



Term of consent

Purpose

The Unified Foundational Ontology (UFO) introduces modeling concepts—such as Kind—to promote consistent classifications in conceptual modeling. Although these concepts are theoretically well-founded, empirical evidence is still needed to assess whether they are consistently applied in practice. This study aims to examine whether modelers make similar Kind-level classification decisions when analyzing domain elements across different contexts.

The data collected will be compared with results from another survey to explore the relationship between basic-level categories used to classify objects and the classes stereotyped as «kind» by conceptual modelers.

Research Questions

- Is there a relationship between basic-level categories used to classify objects and the classes stereotyped as «kind» by conceptual modelers?
- To what extent do modelers agree on what are the Kinds in a domain?

Key Concepts Used in the Survey

- **Rigid**: A type is rigid if its instances must belong to it in all possible situations in which they exist; it defines essential characteristics. For example, a *dog* is always a dog, whether it is a puppy or an adult.
- **Identity Principle**: A criterion used to distinguish one individual from another. A simple example is the identity principle of sets: two sets, A and B, are identical if, and only if, they contain the same elements.
- **Kind**: Represents rigid types that provide an identity principle for their instances and do not depend on other entities to exist. Examples include *person*, *car*, and *house*.

About the Survey

You will be presented with a completed taxonomy and asked to select the classes you believe represent a Kind, as defined in the Key Concepts section above. If you are unfamiliar with UFO, you may use your own reasoning

based on the definitions provided. The survey takes approximately 5–15 minutes. There are no expected risks or direct benefits. Moreover, participation is voluntary, and you may withdraw at any time by simply closing the survey.

Data Collected

- Native tongue
- Field of expertise
- Modeling experience
- Open-ended responses
- Confidence level
- Selected classes in the taxonomy
- Response times

No personally identifiable information will be collected, and field of expertise will not be linked to any individual.

Data Retention

Data will be retained only if it can support further empirical analysis. All data not included in the published study will be deleted by July 15th.

Informed Consent

Please read the consent form carefully before deciding whether to participate.

You can view or download the full consent form [here](#)

By clicking "I agree," you indicate that:

- You have read and understood the information provided.

- You voluntarily agree to participate in this study.
- If you do not agree, you will not be able to proceed.

Note: You do not need to fill, sign and send us the form. The file is just for your reference.

- ☐ I agree
- ☐ I do not agree

en_start

What is your primary field of work?

- ☐ Education
- ☐ Arts and Humanities (e.g., languages, history, design, visual arts)
- ☐ Social Sciences, Journalism and Information
- ☐ Business, Administration and Law
- ☐ Natural Sciences, Mathematics and Statistics
- ☐ Information and Communication Technologies (ICT)
- ☐ Engineering, Manufacturing and Construction
- ☐ Agriculture, Forestry, Fisheries and Veterinary
- ☐ Health and Welfare
- ☐ Services (e.g., transport, security, tourism)
- ☐ Other (please specify):

en_conceptual

How would you self-evaluate your experience with conceptual modeling?

- ☐ Novice (Limited experience, new to the field, needs significant guidance, creates basic models with low complexity.)
- ☐ Beginner (Basic understanding, may require guidance, developing expertise, capable of simple models.)
- ☐ Intermediate (Good grasp of concepts and tools, works independently on many tasks, creates moderately complex models.)
- ☐ Advanced (High expertise, works independently, guides less experienced modelers, creates complex and accurate models.)
- ☐ Expert (Highly proficient and sought after, handles complex tasks,, in-depth understanding of methodologies and tools.)

Which of the activities below best describes how you have been involved with conceptual modeling over the years?

- ☐ I have been involved in reading and providing feedback on conceptual models created by other people.
- ☐ I have been involved in creating conceptual models myself.
- ☐ I have been involved in documenting conceptual models.
- ☐ I have been involved in implementing conceptual models.
- ☐ I have been involved in updating conceptual models created by someone else.
- ☐ Other (please specify)

How much time (in years) have you been involved with conceptual modeling?

en_UFO

How familiar are you with the concepts proposed by the Unified Foundational Ontology?

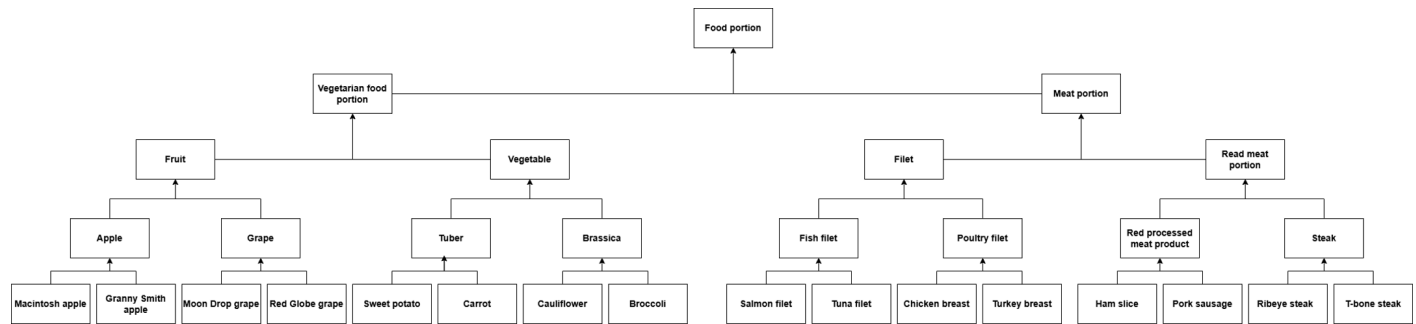
- ☐ Not at all familiar
- ☐ Slightly familiar
- ☐ Neutral
- ☐ Familiar
- ☐ Very familiar

en_taxonomies_well_known

Please identify Kinds the in the taxonomy below by clicking on the appropriate class. You may select more than one.

(Note: If present, a Kind may appear at any level of the taxonomy.)

Download taxonomy



followup_well_known_sp

How confident are you in your choices of which classes are Kinds?

(Please select one)

- ☐ Very unsure
- ☐ Somewhat unsure
- ☐ Neutral
- ☐ Somewhat confident
- ☐ Very confident

Please, indicate the terms you found ambiguous or challenging to categorize. If none, skip this question.

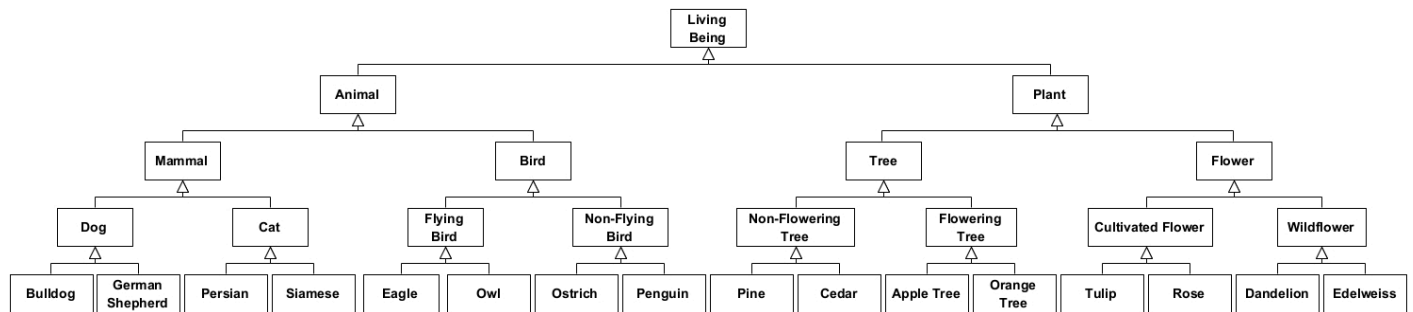
- | | |
|---|---|
| <input type="checkbox"/> Food portion | <input type="checkbox"/> Granny smith apple |
| <input type="checkbox"/> Vegetarian food portion | <input type="checkbox"/> Moon drop grape |
| <input type="checkbox"/> Meat portion | <input type="checkbox"/> Red globe grape |
| <input type="checkbox"/> Fruit | <input type="checkbox"/> Sweet potato |
| <input type="checkbox"/> Vegetable | <input type="checkbox"/> Carrot |
| <input type="checkbox"/> Filet | <input type="checkbox"/> Cauliflower |
| <input type="checkbox"/> Red meat portion | <input type="checkbox"/> Broccoli |
| <input type="checkbox"/> Apple | <input type="checkbox"/> Salmon fillet |
| <input type="checkbox"/> Grape | <input type="checkbox"/> Tuna fillet |
| <input type="checkbox"/> Tuber | <input type="checkbox"/> Chicken breast |
| <input type="checkbox"/> Brassica | <input type="checkbox"/> Turkey breast |
| <input type="checkbox"/> Fish fillet | <input type="checkbox"/> Ham slice |
| <input type="checkbox"/> Poultry fillet | <input type="checkbox"/> Pork sausage |
| <input type="checkbox"/> Red processed meat product | <input type="checkbox"/> Ribeye steak |
| <input type="checkbox"/> Steak | <input type="checkbox"/> T-bone steak |
| <input type="checkbox"/> MacIntosh apple | |

en_wellknown_2

Please identify Kinds the in the taxonomy below by clicking on the appropriate class. You may select more than one.

(Note: If present, a Kind may appear at any level of the taxonomy.)

Download taxonomy



followup_wk_2

How confident are you in your choices of which classes are Kinds?

(Please select one)

- ☐ Very unsure
- ☐ Somewhat unsure
- ☐ Neutral
- ☐ Somewhat confident
- ☐ Very confident

Please, indicate the terms you found ambiguous or

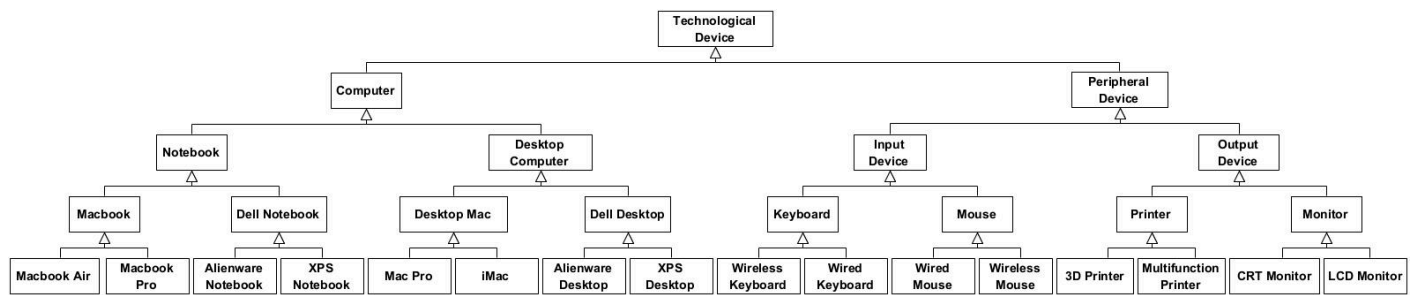
challenging to categorize. If none, skip this question.

- | | | |
|--|---|--------------------------------------|
| <input type="checkbox"/> Living being | <input type="checkbox"/> Non-flowering tree | <input type="checkbox"/> Ostrich |
| <input type="checkbox"/> Animal | <input type="checkbox"/> Flowering tree | <input type="checkbox"/> Penguin |
| <input type="checkbox"/> Plant | <input type="checkbox"/> Cultivated flower | <input type="checkbox"/> Pine |
| <input type="checkbox"/> Mammal | <input type="checkbox"/> Wildflower | <input type="checkbox"/> Cedar |
| <input type="checkbox"/> Bird | <input type="checkbox"/> Bulldog | <input type="checkbox"/> Apple Tree |
| <input type="checkbox"/> Tree | <input type="checkbox"/> German Shepherd | <input type="checkbox"/> Orange Tree |
| <input type="checkbox"/> Flower | <input type="checkbox"/> Persian | <input type="checkbox"/> Tulip |
| <input type="checkbox"/> Dog | <input type="checkbox"/> Siamese | <input type="checkbox"/> Rose |
| <input type="checkbox"/> Cat | <input type="checkbox"/> Eagle | <input type="checkbox"/> Dandelion |
| <input type="checkbox"/> Flying bird | <input type="checkbox"/> Owl | <input type="checkbox"/> Edelweiss |
| <input type="checkbox"/> Non-flying bird | | |

en_wellknown_3

Please identify Kinds the in the taxonomy below by clicking on the appropriate class. You may select more than one.
(Note: If present, a Kind may appear at any level of the taxonomy.)

[Download taxonomy](#)



followup_wk_3

How confident are you in your choices of which classes are Kinds?

(Please select one)

- ☐ Very unsure
- ☐ Somewhat unsure
- ☐ Neutral
- ☐ Somewhat confident
- ☐ Very confident

Please, indicate the terms you found ambiguous or challenging to categorize. If none, skip this question.

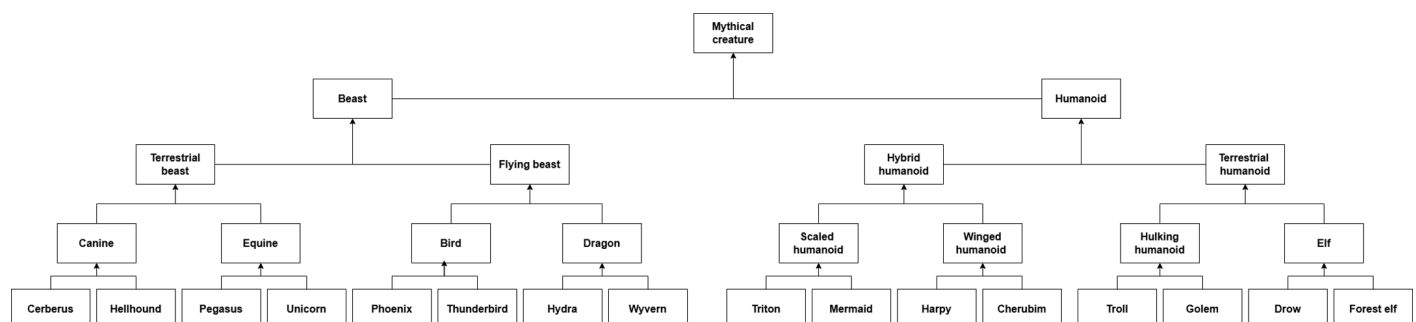
- | | | |
|---|-----------------------------------|--|
| <input type="checkbox"/> Technological Device | <input type="checkbox"/> Keyboard | <input type="checkbox"/> Alienware Desktop |
| <input type="checkbox"/> Computer | <input type="checkbox"/> Mouse | <input type="checkbox"/> XPS Desktop |
| <input type="checkbox"/> Peripheral Device | <input type="checkbox"/> Printer | <input type="checkbox"/> Wireless Keyboard |
| <input type="checkbox"/> Notebook | <input type="checkbox"/> Monitor | <input type="checkbox"/> Wired Keyboard |

- | | | |
|---|---|--|
| <input type="checkbox"/> Desktop Computer | <input type="checkbox"/> Macbook Air | <input type="checkbox"/> Wired Mouse |
| <input type="checkbox"/> Input Device | <input type="checkbox"/> Macbook Pro | <input type="checkbox"/> Wireless Mouse |
| <input type="checkbox"/> Output Device | <input type="checkbox"/> Alienware Notebook | <input type="checkbox"/> 3D Printer |
| <input type="checkbox"/> Macbook | <input type="checkbox"/> XPS Notebook | <input type="checkbox"/> Multifunction Printer |
| <input type="checkbox"/> Dell Notebook | <input type="checkbox"/> Mac Pro | <input type="checkbox"/> CRT Monitor |
| <input type="checkbox"/> Desktop Mac | <input type="checkbox"/> iMac | <input type="checkbox"/> LCD Monitor |
| <input type="checkbox"/> Dell Desktop | | |

en_taxonomies_not_well_known

Please identify Kinds the in the taxonomy below by clicking on the appropriate class. You may select more than one.
(Note: If present, a Kind may appear at any level of the taxonomy.)

[Download taxonomy](#)



followupnotw1

How confident are you in your choices of which classes are Kinds?

(Please select one)

- ☐ Very unsure
- ☐ Somewhat unsure
- ☐ Neutral
- ☐ Somewhat confident
- ☐ Very confident

Please, indicate the terms you found ambiguous or challenging to categorize. If none, skip this question.

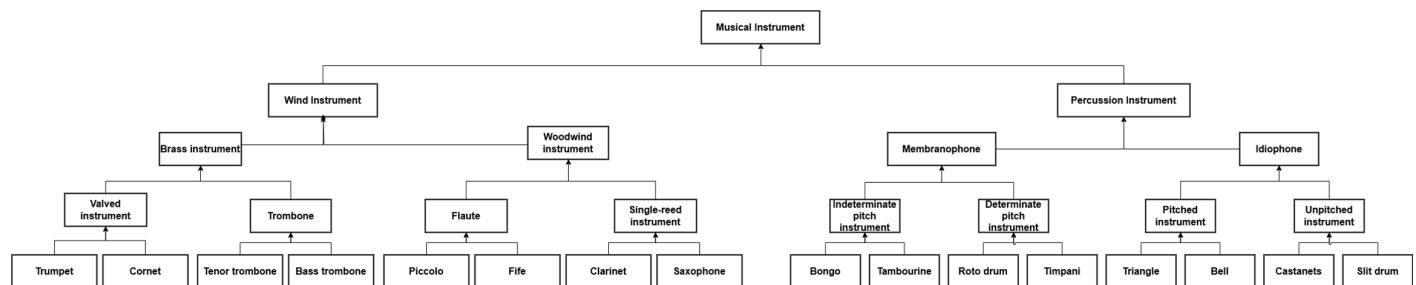
- | | | |
|---|---|-------------------------------------|
| <input type="checkbox"/> Mythical Creature | <input type="checkbox"/> Scaled Humanoid | <input type="checkbox"/> Hydra |
| <input type="checkbox"/> Beast | <input type="checkbox"/> Winged Humanoid | <input type="checkbox"/> Wyvern |
| <input type="checkbox"/> Humanoid | <input type="checkbox"/> Hulking Humanoid | <input type="checkbox"/> Triton |
| <input type="checkbox"/> Terrestrial beast | <input type="checkbox"/> Elf | <input type="checkbox"/> Mermaid |
| <input type="checkbox"/> Flying beast | <input type="checkbox"/> Cerberus | <input type="checkbox"/> Harpy |
| <input type="checkbox"/> Hybrid humanoid | <input type="checkbox"/> Hellhound | <input type="checkbox"/> Cherubim |
| <input type="checkbox"/> Terrestrial humanoid | <input type="checkbox"/> Pegasus | <input type="checkbox"/> Troll |
| <input type="checkbox"/> Canine | <input type="checkbox"/> Unicorn | <input type="checkbox"/> Golem |
| <input type="checkbox"/> Equine | <input type="checkbox"/> Phoenix | <input type="checkbox"/> Drow |
| <input type="checkbox"/> Bird | <input type="checkbox"/> Thunderbird | <input type="checkbox"/> Forest Elf |



en_notwk_2

Please identify Kinds the in the taxonomy below by clicking on the appropriate class. You may select more than one.
(Note: If present, a Kind may appear at any level of the taxonomy.)

[Download taxonomy](#)



followupnotw2

How confident are you in your choices of which classes are Kinds?

(Please select one)

- ☐ Very unsure
- ☐ Somewhat unsure

- ☐ Neutral
- ☐ Somewhat confident
- ☐ Very confident

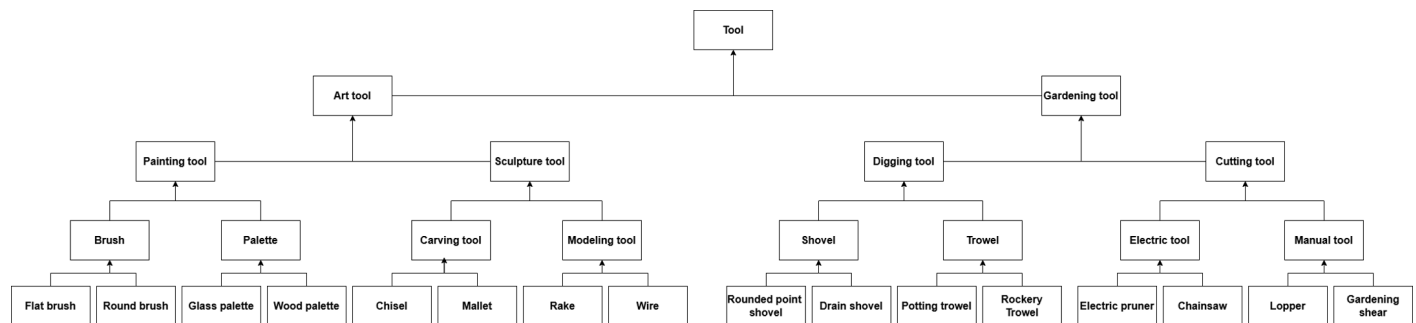
Please, indicate the terms you found ambiguous or challenging to categorize. If none, skip this question.

- | | | |
|---|---|-------------------------------------|
| <input type="checkbox"/> Musical Instrument | <input type="checkbox"/> Indeterminate pitch instrument | <input type="checkbox"/> Clarinet |
| <input type="checkbox"/> Wind Instrument | <input type="checkbox"/> Determinate pitch instrument | <input type="checkbox"/> Saxophone |
| <input type="checkbox"/> Percussion Instrument | <input type="checkbox"/> Pitched instrument | <input type="checkbox"/> Bongo |
| <input type="checkbox"/> Brass Instrument | <input type="checkbox"/> Unpitched instrument | <input type="checkbox"/> Tambourine |
| <input type="checkbox"/> Woodwind Instrument | <input type="checkbox"/> Trumpet | <input type="checkbox"/> Roto drum |
| <input type="checkbox"/> Membranophone | <input type="checkbox"/> Cornet | <input type="checkbox"/> Timpani |
| <input type="checkbox"/> Idiophone | <input type="checkbox"/> Tenor trombone | <input type="checkbox"/> Triangle |
| <input type="checkbox"/> Valved Instrument | <input type="checkbox"/> Bass trombone | <input type="checkbox"/> Bell |
| <input type="checkbox"/> Trombone | <input type="checkbox"/> Piccolo | <input type="checkbox"/> Castanets |
| <input type="checkbox"/> Flaute | <input type="checkbox"/> Fife | <input type="checkbox"/> Slit drum |
| <input type="checkbox"/> Single-reed instrument | | |

en_notwk_3

Please identify Kinds the in the taxonomy below by clicking on the appropriate class. You may select more than one.
(Note: If present, a Kind may appear at any level of the taxonomy.)

[Download taxonomy](#)



followupnotw3

How confident are you in your choices of which classes are Kinds?

(Please select one)

- ☐ Very unsure
- ☐ Somewhat unsure
- ☐ Neutral
- ☐ Somewhat confident
- ☐ Very confident

Please, indicate the terms you found ambiguous or challenging to categorize. If none, skip this question.

- | | | |
|---|--|---|
| <input type="checkbox"/> Tool | <input type="checkbox"/> Shovel | <input type="checkbox"/> Rake |
| <input type="checkbox"/> Art tool | <input type="checkbox"/> Trowel | <input type="checkbox"/> Wire |
| <input type="checkbox"/> Gardening tool | <input type="checkbox"/> Electric tool | <input type="checkbox"/> Rounded point shovel |
| <input type="checkbox"/> Painting tool | <input type="checkbox"/> Manual tool | <input type="checkbox"/> Drain shovel |
| <input type="checkbox"/> Sculpture tool | <input type="checkbox"/> Flat brush | <input type="checkbox"/> Potting trowel |
| <input type="checkbox"/> Digging tool | <input type="checkbox"/> Round brush | <input type="checkbox"/> Rockery trowel |
| <input type="checkbox"/> Cutting tool | <input type="checkbox"/> Glass palette | <input type="checkbox"/> Electric pruner |
| <input type="checkbox"/> Brush | <input type="checkbox"/> Wood palette | <input type="checkbox"/> Chainsaw |
| <input type="checkbox"/> Palette | <input type="checkbox"/> Chisel | <input type="checkbox"/> Lopper |
| <input type="checkbox"/> Carving tool | <input type="checkbox"/> Mallet | <input type="checkbox"/> Gardening shear |
| <input type="checkbox"/> Modeling tool | | |

final_followup

What made you decide which classes are Kinds?

You can mention what features, ideas, or intuitions guided your choices.



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