-negotiable propositions as *monogloss* and *negotiable* ones as *heterogloss. Heterogloss* also includes two kinds: *dialogical contraction* which implies closing down alternatives, *dialogical expansion* which opens them up. Most instructions provided by the on-screen instructions are non-negotiable monogloss to keep guidance clear. However, there are two kinds of dialogical expansion. One is to soften expectations of secondary goals such as maintaining cadence or keeping relaxed. The inclusion of "aim to" in "aim to alternate 95 RPM and 105 RPM every minute." Implies that these are targets rather than fixed requirements. Likewise, "as you can" in "keep as relaxed as you can" implies that the degree of relaxation achievable will vary from person to person. A second use of dialogic expansion is to provide conditional optional advice: "If you are feeling uncomfortable, come up out of your aero position for a bit." Dialogic expansion therefore serves to ease the expectations of the workout regarding less important matters. In contrast, the predominant use of monogloss helps keeps the user firmly on task: "All right, back up to 100 RPM from start to finish for this last effort."

Graduation comprises the complimentary resources of *force* and *focus.* Force describes the intensity of expression which may be raised or lowered. The principle resources for raising the force of expression in Zwift are use of capital letters and choice of vocabulary. The use of force reflects the intensity of the workout or interval. Hence in intervals alternating between a moderate and fast cadence, the moderate cadence is introduced with: "Bring up the power here, and let's settle down at 95 RPM." In contrast, the 105+ RPM interval is introduced with "FAST FEET! GO GO!" *Focus,* refers to how precise or vague an expression is. Since on-screen instructions are brief and designed to provide live information, instructions generally keep a sharp focus. Hence, "halfway" means the exact halfway point, and "30sec" means in thirty seconds. Even so, there are shifts in the degree of vagueness or precision (sharpening or softening focus, in Appraisal terms) across workouts. Sometimes moving from general to precise helps make the task clearer: "I want to progressively increase the cadence each minute starting at 90 RPM" leaves open the degree of increase. But this is followed up with "Nice and easy cadence-wise to start off here." softening the *focus* on leg speed, and "We'll raise the cadence by 5 RPM every minute." Sharpening the focus by giving a specific number to the "progressive increase".

7. Conclusion

This paper has provided a preliminary analysis of the semiotic resources of the online training programs on Zwift, with a particular emphasis on the role of the online screen instructions as a source of motivation. With reference to some of the findings in the literature on motivation, it has suggested that the popularity of Zwift reflects important aspects of motivation which it incorporates. Primarily it is as social interactive space for riders to ride together augmented with gaming features that are specifically designed to appeal to cyclists such as collecting route badges or purchasing virtual bicycles with "drops" (of sweat), and a varied fantasy landscape that blends iconic settings with fantasy ones. More specifically it provides an overview of the semiotic features of the workout screens and describes how they enhance the experience of doing interval training using a smart trainer by providing contextual information. Within this rich multimodal world with such detailed and

informative workout screens, it was nevertheless proposed that the occasional onscreen instructions provide a positive motivating voice. Considered from the perspective of the three metafunctions including the interpersonal resources of Appraisal, this paper has suggested that minimal clear instructions and a positive voice, even in the form of occasional on-screen instructions may be an effective way of supporting intensive interval training. In this preliminary overview, there has not been space to develop and describe this corpus in the detail it deserves. In addition, in future research it would be interesting to explore the relationship between the specific levels of motivation experienced by users in relation to online prompts and other semiotic resources. In the meantime, hopefully this paper has provided food for thought regarding the relationship between language and motivation.

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Zooming into ever-complexifying honorific expressions in Japanese through glossing

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Abstract

Inter-lingual glossing is a methodological process in linguistics that is aimed at giving information about data in the language under description/analysis to a readership unfamiliar with that language. It consists of multiple stages including segmenting the data into meaningful units, and providing an equivalent of each unit in a language shared by the readership. The process is aimed at laying out in the open the linguistic items to be described/analysed in the study. However, representing linguistic data of one language using another inevitably involves distortion. Therefore McDonald (2008) has proposed two fundamental principles of glossing, i.e. be contingent on the purpose of the study and be contrastive. This paper demonstrates how to apply these principles in describing the system of HONORIFICATION and POLITENESS of Japanese (Teruya, 2007; Inako, 2017, 2019). Focusing on recent trends where more complex forms are used by the younger generation, the paper discusses how contingent glossing can make visible the contrasts in a way that is accessible to readers who may not be familiar with Japanese but are interested in the exploration of meaning-making in Japanese.

1. Contingent glossing

Glossing is a common methodological process in linguistics where information about data in the language under description/analysis isa made accessible to an audience who is not familiar with that language. Consisting of multiple stages including transcribing, segmenting and annotating (Inako, 2017, forthcoming, also see below), it plays an important role in linguistic studies by laying out for view what is to be described. However, in spite of its importance, glossing has not attracted much attention in the linguistic community in general (Becker, 1993/1995; Lehman 1982/2004, Shimoji, 2013), as well as in the SFL community, at least until recently (McDonald, 2008; Inako, 2017; SLaM, 2018; Martin et al., 2020).

For one thing, the cases where glossing is needed most are when the language under description is not the same as the language of description. When a study of a language is presented in the same language, as in the case of a study on English written in English, or in a language the audience is assumed to be familiar with, such as a study on English written for a linguistic community in Japan, it is not necessary to provide glosses of that linguistic data since the audience is assumed to have the necessary knowledge of the language. By contrast, glossing has crucial significance in cases other than the above, particularly when the study intends to explore previously untreated linguistic features particular to that specific language and which cannot be

easily translated into the language of description. Readers who are not familiar with the language under description gain access to these focal features by way of the glossing. However, it is also important to acknowledge that glossing, as well as translation, is a representation and thus inevitably entails distortion of meaning. For 'every language operates through a network of interlocking distinctions [that is] never the same' from one language to the next (McDonald 2008: 31). As Becker warns (1993/1995), glossing involves a lot of assumptions about how the language works, which are often downplayed or ignored in English-mediated studies of other languages. In other words, glosses are never theoretically neutral.

Unfortunately, these insights provided by McDonald's (2008) has not been reflected in how glossing is dealt with in SFL publications on various languages to date, including those publications on Japanese written in English (Thomson and Armour eds., 2013; Thomson et al. eds., 2017). Usually, only the results of glossing are provided in the form of annotation lists, if any, without further elaboration on how the glossing was done (discussed in Inako, 2019). SLaM (2018) provides a standardization of glossing convention for SFL, but this approach has some pitfalls. First, standardized glossing is only suitable for typological explorations where same linguistic concepts or features are compared across languages. This is not limited to SFL but applies to language typology from other theoretical frameworks (e.g. Shimoji, 2013). However, SFL is a theory for exploring meaning-making and it applies to any language, including Japanese. For the latter purpose, standardized glossing may risk downplaying, or even ignoring, specific features in that language that may "disappear" once it is glossed or translated. The glossing process needs to make sure to minimize such risks as much as possible. Moreover, SLaM's convention claims to "complement" the Leipzig Glossing Rules (Max Planck Institute for Evolutionary Anthropology, 2015). The appropriateness of relying on "rules" that comes from a different linguistic tradition, particularly one whose theoretical underpinning consists of linguistic universals (Lehmann, 1982/2004) may need to be questioned. Instead, SFL-based linguistic descriptions/analyses should take another approach to glossing methodology that considers glossing as choice (Inako, forthcoming).

Initially proposed in McDonald (2008), this alternative approach consists of two fundamental principles, i.e., be contingent on the purpose of the study, and be contrastive in the sense of focusing on the distinctions within the network of the language under description/analysis. If the purpose of the study is a typological comparison of multiple languages, standardized glossing such as the one proposed by SLaM may be the option to choose. But in many other cases where the focus is on one language, it is important that glossing focuses on the distinctive contrasts made in that particular language under description/analysis rather than adopting a ready-made categories and concepts developed for other languages.

As simple and obvious as it may sound, this alternative approach, referred to as contingent glossing, provides both opportunities and challenges for linguists to address. In a series of studies, Inako (2017, 2019b, forthcoming) has been addressing issues that arise from making explicit choice about glossing with a specific focus on English-mediated studies of Japanese. Firstly, as glossing is a procedure that involves multiple stages, at each of which linguists need to make choices. Inako (2017) identified the stages of romanization, segmentation, item-by-item annotation, and

group-, clause-, and/or clause-complex- level translation. But in addition, Inako (forthcoming) considers that there should be an initial stage where the decision is made as to whether or not to provide a gloss in the first place, in reference to the contextual variables in which glossing is made including the purpose and the audience. Inako (2019b) also discusses issues and challenges around the stages of segmentation and annotation in the latest SFL publications of Japanese, and proposed that glossing should make sure to illustrate the linguistic contrasts in the system networks for Japanese, rather than relying on existing conventions and/or English translations.

These previous studies are not just focused on challenges. The major rationale for contingent glossing is because it is actually the initial stage of linguistic analysis/description. As it involves explicit choices at every step of the way, it helps give access to new perspectives on the linguistic data which are otherwise inaccessible not only to the audience but to linguists themselves, and as a result, opens up new areas for linguistic exploration. For instance, Inako (2017) demonstrated how appropriate glossing choices can make the linguistic analysis more explicit to the readership by focusing on the different functions of so-called *te*-form, adopting different ways of glossing depending on its functions. Inako (forthcoming) reveals that even the initial stage of transcription, in this case using the Roman alphabet, involves issues that could be questioned from historical, dialectal and political perspectives. Contingent glossing is not just challenging; it is rewarding in its potentiality to open up frontiers for new exploration and its capacity to reveal more meanings in the language under description/analysis, in this case Japanese, to a greater audience not familiar with Japanese and yet interested in exploring meaning-making practices in different languages.

In order to demonstrate the capacity of contingent glossing, this paper focuses on so-called *keigo*, or honorifics, or in the SFL terms the features of Japanese described in the lexicogrammatical system of HONORIFICATION, BEAUTIFICATION and POLITENESS (Teruya, 2007; Inako 2017, 2019a). Since English does not have lexicogrammatical systems equivalent to these, this raises an interesting issue regarding inter-lingual glossing. A recent trend has emerged in Japan for younger generations to make use of more complex resources from these systems, although the simpler forms are taught as standard in school (Council for Cultural Affairs, 2007). From a social semiotic perspective, it means that new meaning potentials are emerging around this area of meaning resources, despite prescriptive pressure from older generations to use "correct" honorifics. The emerging expressions being longer and more complex than the "correct" honorifics goes against Martinet's (1967/1972) 'economy principle'. Such a phenomenon can be addressed and presented from a general social semiotic perspective using SFL, and can be an interesting topic to be shared and discussed in a wider international linguistic community, incorporating different contextual factors including genre and register. Since many languages including English do not have corresponding systems in their lexicogrammar, the challenge always lies in demonstrating the complexifying trend itself to the audience who are not familiar with these systems, and how they function not only in relation to tenor but also to other variables.

This paper does not intend to provide a full account of what honorifics in Japanese are and how they are complexifying and why. Instead, it focuses on the

methodology of how to make this linguistic phenomenon accessible to an international readership, in other words, using glossing as a methodology for focusing in on the microscopic view of these linguistic resources.

In the following sections, the paper begins by reiterating what contingent glossing refers to and what stages are involved. It then takes up some sample sentences that include standard and complexifying HONORIFICATION and POLITENESS. The analysis demonstrates the process and the issues to consider in order to make the resulting glosses contingent on what the study aims to explore regarding the linguistic phenomenon of complexifying honorifics.

2. Case study

As mentioned earlier, contingent glossing has two fundamental principles, i.e. be contingent on the purpose of the study, and be contrastive (McDonald, 2008). In its latest version, this involves the following stages.

Stages 1 and 2 are where the decision is made whether to gloss the linguistic data or not, and if so using what script. Since this case study is intended for an international readership who are not familiar with Japanese writing system but with the English writing system, which uses the Roman alphabet, the choice was made to romanize the text. Stages 3 to 5 consists of what glossing is generally taken to refer to, involves dividing the data into significant units and providing annotation as well as group level translation. Choices are involved as to the degree of detail into which the data should be divided, as well as the kind of annotation, whether a lexical equivalent or a grammatical category and again in how much detail. Finally, Stage 6 provides 'the contextually appropriate equivalent of the original' which is considered to be separate from a gloss (McDonald, 2008).

Table 1: Stages in contingent glossing (adopted from Inako, forthcoming)

Stage	process	decision making
Stage 1	decision making	whether to gloss the original data or not
Stage 2	transcription	whether/which script to use
Stage 3	segmentation	divide the data into significant units
Stage 4	annotation	provide unit-by-unit equivalent
Stage 5	Group rank translation	provide translation at group rank
(Stage 6)	clause (complex) rank translation	provide contextually appropriate equivalent of the original

As this is a case study intended to demonstrate how contingent glossing works, it uses the following linguistic data, constituted of two sets of made-up sentences. As this paper is intended for the audience who are familiar with the Japanese, it is presented at this initial stage using the Japanese scripts only.

Stage 0: Original sentences
Set 1:

(1) (at a cafe) ホットでよろしいですか。
(2) (in a business message) 支払いの件で連絡いたします。
Set 2:
(1') (at a cafe)ホットでよろしかったでしょうか。
(2') (in a business message) お支払いの件につきましてご連絡させていただきました。

Note that these sentences have already been categorized into two groups in the light of the purpose of the study for which they are to be used, i.e. to explore the phenomenon of complexifying honorifics in Japanese. The sentences in Set 1 are standard realization of honorifics in Japanese, while the sentences in Set 2 are the emerging versions that are more frequently used now, particularly among younger generations. To meet the purposes of the study, the glossing needs to be done in a way that illustrate how the sentences in Set 2 are more complex versions of those sentences in Set 2. It needs to highlight the contrast in the choices of honorifics in these sentences so that differences in meanings between the sentences in the two sets are made visible to the audience who are not familiar with this area of Japanese. In the next section, I follow each stage of contingent glossing and discuss what issues need to be considered and choices to be made in the light of the two fundamental principles introduced above, being contingent with the purpose of the study, and of being contrastive, in terms of the network of interlocking meaning distinctions in Japanese.

3. Glossing procedure

3.1 Stage 1: Transcription (romanizing)

Let us begin from Stage 1 and Stage 2. This case study assumes that the audience is not familiar with Japanese scripts but only with the Roman alphabet, and so the decision is made to transcribe the original examples using Roman letters. There are a number of existing conventions for romanizing in Japanese, and as with romanizing of other languages, this initial process involves theorizing (Becker, 1993/1995; McDonald, 2008; Inako, forthcoming). This case study adopts a modified version of Hepburn Style in which long vowels are represented following how they are written using kana, in order to reflect the moraic representation of the language. No segmentation is done at this stage. The resulting representation of the sentences looks like the following:

Set 1: Standard
(3) (at a cafe) *Hottodeyoroshiidesuka.*
(4) (in a business message) *Shiharainokenderenrakuitashimasu.*
Set 2: Complexifying
(3') (at a cafe) *Hottodeyoroshikattadeshouka.*
(4') (in a business message)
Oshiharainokennitsukimashitegorenrakusaseteitadakimashita.

3.2 Stage 2: Segmentation

Stage 2 is that of segmentation into units of wording, an issue that linguists working

on Japanese need to face in one way or another, because the Japanese writing system does not use space to divide words. Words and morphemes are defined differently from one theoretical framework to another. Since this study does not aim to identify what are words or morphemes in Japanese, we avoid using these terms and instead use the term *items* to refer to the linguistic units that hold one or more lexical meaning or grammatical function. In order to be contingent on the research purpose of exploring the meaning making functions of complexifying honorific expressions, segmentation is done to highlight the complexifying feature of the honorifics, while forms that do not make contrastive meanings, such as inflection, need not be attended to. As part of the process of segmentation, we can divide the romanized sentences into the following items.

However, the process of segmentation for Japanese does not simply involve dividing meaningful units using spaces in between. Japanese is an agglutinative language where lexical items including nouns and adjectives (e.g. *asu*, *yoroshii*) are followed by grammatical items such as particles and tense (e.g. *no*, *ta*), honorifics (e.g. *masu*) mostly occurring as the latter. In addition, some lexical items, such as *itadaku*, have been grammaticalized, no longer carrying the lexical meaning of the verb, receive, but representing the grammatical meaning of HONORIFICATION: *defer* (Inako, 2019a; see below). Grammatical items or grammaticalized lexical items do not appear on their own, but are attached to a lexical item, either before it as a prefix (e.g. *go* in '*go renraku*') or after it to form a higher ranked unit in the sentence such as groups and phrases. This kind of grammatical boundary is indicated by the marker '.' in order to distinguish it from group boundaries. Below is the resulting gloss in process.

Set 1: Standard
(5) (at a cafe) *Hotto.de yoroshii.desu.ka.*
(6) (in a business message) *Shiharai.no ken.de renraku.itashi.masu.*
Set 2: Complexifying
(5') (at a cafe) *Hotto.de yoroshikat.ta.des.hou.ka.*
(6') (in a business message) *O.shiharai.no ken.ni.tsuki.mashite go.renraku.s.asete.itadaki.masu.*

3.3 Stage 4: Annotation, group rank translation and clause rank translation

Annotation is what is usually referred to as gloss and is usually provided below the romanized version of the original text as shown below. It is the most important and challenging part of contingent glossing and requires going back and forth between segmentation and group rank translation (See 3.5).

Taking into account that Japanese is an agglutinative language, Inako (2017) found it useful to distinguish the way different kinds of items are annotated as below. Lexical items (e.g. *ii*, *asu*) are provided with a most approximate lexical equivalent in English (e.g. good, tomorrow). Grammatical items are provided with an upper-case abbreviation of the grammatical category using an English term. For instance, *masu* is annotated as POL (abbreviation of polite). Grammaticalized lexical items are provided with the lexical equivalent in English in upper case. When more than one meaning or function is realized in one item, a slash '/' is used to represent each meaning or function. For instance, *itadaku* can be used to represent the lexical

meaning of 'receive' or the grammatical function of 'defer'. In this case it is represented as 'receive/DEF'. However, *itadaku* can also be used as a grammaticalized lexical item to represent the meaning of 'defer' only. In the latter case, it is annotated as 'RECEIVE/DEF.'

(7) At a cafe: standard version:
hotto.de *yoroshii.desu.ka*
hot(-drink).be good/BEAU.be/POL.INTR
(8) In a business message: standard version
shiharai.no *ken.de* renraku.itashi.masu
payment.CLT matter.MTR contact.do/DEF.POL
(7') At a cafe: complexifying version
hotto.de *yoroshikat.ta.desh.ou.ka*
hot(-drink).ATTR good/BEAU.PST.be/POL.SUPP.INTR
(8') In a business message: standard version
o.shiharai.no *ken.ni.tsuki.mashite*
BEAU.payment.CLT matter.LOC.ATTACH.POL
go.renraku.s.asete.itadaki.mashi.ta
DEF.contact.DO.CAUS.RECEIVE/DEF.POL.PST

3.4 Stages 5 and 6: Finalizing glossing with group rank translation and clause rank translation

The final stages of glossing include providing group rank and clause rank translations below the gloss. At this point, it is useful to provide the original sentences in Japanese script. It is also useful to compare the standard and complexifying versions.

(9) At a café: standard version:
ホットで よろしいですか
hotto.de *yoroshii.desu.ka*
hot(-drink).be good/BEAU.be/POL.INTR
hot (coffee) is OK?
Translation: Would hot coffee be OK?
(9') At a cafe: complexifying version
ホットで よろしかったでしょうか
hotto.de *yoroshikat.ta.desh.ou.ka*
hot(-drink).ATTR good/BEAU.PST.be/POL.SUPP.INTR
hot coffee would have been good?
Translation Would hot (coffee) have been OK?
(10) In a business message: standard version
支払いの 件で 連絡いたします
shiharai.no *ken.de* renraku.itashi.masu
payment.CLT matter.MTR contact.do/DEF.POL
On the matter of payment contact you
Translation: I'm contacting you on the matter of payment.

(10') In a business message: standard version
お支払いの　　件につきまして
o.shiharai.no　　*ken.ni.tsuki.mashite*
BEAU.payment.CLT　　matter.LOC.ATTACH.POL
About the matter of paymennt
ご連絡させていただきました
go.renraku.s.asete.itadaki.mashi.ta
DEF.contact.DO.CAUS.RECEIVE/DEF.POL.PST
have contacted you.
Translation: I have contacted you with regard to the matter of payment.

Presented this way, the audience without knowledge of Japanese can compare the glosses of (9) with (9') and (10) with (10'), and find that more meanings are instantiated in the more recent versions (9') and (10') compared to the standard honorific sentences in (9) and (10). The difference between the two versions can be demonstrated in a more visible, tangible manner than if they were presented with the translations only.

Linguists can use the glossed data for further analysis in relation to wider contextual perspectives including register and genre, and discuss, for example, why complexification of honorifics is aa recent trend in the Japanese language, in spite of Martinet's economy principle, a question which goes beyond the scope of this study.

4. Discussion

The case study presented here has demonstrated that glossing, if done in a way that is contingent on the purpose of the study, can illustrate the contrasts the study aims to describe/analyse even to an audience without knowledge of the language.

However, there are numerous issues that linguists should be aware of when glossing even such a small set of data. Choosing annotation labels is not straightforward. In this case study, *de* in *hotto,de* is temporally interpreted as inflection of the Japanese copula, rather than a particle (Sugimoto 2014). As this use of *de* is very common in spoken Japanese, it is important that SFL grammar of Japanese incorporate this kind of recent usages. The status of the nominal modifier particle *no* is also an issue, but thanks to recent advancement in SFL, it can be interpreted as equivalent of what Martin (2021) refers to as clitic as in the function of English *of* as in *two cups of tea*. *De* in *ken.de* is interpreted marking the circumstantial option of matter (Teruya 2007). The same function applies is to *ni.tsuki.mashite*, which is a more polite realization of *nitsuite*, commonly translated as 'about'. But annotating the whole sequence of *nitsukimashite* as 'about' is not appropriate considering the purpose of this case study. Since the focus is on the complexifying nature of honorifics in Japanese, it is important to make visible that even a circumstantial element like *nitsuite* can be marked politeness-wise. The principle of "be contingent" is at play here, It should also be noted that *nitsuite* is actually a grammaticalization of *.ni tsuku*, or 'attach to'. In any case, glossing already requires examining linguistic units that are yet to be described or categorized.

This last point leads to important potential benefit of contingent glossing in

addition to catering for the audience. Providing glosses for linguistic data while following these two principles requires a wide range of knowledge including that of the meta-language of the lexicogrammar of the language under description as well as the theoretical framework that underpins the study for which the glossing is done, in this case SFL. Since SFL is an ever-evolving theory, so too is how a language may be glossed. Some of the annotations provided in this study may be replaced in the future as the theory and description of Japanese develops. That makes contingent glossing a challenging endeavour, but all the more interesting and promising in the sense that it opens new frontiers for linguistic exploration.

Appendix: List of annotations

BEAU: beautification

CAUS: causative

CLT: clitic

DEF:defer

INTR: interrogation

LOC: circumstance: location

MTR: circumstance: matter

POL: polite

PST: past

SUPP: mood: suppositive

SUS: mood: suspended

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第 28 回日本機能言語学会秋期大会プログラム

会期：2020 年 10 月 17 日（土）～ 10 月 23 日（金）
オンライン開催

開会の辞　日本機能言語学会会長 **Virginia Peng（立命館大学）**

早川 知江（名古屋芸術大学） [発表言語: 日本語]
「英語絵本読み聞かせに活用できる英語表現集の開発：小学校外国語教育における読み聞かせ技術の向上を目指して」

井 凌泓（同志社大学大学院学生）　伊藤 紀子（同志社大学） [発表言語: 日本語]
「雑談対話システムとのチャットにみられる対話破綻とユーザのコミュニケーション方略―ユーザ特性による違い―」

Patrick Kiernan (Meiji University) [To be presented in English]
'Interpersonal Language and Motivation in Zwift: An analysis of motivational language in an online cycle training program'

Ayumi Inako (Kobe City University of Foreign Studies) [To be presented in English]
'Zooming into Ever-complexifying Honorific Expressions in Japanese'

~~**Ayako Ochi (National Institute for Japanese Language and Linguistics)** [To be presented in English]~~
~~'The Lexicogrammar of Emotion in Japanese from a Systemic Function Perspective: an initial exploration'~~
*この発表はキャンセルされました。

閉会の辞　日本機能言語学会副会長 **佐々木真（愛知学院大学）**

The Program of JASFL 2020

Dates: October 17 (Sat) to 23 (Fri) 2020
Held online

Opening Remarks
President of JASFL **Virgina Peng（Ritsumeikan University）**

Chie Hayakawa (Nagoya University of the Arts) [To be presented in Japanese]
'Developing an English Expression Textbook for Picturebook Storytelling: Improving the Picturebook Storytelling Skill of Foreign Language Teachers in Elementary School'

Jing Linghong (Doshisha University Graduate School Student), Noriko Ito (Doshisha University) [To be presented in Japanese]
'Analysis of Dialogue Breakdown with a Chat Dialogue System and User's Communication Strategies with Special Reference to Use's Characteristics'

Patrick Kiernan (Meiji University) [To be presented in English]
'Interpersonal Language and Motivation in Zwift: An analysis of motivational language in an online cycle training program'

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*This presentation was cancelled.

Closing Remarks
Vice President of JASFL **Makoto Sasaki (Aichi Gakuin University)**

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