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Theoretical and Methodological Considerations for Understanding the Influence of Tacit

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Presentation Overview

- Overview of tacit knowledge as a concept

Tacit knowledge management within KO

Relationship to heuristic reasoning research

Framework for categorizing tacit knowledge

Presentation bibliography: tinyurl.com/ISKO23TK

· Kashruth (kosher/Jewish dietary laws) case study

Summary and questions

Tacit knowledge

refers to a semantic relationship in which the

be articulated or defined indirectly through another (often related) entity.

This is the gap between what we "know" and can "tell."

Tacit knowledge

refers to a semantic relationship in which the

be articulated or defined indirectly through another (often related) entity.

This is the gap between what we "know" and can "tell."

Because our body is involved in the perception of objects, it participates

(Polanyi 1966, 29)

These somatic experiences can leave us with an understanding of something without providing the means

a "somatic-limit" (2010, 101).

Notable examples include swimming and riding a bike 💰

Tacit Knowledge Management

Attempts to "convert" tacit knowledge into explicit forms can make (some) information discoverable and accessible. 52

Tacit gaps are often circumvented by focusing on the material objects and tangible attributes that "convert"

expressions (Rowley and Hartley 2016, 7).

The cataloging of music, dance, and other embodied art forms must contend with this most directly, but the

the issue (Smiraglia 2019).



Intangible and tacit qualities of a work—such as relationality (Littletree, Belarde-Lewis, and Duarte

Intuition & **Dual-Processing** Frameworks

In academic work on heuristic reasoning, dual-processing cognitive models distinguish between "quick" associative reactions

PROCESSING **CHARACTERISTICS**

CONTENT

PROCESSING

Affective Casual propensities

SYSTEM 1

Automatic

Effortless

Rapid, parallel

Opaque process

Abstractions

Table adapted from Kahneman & Frederick (2002, 51)

Statistics

Controlled Effortful

Slow, serial Self-aware

SYSTEM 2

tinyurl.com/ISKO23TK

6 of 27



SYSTEM 1

SYSTEM 2

Controlled Effortful

PROCESSING CHARACTERISTICS

Rapid, parallel Opaque process

Automatic

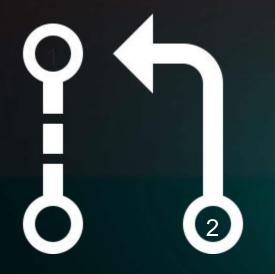
Effortless

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PROCESSING CONTENT Affective Casual propensities Statistics Abstractions

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SYSTEM 1

SYSTEM 2

Controlled Effortful

PROCESSING CHARACTERISTICS

Rapid, parallel Opaque process

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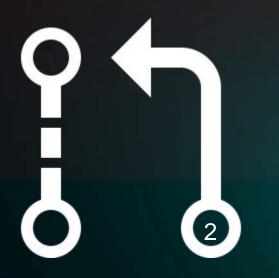
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PROCESSING CONTENT Affective Casual propensities Statistics Abstractions

Table adapted from Kahneman & Frederick (2002, 51)

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intuitive judgments occupy a position [...] between the automatic parallel operations

operations of reasoning." (Kahneman & Frederick 2002, 50)

"[Complex] cognitive operations eventually migrate from System 2 to System 1 as proficiency and skill are acquired." (ibid, 51) Tacit knowledge develops when System 2 cannot

integrated into System 1.



intuitive judgments occupy a position [...] between the automatic parallel operations

operations of reasoning." (Kahneman & Frederick 2002, 50)

"[Complex] cognitive operations eventually migrate from System 2 to System 1 as proficiency and skill are acquired." (ibid, 51)

Describing

Both "positive" and "negative" descriptions can be used to describe tacit knowledge.

However, the gap between what we "know" and what we can "tell" cannot be

Apophatic ("Negative") Descriptions

Tacit knowledge cannot be directly articulated using verbal

As tacit knowledge inherently lacks particular communicative

Ostensive ("Positive") Descriptions

- The tacit-somatic limit can be circumvented using
- Examples like bike riding and swimming are typically used

Language Affordances & Limitations

NEGATIVE DESCRIPTION

THE GOOD

Summarizes the concept fairly well

mite our obility

THE BAD

Limits our ability to identify new instances

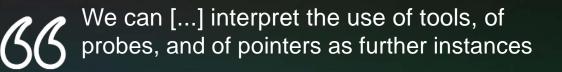
POSITIVE DESCRIPTION Offers a clear and accessible anchorpoint

Tacit knowledge becomes synonymous

Proposed Methodological

When analyzing KOS, categories, and classifications for the influence of tacit knowledge, discourse,

analyzes can be used to identify tacit "traces."



our list also the denotative use of language, as a kind of verbal pointing." (Polanyi 1966, 7)

Proposed Methodological

When analyzing KOS, categories, and classifications for the influence of tacit knowledge, discourse,

analyzes can be used to identify tacit "traces."

We can [...] interpret the use of tools, of probes, and of pointers as further instances

our list also the denotative use of language, as a kind of verbal pointing." (Polanyi 1966, 7)

Identifying tacit knowledge in discursive gaps

Domain analysis can be used to understand a professional, academic, or social domain. We can then deduce what has

Domain Analysis

Domain analysis offers tools and methods for identifying discursive tacit gaps.

Precedent in both KO and knowledge management

application of domain analysis to the study of

SELECT KO LITERATURE	SELECT KM LITERATURE
Hjørland & Albrechtsen 2003	Fetterhoff, Nila & McNamee 2011
Hjørland 2002	Venkitachalam & Busch 2012
Smiraglia 2013; 2015	Nonaka & Tekeuchi 1995
Marchese & Smiraglia 2013	Chen et al. 2019

Case Study: *Kashruth*

Kashruth refers to Jewish dietary laws. These laws describe particular eating practices, categorize animals used for food, and outline

SOURCES

EXAMPLE RULES

Non-kosher land animals Non-kosher fish Non-kosher birds Swarming insects Mixing meat & milk of domesticated animals "Wine of libation" The sciatic nerve

BIBLICAL PROHIBITIONS

Torah

Leviticus & Deuteronomy

Talmud Mishnah & Gemara

RABBINIC PROHIBITIONS

"Dangerous" foods Non-Jewish cheese or milk Non-Jewish bread Non-Jewish cooking Mixing meat & milk of non-domesticated animals Non-Jewish wine Tissue & fat surrounding the sciatic nerve

Abridged selection of *kashruth* guidelines. For more information, see Forst (1994).

MISHNAH

200 CE

*Kashruth-*adherent Jews seek to maintain continuity with rabbinic interpretations

Subsequent medieval commentaries have been used to clarify these rulings.

Following Tillett's taxonomy (2001), these texts exist in a network of descriptive and

GEMARA

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RASHI RAMBAN

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Speak to eat from a	ּבְּנֵי יִשְׁרָאֵל לַאמְר זָאת הָחַיָּה אֲשֵׁר תּאכְלו מִכְּל־הַ הָאֲרֵץ: the Israelite people thus: These are the creatures that ; imong all the land animals: סַת פִּרְסָׁה וְשׁסֵעֵת שֵׁׁסִעֹ פְּרָסֵׁת מֵעֵלֵת גֵּרֶה בְּבָּהָמֵה	אַשֶׁר עַלי יou may	 ⑦ About this Text ☆ Table of Contents Q Search in this Text ^K_A Translations (17) RELATED TEXTS 	
any anim	al that has true hoofs, with clefts through the hoofs, a ie cud—such you may eat.	תאֹכָלוּ:	 Commentary (68) Talmud (8) Midrash (8) 	EN EN
The follo hoofs, you	ל לָא תְאָכְלוּ מִמְעֵלֵי הַגָּרְה וּמְמֵפְרְסֵי הָפָּרְסֵה אֲת'תָ גֵּרְה הוּא וּפִרְסָה אַיְגֵנּו מַפְרְיס טְמֵא הְוּא לְכֵם: wing, however, of those that either chew the cud or h u shall not eat: the camel—although it chews the cud posfs: it is impure for you;	כִּי־מִעֲלֵה ave true	More RESOURCES Sheets (79) Web Pages (1066)	EN
25 72	ין כִּימַעֲלָה גַרָה הֿוּא וּפַרְסֵה לָא יַפְרֵים טָמֵא הָוּא י n—although it chews the cud, it has no true hoofs: it r you;		# Topics (6)	
- הוא	נבת כי־מעלת גרה הוא ופרסה לא הפריסה טמאה	ואת־האר	TOOLS	

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		ּבְּנֵי יִשְׂרָאֵל לֵאמֶׁר זָאׁת הַתַּיָּה אֲשֶׁר תּאֹכְלֿו מִכְּל־הַבְּהַמֶה'	דַּבְּרָוּ אֶל	2	Damban TATAU	D P-L: MISUNA	u

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אשר על־הארץ:

Speak to the Israelite people thus: These are the creatures that you may eat from among all the land animals:

כלן מפרסת פרסה ושסעת שסע פרסת מעלת גרה בבהמה אתה תאכלו:

any animal that has true hoofs, with clefts through the hoofs, and that chews* the cud-such you may eat.

אָד אַת־זָה לָא תָאכלוּ מַמַעַלִי הָגָרָה וּמַמַפָּרְסֵי הַפָּרְסָה אַת־הָגָמָל כי־מעלה גרה הוא ופרסה איננו מפריס טמא הוא לכם:

The following, however, of those that either chew the cud or have true hoofs, you shall not eat: the camel-although it chews the cud, it has no true hoofs: it is impure for you;

ואת־השפן כּי־מעלה גָרָה הוא ופָרְסָה לָא יָפָרָיס טָמַא הוא לְכַם:

the daman-although it chews the cud, it has no true hoofs: it is impure for you;

ואת־הארנבת כּי־מעלת גרה הוא ופרסה לא הפריסה טמאה הוא

Mishnah Niddah 6:9

It is written: "Whatever has fins and scales in the waters, in the seas, and in the rivers, you may eat them" (Leviticus 11:9). There is a principle with regard to the signs indicating that fish are kosher: Any fish that has scales has fins; and there are fish that have fins but do not have scales. Similarly, with regard to kosher animals it is written: "Whatever parts the hoof, and is wholly cloven-footed, and chews the cud, among the beasts, that you may eat" (Leviticus 11:3). Any animal that has horns has hooves: and there are animals that have hooves but do not have horns.

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eat from among all the land animals:

chews* the cud-such you may eat.

no true hoofs: it is impure for you;

impure for you;

Speak to the Israelite people thus: These are the creatures that you may

any animal that has true hoofs, with clefts through the hoofs, and that

The following, however, of those that either chew the cud or have true

hoofs, you shall not eat: the camel-although it chews the cud, it has

the daman-although it chews the cud, it has no true hoofs: it is

כלן מפרסת פרסה ושסעת שסע פרסת מעלת גרה בבהמה אתה

אד את־זה לא תאכלו ממעלי הגרה וממפרסי הפרסה את־הגמל

ואת־השפן כּי־מעלה גרה הוא ופרסה לא יַפְרָיס טְמֵא הָוּא לְכָם:

כי־מעלה גרה הוא ופרסה איננו מפריס טמא הוא לכם:

RASHI RAMBAN

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תאכלו:

אשר על־הארץ:

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Chullin 59a:17

§ The mishna states: The signs of an undomesticated animal were stated in the Torah. With regard to this, the Sages taught in a baraitar. These are the signs of an undomesticated animal. The Gemara interjects: Why does one need signs for an undomesticated animal? An undomesticated animal [bayya] is included in the category of a domesticated animal [behema] with regard to signs, as the verse states: "These are the living things [bayya] which you may eat among all the animals [behema] that are on the earth. Whatsoever parts the hoof" (Lewiticus 11/2-3). Rabbi Zeira said:

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Chullin 71a:3

From where do we derive that according to the Torah, a behema is included in the category of a hayya? As it is written: "These are the hayya that you may eat, among all the behema that are on the earth. Whatever parts the hoof" (Leviticus 11:2-3). How is this possible, that the verse mentions a hayya and then refers to a behema? This indicates that a domesticated

ואַת־הָאַרְגָּבָת כִּי־מַעֵלֵת גָרָה הָוא וּפַרְסָה לְא הָפָרֵיסָה טְמֵאֲה הָוא 🕚

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ואת־הארנבת כּי־מעלת גרה הוא ופרסה לא הפריסה טמאה הוא

RASHI RAMBAN

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דַּבְרָוּ אֶל־בְּנֵי יִשְׁרָאֵל לַאמְר זָאת הַחָיָה אֲשֵׁר תּאכְלוּ מְכָל־הַבְּהַמֶה אֲשֵׁר עַל־הָאֲרֶץ:	2	Ramban TALMUD Rashi MIS	HNAH
Speak to the Israelite people thus: These are the creatures that you may eat from among all the land animals:		מסרסת — Explain this as the Targur split. אַ Open @ Add to Sheet	n does: that is
כָּלוּ מִפְרֵסָת פִּרְסָה וְשׁסֵעַת שֶׁסַע פְּרָסֿת מִעֲלֵת גַרֲה בִּבְּהַמֵה אֹתֶה תאַכַלוּ:	3	שרסה – plante in O. F.; English= h ריק (open (c) Add to Sheet	oof.
any animal that has true hoofs, with clefts through the hoofs, and that chews* the cud—such you may eat.		אנט נס אופע אוט אופע AND HATH CLOVEN	FEET -
אָד אָת־זָה לָא תָאכְלוּ מִמְעֲלֵי הַגַּרָה וּמִמְפְרְסֵי הַפְּרְסֵה אֲת־הַגָּמְׁל כִּי־מַעֲלֵה גַרְה הוּא וּפְרְסָה אַיֵּנֵיו מִפְרְיס טְמֵא הָוּא לְכֵם:	4	which are divided above and below (The hoof must be cloven over the o so that from top to bottom they are hoofs are covered therefore not by o	entire height, split, and the one nail but by
The following, however, of those that either chew the cud or have true noofs, you shall not eat: the camel—although it chews the cud, it has no true hoofs: it is impure for you;		rwo); as the Targum has it: which h: (plural). For there are animals whos cleft on top but are not cleft and seg entirely, because they are joined belo on v. 26).	e hoofs are parated
וְאֶת־הַשְׁפְׁן כִּי־מַצְלֵה גַרָה הוא וּפִרְסֵה לָא יַפְרֶים טְמֵא הְוּא לְכֵם:	5	C [®] Open ⊕ Add to Sheet	
the daman—although it chews the cud, it has no true hoofs: it is			
impure for you;		WHICH CHEWETH TI מעלת גרה which brings up and spues up the fe	

entrails and returns it into its mouth to pound it

MISHNAH

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ואת־השפו כּי־מעלה גרה הוא ופרסה לא יפריס טמא הוא לכם:

the daman-although it chews the cud, it has no true hoofs: it is impure for you;

ואת־הארנבת כּי־מעלת גרה הוא ופרסה לא הפריסה טמאה הוא

WHATSOEVER PARTETH THE HOOF, AND IS WHOLLY CLOVEN-FOOTED, AND CHEWETH THE CUD, AMONG THE BEASTS: THAT MAY YE EAT. The meaning of this verse is that every animal which has these two signs, you may eat, but you may not eat it if it has only one sign. Now it would have been proper if He would merely state the law in this general way. However, He singled out the camel, the rockbadger, and the hare¹⁵² as having only the one sign of chewing the cud, and the swine as having the one sign of a parted hoof, 153 because there are no other animals in the world that have only one sign. He then repeated [as a general rule applying to those with no sign at all, and those with only one sign], Of their flesh ye shall not eat, 154 which denotes a negative commandment. Now Rashi wrote: "From this verse I know only about these [four animals mentioned]. Whence do I know that other unclean animals that have no signs of purity, may not be eaten? You derive it by

the rule of kal vachomer, 155 How is it with these four animals mentioned, that have some of the signs of purity? They are forbidden! [It follows all the more so that those which have none of the signs, are surely forbidden to be eaten!]" In the

Identifying Tacit Traces Well-documented historical



"Food, in this system (as in all other systems) is a social and cultural reality, and

impossible to ignore.

[...] The one who blesses will regularly notice—and construct or reinforce historical-cultural preferences, social inclusions or exclusions, and commensality or isolation. Although the Mishnah leaves many details unnoticed, the questions that must be asked when one eats, and must

perfectly evident." (Kraemer 2009, 80)

discussions

When gaps persist in this supplementary commentary,

domains allow us to track its

understanding previously thought to be self-evident.

Creatures That Swarm On Earth

	Land Animals	Lives in Water	Birds	Winged Swarming	Swarms On Earth
Rules	Has split hooves Chews cud Walks on paws	Lives in water Has fins	N/A	Has wings Swarms	Swarms on earth Crawls on its belly Walks on fours
		Swarms in water		Has jointed legs Leaps on ground	
Examples	Camel Hyrax/Daman	N/A	Eagle Vulture	Locusts* Bald locust	Mole Mouse
	Swine/Pig		Kite Falcons	Grasshopper	Gecko
			Ravens		Sand lizard Chameleon
			Nighthawk Seagull		
			Little owl Cormorant		
			Great owl		
			Pelican Bustard		
			Herons Hoopoe		

200 CE MISHNAH

Bats are Birds?

As the texts enthusiastically debate the most minor details,

bats are categorized as birds suggests a shared tacit understanding.

Literature on perceptual categories (e.g. Rosch 1975; Battig and

(Rosch 1973; Kempton 1981) make similar bird/bat associations.

GEMARA

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× Leviticus 11 The Contemporary Torah, JPS, 2006

the white owl, the pelican, and the bustard;

- וְאַת הַחְסִידְה הָאֲנְפֶה לְמִיגֵה וְאֶת־הַדּיּכִיפָת וְאֶת־הָעֲטַלַף: the stork; herons of every variety; the hoopoe, and the bat.
 - 20 כל שרץ העוף ההלף על־ארבע שקץ הוא לכם:

All winged swarming things that walk on fours shall be an abomination for you.

אָד אָת־זָה תָאכְלוּ מִכֹּל שֶׁרֶץ הָשׁׁף הַהֹלֶד עַל־אַרְבֶּע אֲשֶׁר־[לָוֹ] (לא) כְרָשִׂים מִמַּעַל לְרָגְלְיו לְנַתֵּר בְּהָן עַל־הָאָרָץ:

But these you may eat among all the winged swarming things that walk on fours: all that have, above their feet, jointed legs to leap with on the ground—

אָת־אָלָה מַהָּם תּאֹכְלוּ אֶת־הַאַרְבָּה לְמִינוֹ ואָת־הַסְּלְעֵם לְמִינָהוּ ואָת־הַתְרְגָל לְמִינַהוּ ואָת־הָתָגָב לְמִינָהוּ:

of these you may eat the following:* locusts of every variety; all varieties of bald locust; crickets of every variety; and all varieties of grasshopper.

יכל שֶׁרָץ הָעוֹף אֲשֶׁר־לְוֹ אַרְבַּע רַגְלֵיִם שֵׁקֵץ הָוּא לְכֵם: 22

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AND THE HER	ON. The an	atah (heron)	grows	

AND THE HERON. The anafah (heron) grows angry (yitannef) quickly.⁴⁹

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AND THE HOOPOE. The Sadducees say that the *dukhifat* (hoopoe) refers to the chicken. However, they are the world's greatest fools, for who told them this?

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AND THE BAT. A small bird that flies at night. The word *atalef* (bat) is a quadriliteral; that is, it comes from a four-letter root.

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Note that the word teshakketzu in teshakketzu min ha-of (these ye shall have in detestation among the fowls) (v. 13) has a slightly different grammatical meaning from teshakketzu in al teshakketzu et nafihotekhem (ye shall not make yourselves detestable) (v. 43). In the latter instance the word nafihotekhem (yourselves) is the object, while in the case of the fowl (v. 13) its meaning is, you shall know that they are detestable and they shall be considered detestable to you. All winged swarming things that at times fly and at times go upon all fours are detestable.⁵⁰ Bugs in the (Food) System Kraemer suggests that the sudden concern with bugs

product of 1980s politics and community infighting.

Lack of continuity with the domain's discourse signals a

gestures to shift in what bugs represent.



"The question remains 'why?' Why have vegetables all of a sudden become suspect?

discussed [...] are dangers seen to lurk in all quarters? Why in the mid-1980s were there, all of a sudden, 'bugs in the system?'"

Concluding Comments

Tacit knowledge impacts KO activities.

Although tacit knowledge cannot be expressed directly, individuals can either describe its presence or embed it into explicated language.

Domain analysis can be used to identify the influence of tacit knowledge in verbal language.

Religious dietary laws and cultural food categories often provide well-studied domains for studying tacit knowledge.

Thank you!

I welcome your comments, questions,

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