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# **A Psycholinguistic Model of Man-Machine Interactions Based on Needs of Human Personality**

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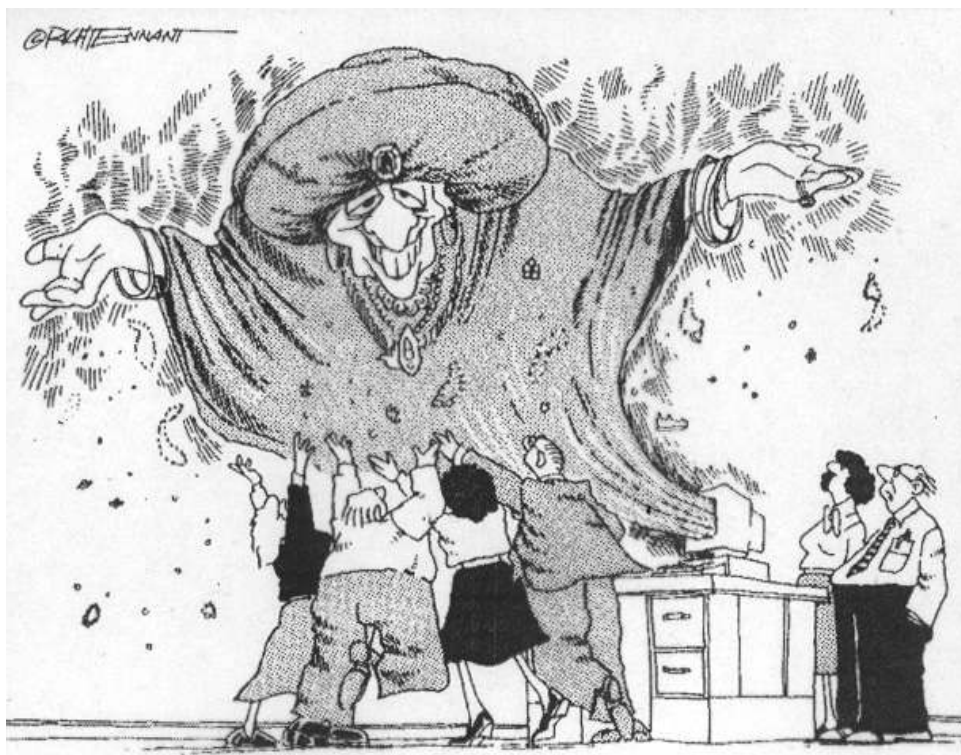


# Intelligence: natural *versus* artificial Will they complement each other or pose a threat to each other?

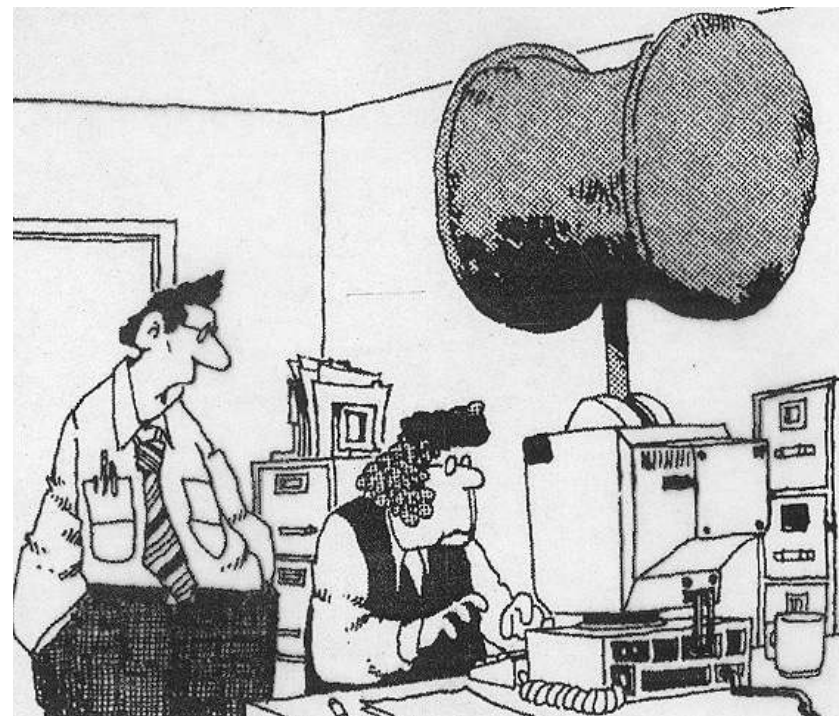




**This will depend on subjective judgement of artificial intelligence by various people.**



Either this way?



Or that way?

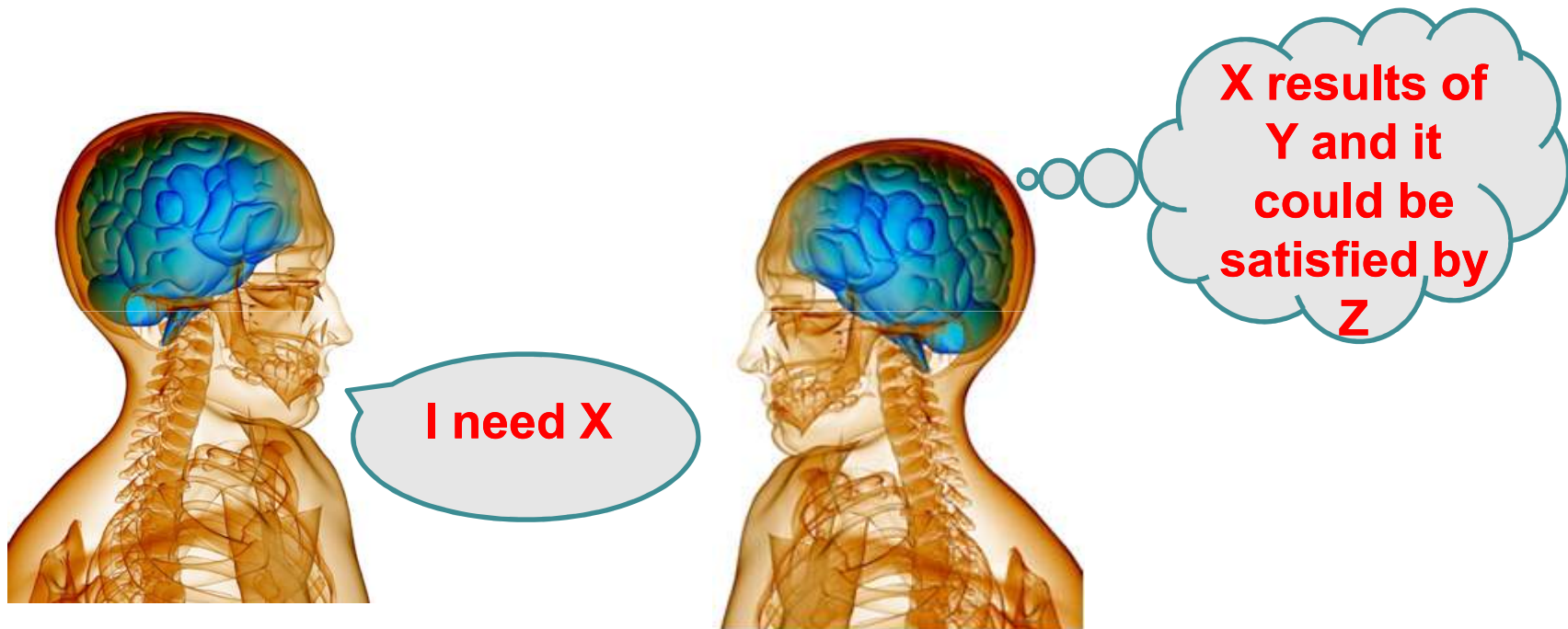


**Emotions play equally essential role  
as rational reasoning when judge  
intelligence of a parter.**

**A computer often says „No” even if it is equipped with artificial intelligence.**



## Surface statement structure [transformative grammar] often hides its default context and intentions...



**Associations are a basis  
for intelligent behaviours!**



**Natural intelligence of people using a knowledge of a problem, inverbal context and associations can help us to understand, what X results of and in what way X can be satisfied.**

**Solitary logic can be many times insufficient and sometimes it can even misinform somebody.**

## Communication and a influence of natural and artificial intelligence



**Intension associations rather than their logical analysis are a basis for various behaviours, which can be treated as intelligent!**



**Artificial intelligence is only accepted if a high level of similarity will be provided of computer behaviour and **kind** human behaviour.**

**It means that a computer have to understand intentions, reasons and motives of human intelligence actions.**



**The intelligent computer should be able to decipher user needs. In other case it will be unable to create and recall proper associations and adapt its algorithms or ways of a conversation.**



## **Understanding and agreement enable cooperation and acceleration of completion of joint goals and dreams...**

Computers can always reach an agreement after given procedures.



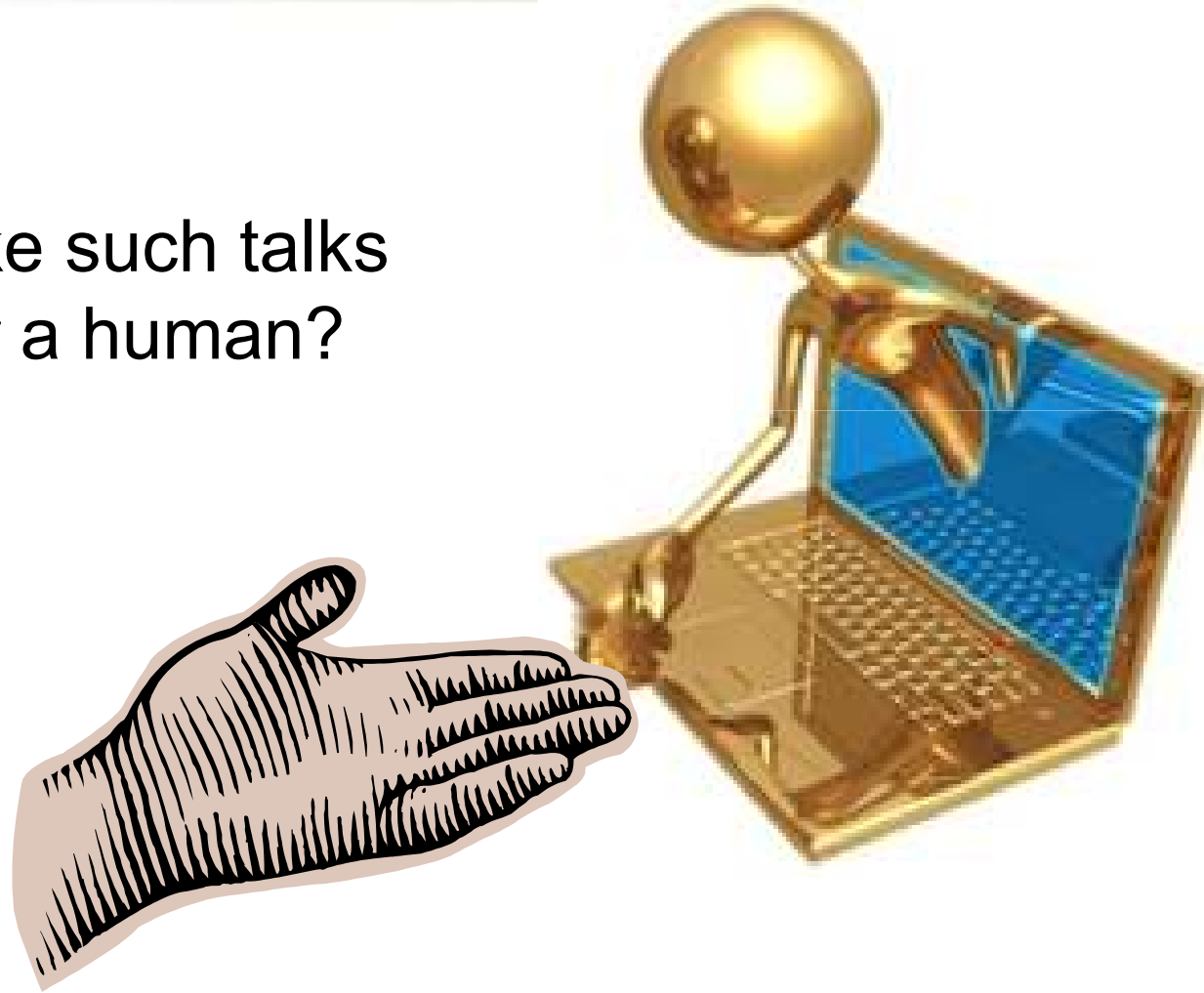
On the other hand, people cooperate well if they like and understand each other.





**Man-machine cooperation requires that user should like to cooperate with a computer and to talk to it.**

How to make such talks pleasant for a human?





## **Understanding and reacting to other person needs is treated as indication of individual intelligence and is pleasant**

This task is not easy because people join with others not only for professional jobs and reasons but also for their shared passions, goals, wishes, dreams, missions, similar behaviors, interests and other reasons coming from their physiology and personality.





**So far, it is impossible to make a hobby with a computer.**

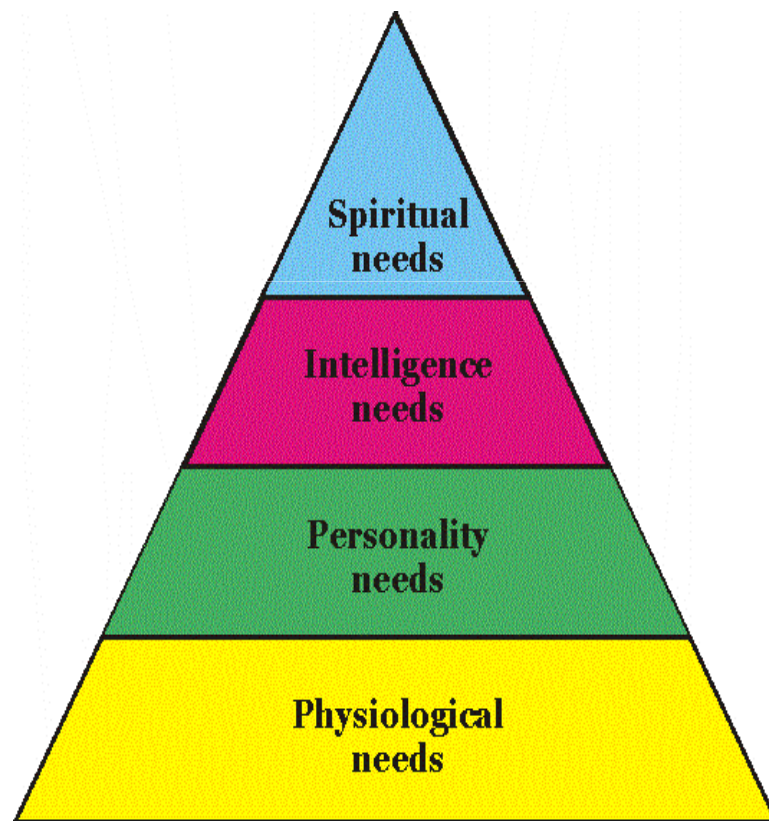




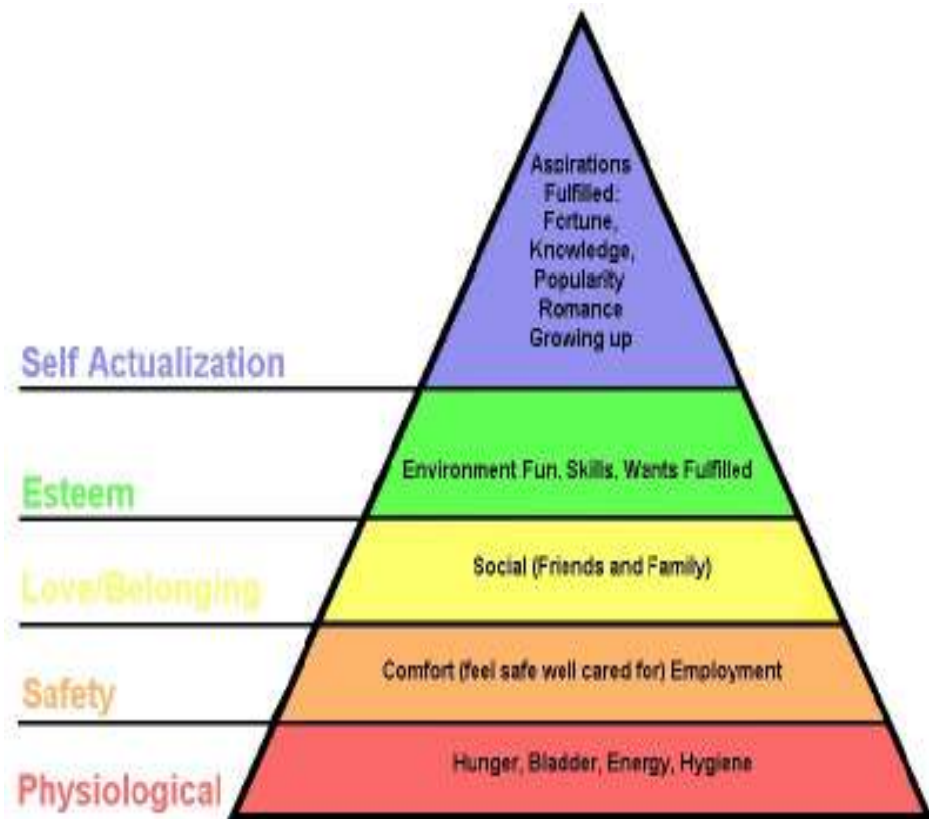
**Therefore a computer could be liked  
if it will consider for human needs.**

## The used hierarchy of human needs

There are lots of various hierarchies of human needs.



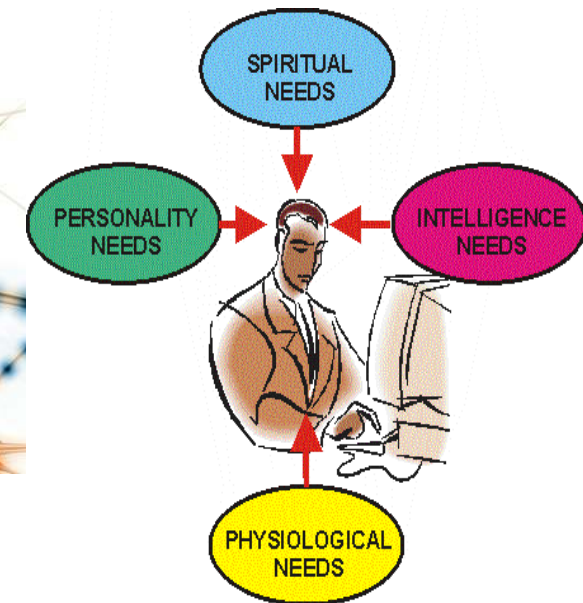
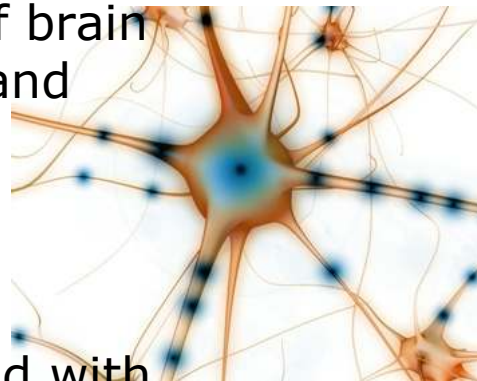
The used hierarchy of human needs



The pyramid of Maslow needs

## Etymology of used hierarchy of human needs

- **physiological needs** – bound up with a specific construction and building of a human body.
- **personality needs** – bound up with an individual differences in a construction, types, numbers and proportions of neurotransmitters and postsynaptic receptors - after some biopsychological theories.
- **intelligence (association) needs** – bound up with a degree of brain development, construction and complexity as well as interconnection of its centers, units and neurons.
- **spiritual needs** – connected with a strength of will to do well influence others or stay selfish.

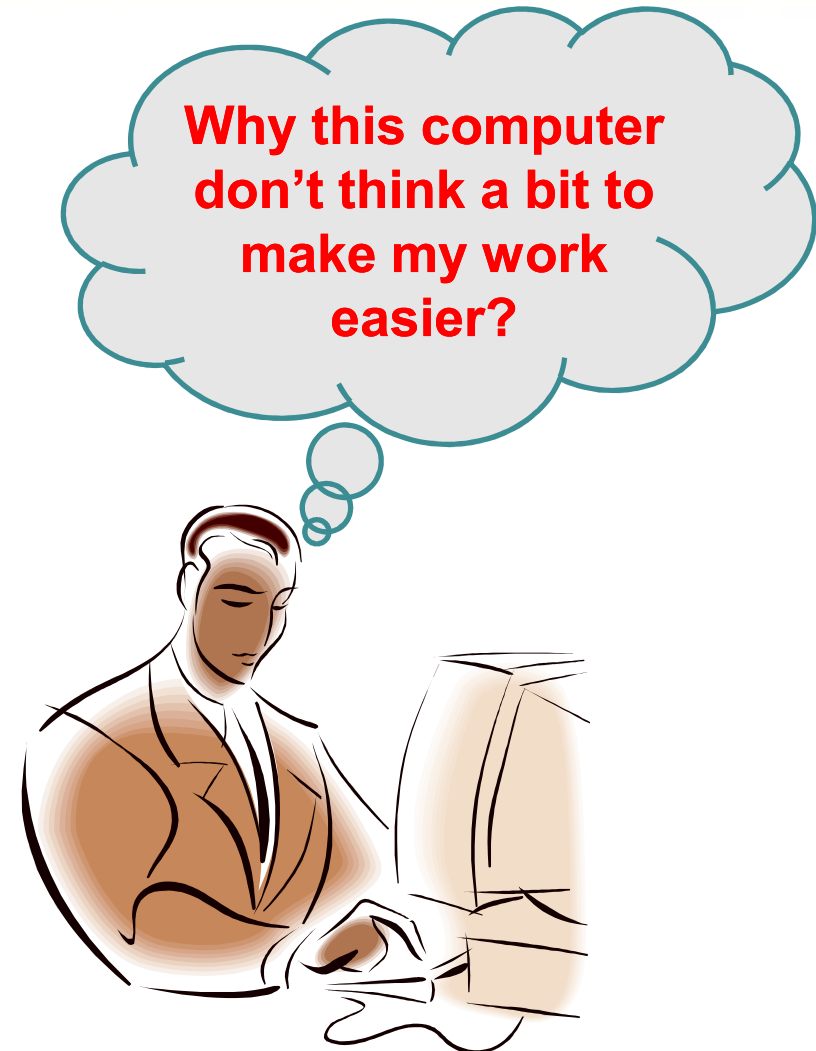




## **AI system should recognize human needs and motivations actively in order to achieve better effectiveness...**

Each person subconsciously is dragged into certain behaviours coming from his or her personality.

Personality triggers a group of needs that each person will to fulfill.





# COMPUTER tool of work **or** intelligent assistant?

Thanks to AI development computer can evolve in future.

Today, it is generally a tool of work that processes and organizes data.

Tomorrow, it can be able to automatically and passively recognize and classify human needs and interests in order to fulfill them.



EVOLUTION





## **Perceiving of human needs**

**The ability to perceive needs of others is usually sensed as an indication of one's intelligence.**

**This can make computers more intelligent, sensible, friendly, talkative and helpful for people (and other intelligent computers).**



## Recognizing of personality needs

Needs can be recognized watching the following behaviours:

- **verbal**, i.e. a way of talking, used vocabulary, phrases, inflection, sentence constructions
- **inverbal (body language)**, i.e. facial and body expressions, a way of movement, dressing-up, driving cars, bicycles, environment, family etc.

**Usually we are unable to honestly and objectively classify own personality.**

Each person usually aspires to some changes of own behaviour and classify own personality after own desires or complexes.

This is why asking a person about his or her features of personality is pointless and unreliable.



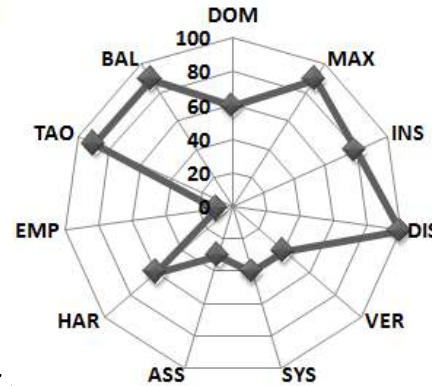


## Automatic passive classification of personality.

Therefore, this presentation concerns **automatic** verbal recognition and classification of personality needs, which can be watched and analyzed during a talk to e.g. computer chatbot or any other kind of artificial intelligent assistant.

# How to recognize personality linguistically?

Measurement of intensities of personality types



**A computer can analyze person responses and answers in order to recognize his or her personality needs.**

**A computer doesn't know, what a person is thinking about.**

**We know what he does and how he reacts and answers to given tasks and information.**



## Application of this method

**The presented method can be used in various linguistic AI systems, e.g. chatbots, as well as for analysis of e-mails, placing orders, speeches, complaint processing etc.**



## **Adaptation of interfaces and a way of communication**

**The presented method can be also used to automatic tuning and adapting of interface after preferences of a user and a way of constructing sentences when talking to him in order to achieve better user response and impression of computer intelligence and ability to care of users businesses.**



## **Personality need fulfillment and its costs**

**Personality needs can be usually fulfilled cheap.**

**It doesn't cost anything to be polite and select proper phrases or words with user personality!  
It triggers positive user responses.**

**It is very important in view of e-commerce, e-business, e-shop, e-learning, CRM, chatbot systems.**



## **Cheap alternative for expensive satisfaction**

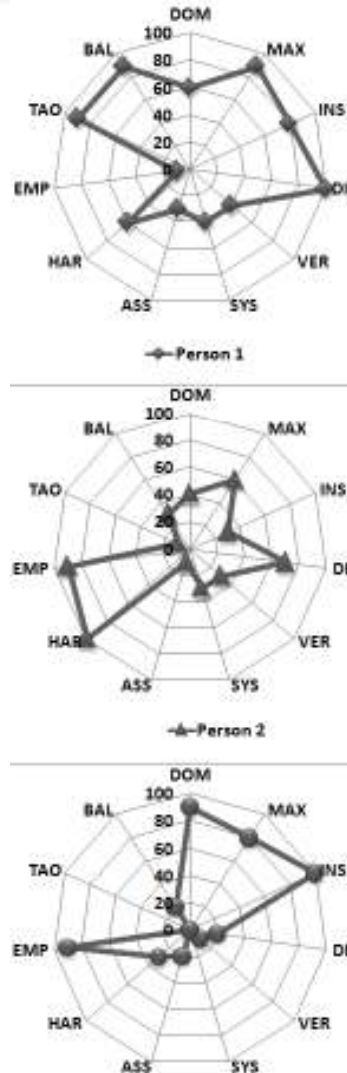
**It can be used as alternative or supplement to fulfill other needs that are more expensive in view of trade or negotiation.**

**If customer is satisfied on personality level he will not strive to get satisfaction on other levels (e.g. better price, longer payment date) so hard.**



## Typology described in this paper concerns 11 personality types (traits of character)

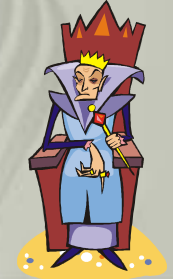
Dominant (DOM)  
Maximalist (MAX)  
Inspiring (INS)  
Discovering (DIS)  
Verifying (VER)  
Systematic (SYS)  
Assurant (ASS)  
Harmonious (HAR)  
Emphatic (EMP)  
Task-Oriented (TAO)  
Balancing (BAL)



For each personality type can be pointed:

- ✓ characteristic groups of behaviours and reactions
- ✓ linguistic way of recognition and classification
- ✓ characteristic words, phrases, idioms, inflection
- ✓ ways of acting to maximize positive responses
- ✓ ways of acting to minimize negative responses
- ✓ personality conflicts
- ✓ complex personality types

## Dominant (DOM)



### Likes:

- decide, choose, boss [sb] around, dominate, manage, speak and decide on behalf of himself and other people, rule, govern,
- choose, select, regulate, designate,
- order, make sb to do sth, determine, restrain, control sb or sth, steer, drive, manipulate, conduct, handle, influence,
- have got own opinion, convince sb of his point of view,
- be kindly asked, thanked, bowed, curtsied, given way, yielded by sb,
- be independent, unhampered and unhindered
- lead, operate, persuade, teach, advise, instruct, appoint, recommend, force, want, will,
- have assets, original, intact, virgin and untouched sth/sb.

## Dominant (DOM)



### Dislikes:

- be dominated, managed, determined, restrained, controlled, forced, ordered, steered,
- manipulated, persuaded, admonished, advised, instructed,
- when somebody decides or chooses something on behalf of him
- when somebody criticizes his opinion, choices, decisions things, thought, ideas and proposals,
- admit to defeats, failures, mistakes, lost, inability, incapacity, powerlessness, helplessness and everything else what debases or demeans him before others

## Dominant (DOM)



### Treatment:

- kindly or obsequious ask him for something (things, actions or opinions), thank him,
- leave him alternatives, possibilities, a choice, if possible carry out his selection and a choice,
- do not take him away consciousness of independence; neither make, push, force, drive, persuade, recommend, order, command him nor decide on behalf of him,
- neither narrow nor limit a selection or alternatives too much,
- neither admonish nor instruct him,
- sensitively advise or offer him solutions, products, propositions if he asks for it but leave him to make a final choice or make a final decision,
- do not show disrespect to his opinion or point of view,
- neither ignore nor disregard him



## Dominant (DOM)



**When a DOM individual is incorrectly treated he usually:**

- refuses, cancels, declines, denies, opposes or goes against somebody's orders or is perverse, contrary or revolt against somebody or something

**When a DOM individual is correctly treated he usually:**

- shows his favour, help, assistance, kindness and generosity,
- is interested to cooperate.



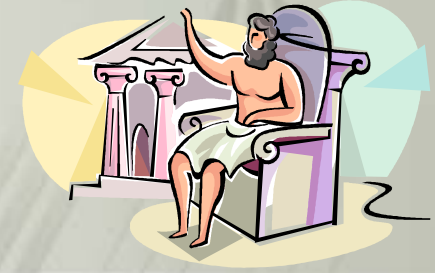
## Dominant (DOM)



**Often says:** *I, my, we, us, our, want, need, decide, choose, select, elect, control, steer, drive, conduct, program, order, book, recommend, independent, original, intact, untouched, virgin, have sth, own sth, owner, possess sth; [on] my own, unaided; I/we [would] like, my/our opinion, my/our choice, from my/our point of view, to my mind, I/we think, I/we wish; you right, I/we have decided to/on, not to be dependent on sb/sth, believe me, do what I say, I/we recommend, I/we agree with, I/we disagree with/on/about, I/we concur with.*

Recomends, commands and orders; speaks on behalf of a group of people; expressions of selections, choices and decisions; giving own opinions and points of view; various expressions of a refuse, a perverse, contrary, revolt, rebel or mutiny.

## Maximalist (MAX)



**Likes:** have, get, own, possess, win, obtain, observe, watch, read, imagine, create, focus, make known, do something extreme, e.g.: unique, rare, unusual, enormous, huge, super, great, maximal or the best

**Dislikes:** minor, lesser, small or insignificant things, goals, aims, targets, actions, features, parameters, experiences or feelings; when somebody discourages him or tries to persuade him that his goals are impossible to achieve.



### Treatment:

- neither discourage him nor try to persuade him that his goals are impossible to achieve, try to show a will to help him to achieve his goals and help him to eliminate dangers, risks and threats on his way,
- express, reflect and illustrate extremes and splendid goals,
- demonstrate or offer ideas, ways, actions or things that can make him closer to these goals

## Maximalist (MAX)



**Often says:** *great, large, huge, extreme, super, hiper, enormous, maximal, fast, rapid, speedy, quick, nice, wonderful, exceptional, remarkable, unique, rare, better, the best, more, the most, higher, the highest, big, bigger, the biggest, an extreme size, weight or height of physical or intelectual features or parameters, no problem; I/we manage to do sth, I/we cope with sth; I/we get by/along*

Asks for something more extreme (bigger, taller, faster etc.); describes extreme goals, aims, targets or dreams; uses adjectives and adverbs in comparative and superlative forms.



## Likes:

- seek for inspiration and inspire sb with sth, look for some new associations, things, features and parameters of things, arrangements, layouts, systems, relations, feelings, experiences, behaviours, ideas, conceptions
- speak about with what is he inspired, at what is he surprised or by what is he enthralled; surprises and to spring a surprise on sb,
- act spontaneously, differently from others and by intuition,
- create sth new because it supplies him with inspiration,
- watch, listen, touch, sniff and taste in order to observe, hear, feel or smell new things and people that can supply him with a new portion of inspiration



## Inspiring (INS)



**Dislikes:** simple, normal, usual and ordinary things, features, actions; established procedures, actions, behaviours and schedules and to act according to them; repetition of uninspiring actions; stereotypes, stiff regulations, plans, procedures, sequences



### **Treatment:**

- talk about inspiring, unknown, mysterious, fantastic things, actions, feelings, behaviours and people,
- surprise him and do some unexpected things or actions; do not plan nor schedule with him.



## Inspiring (INS)



**Often says:** *idea, surprise, unexpected, unknown, new, revolution, inspiring, inspirational, inspired, remarkable, fantastic, mysterious, magic, super, muse, mood, art, artistic, imaginatively, create, creative, fashion; I have thought about, I have invented/devised/concoct, I have been inspired/enthralled by something, I have been surprised.*

Talks about invention, projects, conceptions, style, fashion, inspiration, surprise.



### Likes:

- discover, examine, penetrate, integrate various associations and understand unknown things, actions, reactions, behaviours, relations; ask frequently himself and other people about things, actions and behaviours that he does not know nor understand,
- watch, listen, touch, sniff and taste in order to discover, get known and understand; research, think about sth, ponder over sth and associate facts with other facts,
- when something unusual, new, unknown and unordinary happens all the time,
- news, new technologies and their products



### Dislikes:

- simple, normal, usual and ordinary things, actions,
- unsolved or unexplained questions,
- repetitions and established procedures, actions, behaviours and schedules if he cannot get known something new.



### **Treatment:**

- talk about discoveries, news and other new or interesting things, ideas, associations, opinions, facts, relations, actions, reactions, behaviours, topics
- conduct conversations and discussions on discovering topics
- bring something undiscovered up for discussion



**Often says:** *why, ask, explanation, discover, reveal, discern, check, check-up, compare, recognize, reconnoitre, examine, penetrate, integrate, understand, new, news, unknown, unusual, unordinary, relation, explore, penetrate, classify, examine, associate, think over/about, ponder over, make out*

Lot's of various questions, asks and requests for explanations of something he would like to know or understand, asks for opinions and points of view.



### Likes:

- watch, observe, listen, feel and smell in order to compare and distinguish sth from other things, actions, behaviours, differentiate between things, features of things, people, actions, relations, behaviours and discriminate them,
- look for distinguish marks, even the smallest differences and he watches, checkes and verifyies all things and people around in order to find differences,
- speak, talk and write about noticed differences,
- precise, exact and accurate description of things, actions and tasks.



### Dislikes:

- inconsistency, mistakes, errors, bugs, lacks, a negligence, oversights, shortcomings, inconsistencies, faults, flaws, vices, lies, contradictions, conflicts, misreadings, miscalculations, misconceptions, carelessness, imprecise or inaccurate things and actions,
- underestimation or underration of his notices and remarks.



### Treatment:

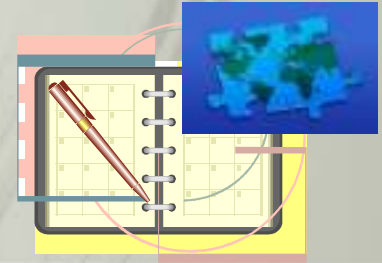
- listen to his remarks and comments, neither quarrel nor argue over what he has said but you can tell him your opinion and substantiate it if you disagree with him,
- do not underestimate or underrate his notices and treat them as criticism or reject his notices,
- if possible and profitable use these notices to improve things or actions; weigh your words, choose your words carefully,
- let him to reveal mistakes, errors, bugs, lacks, a negligence, oversights, shortcomings, inconsistencies, faults, flaws, vices, lies, contradictions, conflicts, misreadings, miscalculations, misconceptions for free, thank him for them and ask for more and more notices, remarks, suggestions and comments until he finishes,
- let him sure that you value his remarks and notices.



**Often says:** *not, mis-, in-, im-, dis-, -less, disagree, incorrect, mistake, fault, error, inaccurate, imprecise, inconsistent, misplaced, careless, omitted, dirty, spoiled, risk, show, look at, attention, note, control, quality, details, detailed, precise, inaccurate, inexact, improve, correct, repair, mend, fix, remedy, rectify, redress, neatness, remark, notice, watch, observe, point out, thorough, painstaking, meticulous, punctilious; to be meticulous in sth/in doing sth; put the emphasis on sth.*

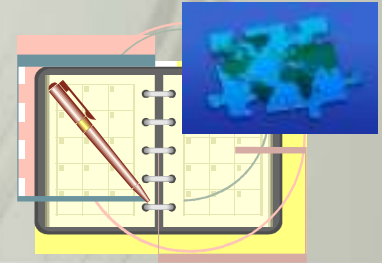
Points out various differences, impreciseness, faults, mistakes, inaccurateness, carelessness.

## Systematic (SYS)



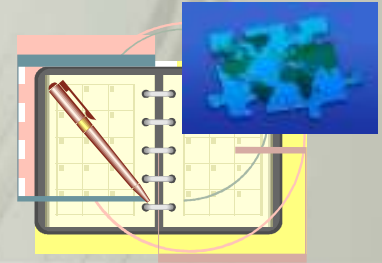
### Likes:

- organize, systematize, order, sort, arrange, classify, cluster, form a sequence or chronology, enumerate, list, schedule everything, act only after planned actions or reactions,
- create plans, models, standards, norms, schedules, rules, regulations and to act in accordance with them,
- everything have its right place and time, do everything in some order,
- enumerate or list tasks and calculate time necessary to perform them, enumerate things, features, actions etc. emphasizing their order and sequence



### Dislikes:

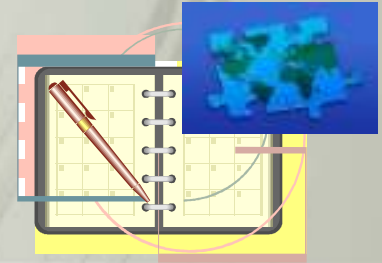
- act without planning and scheduling things and actions,
- act in a hurry because he needs time for planning and scheduling,
- when somebody is late or unorganized.



### Treatment:

- map, reproduce and copy his order,
- enumerate or list things and actions, keep things in order and chronology,
- avoid doing digressions,
- do not change his plans too often,
- give him extra time for planning and scheduling before he starts to act or answer,
- do not hurry him.

## Systematic (SYS)



**Often says:** *first, second, third, fourth, fifth, next, last, at last, now, earlier, later, at the beginning, start, start with, at the end, mess, tidiness, untidy, gradually, step, in steps, one by one, one after the other, in order, order, sort, sequence, rank, systematize, level, stage, arrange, classify, cluster, chronology, enumerate, list, map, schedule, appointment, diary, timetable, layout, compose, composition, group, structure, model, organization, organize, think, lay out, plan out, unfold, divide, spread out, time, on time, date, deadline, count.*

Uses various expressions of time and date; enumerates or lists something; shows temporal or spatial relations and order.



## Assurant (ASS)



### Likes:

- protect, assure, warrant, guarantee, insure, safeguard, prevent, warn others, limit risks and threats and make precautions against them and avoid them,
- purchase proven and reliable products,
- expects and demands guarantees from others,
- insures himself and other people against risks and threats,
- safeguard and protect himself and other people,
- use preventive, protective and precautionary measures and recommends them to others,
- be prepared and know what to do when difficulties or troubles occur,
- have some reserves, provisions and stores.



## Assurant (ASS)



### Dislikes:

- ignoring or disregarding his warnings, rules, steps and means of caution, safety and security or when people do not want to see or think about threats.



### Treatment:

- assure him that his words of caution and warning and against what he says are taken into consideration,
- ask for more notices and his recommendation,
- neither ignore nor shrug off his criticism or warnings,
- tell him what to do if/when in doubt or in case of doubt,
- all his doubts should be dispelled.



## Assurant (ASS)



**Often says:** *but, problem, doubt, misgivings, careful, be careful, danger, cautious, reliable, sure, confident, certain, secure, warrant, sure, protect, provisions, stores, stock, prevent, protect, precaution, protect, be assured, guaranteed, warranted, insured, prudent, risk, threat, safeguard, precautionary measure against something, alarm, alert, warn, limit, precaution against risks, just in case, can be necessary, put away something for a rainy day.*

Raises doubts, something but something; suspicious and mistrustful asks, questions and statements.

## Harmonious (HAR)



### Likes:

- harmonize, conciliate and reconcile people, appease disputes and conflicts, resolves and tones down conflicts, make peace with others, make symbiosis between things, adapt, accommodate, adjust, tune, fit and match things together,
- avoids quarrels with sb, disagreements among sb, rows, brawls, fights, conflicts,
- alleviate stress and nervous situations, relieves, reduces, calms, appeases, assuage, eases and moderates all situations,
- relieves, reduces, calms, appeases, assuage, eases and moderates all situations.



## Harmonious (HAR)



### Dislikes:

- conflicts, quarrels with sb, disagreements among sb, rows, brawls, fights, wars, stress, stress out, nervous situations, be under pressure from sb.



## Harmonious (HAR)



### Treatment:

- do not come into conflicts,
- make him sure that he can tell what he means and his opinion, ask or suggestions do not cause a conflict,
- be sensitive to his opinions, neither push nor drive him if you would like to know his opinion,
- ask him about his opinion and show him that his answers will not lead to conflicts, quarrels etc.,
- do everything in peace, quiet and understanding,
- help him to harmonize all situations and people,
- take into consideration that he probably change his decision in case of somebody's disagreement or in view of having a quarrel with somebody.



## Harmonious (HAR)



**Often says:** *O.K., yes, good, no problem, agree, confirm, bit, little, a bit, a little, not so much, little, not many, small, slight, minor, almost, let off; peace, quiet, It is interesting, I ponder over this, I think about this; I ask my; do you mind if I; Excuse me.*

White lies, lies, tells to seek advice from somebody, diminutives and weaken words; handles somebody with kid glove; pulls wool over somebody's eyes; beats about the bush; minces his words, excuses oneself, asks for permission.

## Emphatic (EMP)



**Likes:** empathy, compassionate, understand other people and their emotions, be understood by other people, be sensitive, tender, affectionate, give himself to know, bringing himself closer to somebody else, grow closer together and degrade a distance, personal contacts; listen to secrets and intentions of other people.

**Dislikes:** when somebody does not tell about his intentions and reasons of doing something to him; when somebody escapes personal contact; when somebody cut his personal reflections.



### Treatment:

- tell him about own intentions, reasons, be emphatic and let him to understand your intentions
- make personal digressions
- do not cut his personal reflections
- do not come straight to the point.

## Emphatic (EMP)



**Often says:** *nice, I am, children, family, hurt, wound, distress, unpleasantness, tribulation, understand, tell me about your problem/situation, how about you, for you, with you, intend, intention, with a view to doing something, with the purpose of doing something, that is why, because, why, as, since, for, in order to, mean, what for, sympathy, sympathize with somebody, compassion, compassionate, condolence, pity somebody, regret, help, reciprocate, feel sorry for somebody; I am going to do something, What are you going to do, How are you?*

White lies to avoid unpleasant situation, diminutives, telling about intentions, reciprocate, weaken words, digressions, intentions, reasons and motivations behind behaviour and decisions.



**Likes:** be subjective, practical, sensible, businesslike and matter-of-fact, quick execution and solution of tasks, come straight to the point, get to the heart of the matter or hit the nail on the head; like completed tasks, examinations and work.

**Dislikes:** handle him with kid glove, pull wool over his eyes, beat about the bush, mince one's words; unfinished tasks, examinations or work; digressions, talking about personal reasons and intentions.



### Treatment:

- talk to him in concrete terms, do not mince words,
- do not beat about the bush,
- immediately go straight down to business, facts, specifics or brass tacks,
- get immediately down to facts, business or specifics.



## Task-Oriented (TAO)



**Often says:** *performance, efficient, fast, concrete facts, specifics, hurry, hurry up, hasten, quickly, subject, task, practical, sensible, businesslike, precisely, accurately, exactly, finished, completed, concise, succinct, matter-of-fact, heart of the matter, hit the nail of the head, get on somebody with one's work, let's get down to facts / business / specifics, get down to brass tacks, talk sense, bring something to a conclusion; to get to the bottom of a matter.*

Tells rarely intention and a little explanation, talk without beating about the bush short matter-of-fact speech.



### Likes:

- look after balance, counterbalance, compensation for sth, exact measuring, assessing, weighting, weighting out, leveling, calibrating, sizing, grading according to size and to keep things in balance,
- arbitrate, adjudicate and work out or decide which is right,
- act appropriately and proportionately to sth, looks for appropriately balanced solutions,
- when things fit each other and are appropriate to sth,
- measured and balanced judgments,
- expect balance, reciprocity and mutual concessions.



### Dislikes:

- unbalanced things or judgments,
- inconsistent acting or when something is inconsistent with something else,
- when somebody disregards, violates or breaks the law or when somebody neither observe nor follow rules and regulations nor does something contrary to the regulations.



## Balancing (BAL)



### **Treatment:**

- keep balance in everything and be fair, just and self-critical

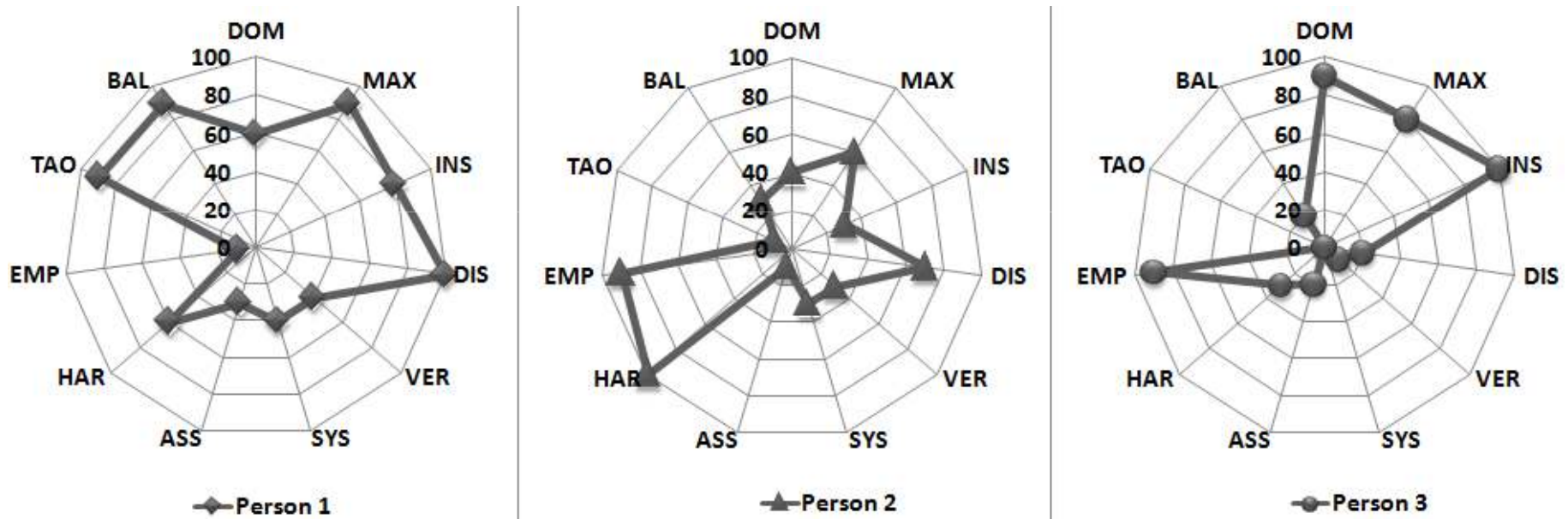


**Often says:** *balance, balancing, counterbalance, compensation for sth, exact, accurate, precise, measure, measuring, assess, assessing, weight, weighting, weight out, level, calibrate, sizing, sort, grade, according to size, to keep things in balance, compare, compensate for, equal, be consistent, just, justice, fair, fairness, unfair, unfairly, judge, principle, rule, reciprocate, repay, be consistent, compensate, settle a debt, equalize, level, make something up to somebody.*

Balances, compares, weights, measurs, calibrats.

## Complex personality types

Personality of each person can be described using various intensities of presented personality types:



Some popular complex types can have own names, e.g.:

**Competing (COM) = MAX + DOM, where  $\text{Intens}(\text{MAX}) > \text{Intens}(\text{DOM})$**

**Visionary (VIS) = INS + MAX + ... (it depends of kind of vision)**

## Intensity of personality types and intensity of needs



**Intensity of personality types** can be linguistically measured in a few ways:

- ✓ after frequency of appearing of characteristic words, phrases, idioms and inflection,
- ✓ through weighting characteristic words, phrases, idioms and inflection,
- ✓ checking inflection and sentence constructions,
- ✓ context of statements and related sources.

Some words, phrases, inflection can be characteristic for more than a single personality type. The same linguistic expressions can be used by various personality type for various reasons.



## Automatic description of personality and tuning of the following speech

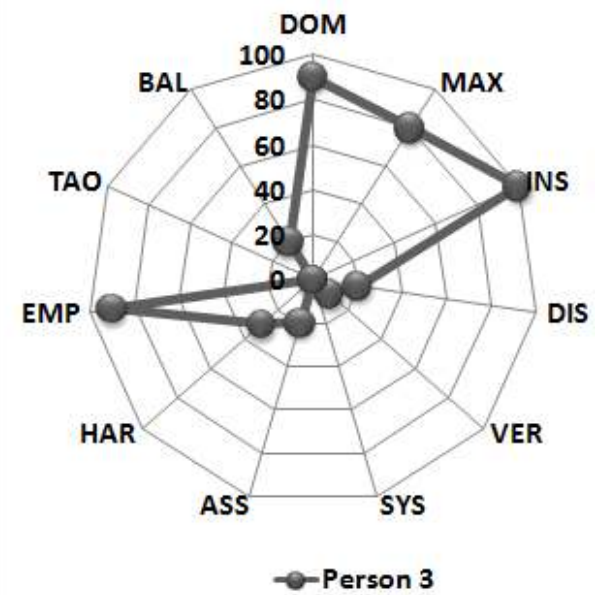
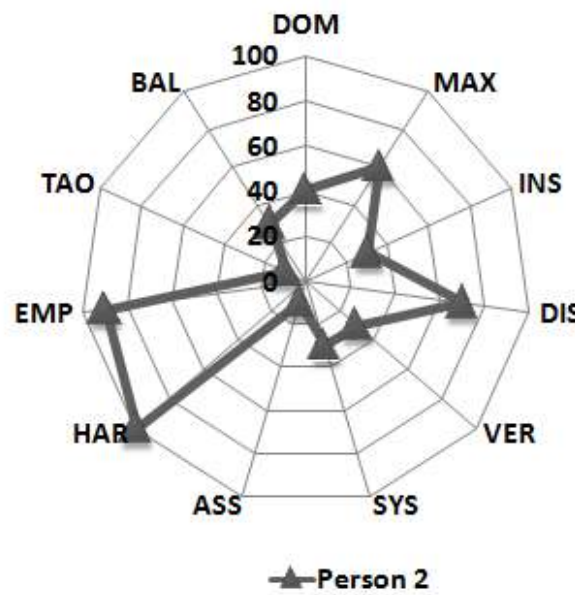
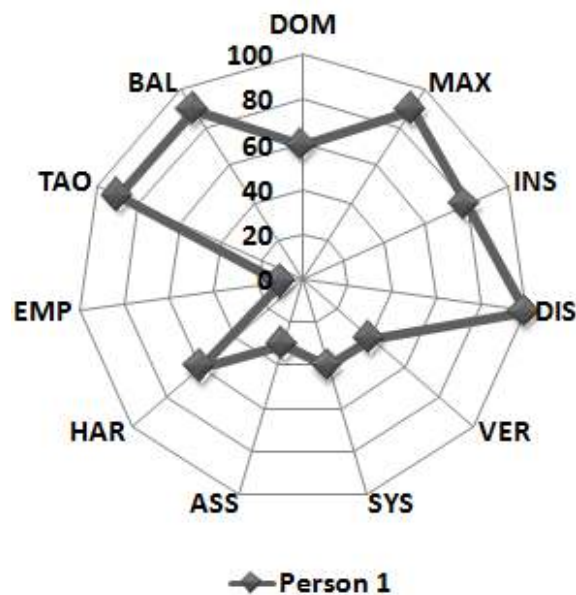
During a talk to artificial psycholinguistic intelligent system - system can pay attention not only to **meritorical subjects** but also to **linguistic expressions of personality**.

These expressions can be used to classify intensities of personality types and **tune** a following talk to the personality needs (preferences) of a talking person in order to maximize his positive responses to the subject of a talk.



# Automatic description of personality after analysis of linguistic responses of a talking person

Words, phrases, idioms and inflection can be weighted and summed creating personality model of a talking person:





## How to distinguish expressions of personality from intended behaviours coming from intelligence?

Acting after personality cannot be substantiated - though is not irrational!

### How to substantiate:

- why I (don't) like to choose something independently?
- why I (don't) like to have everything in order?
- why I (don't) like to understand other people and their intentions?
- why I (don't) like spontaneous behaviour?
- why I (don't) like quarrels and (don't) avoid them?

**If you cannot substantiate** it it comes from your personality.

**If you can substantiate** it it comes from your intelligent conclusions and will but it cannot make you **pleasure**.

**If you can substantiate** it and it makes you **pleasure** it comes from both (personality and intelligence).



## Influence of intelligence on personality

**Small children** react on all situations after an influence of personality and physiology:

they like e.g.: eat, rest, move

they like e.g.: decide, order, ask, hidden, talk, quarrel  
and they generally **don't like to do anything what does not make them pleasure!**

e.g. Why they should learn foreign languages?

They do what they like and what make them pleasure  
- therefore we can observe lot's of **enthusiasm** in children behaviour.



## **Influence of intelligence on personality**

**Bigger children (with growing intelligence)** are gradually more conscious that it is profitable to control (temper, reinforce or modify) own reactions coming from physiology and personality.

**The consciousness of profitability of such control** comes from learned associations acquired in the past in various situations that were profitable or not.

Such associations recall in an appropriate context of behaviour, enable to control it and modify natural physiology and personality reactions.

Unless reactions are controlled (by growing intelligence) **enthusiasm** and **pleasure** are usually smaller.



## Influence of intelligence on personality

Intelligent control of behaviour **does not change personality** nor physiology though behaviour is different from the natural one.

**Intelligently modified actions and reactions** are usually not so pleasant for the actor because they are sometimes opposite to natural actions and reactions of physiology and personality, e.g.:

**PHYSIOLOGY:** If somebody is thirsty then passing a last bottle of liquid to the thirsty child is not pleasant from **physiological** point of view and also the own thirsty does not reduce but this intelligent reaction can produce a pleasure in the **spiritual** level.

**PERSONALITY:** If somebody likes to rule and his child as well and lets his child to decide about something (job, subject) it does not mean that his intensity of DOM personality has reduced but his intelligent reaction lets the child to have satisfaction and pleasure from his own decision and makes the child to be responsible for it.

Personality is hereditary so if both parents like rule children likes as well.



## Influence of intelligence on personality

**Intelligent adults** often modify, temper or strengthen their behaviour and reactions in order to achieve some goals faster or easier after their experience.

**Experience** is a group of associations that recalls in appropriate contexts thanks to associative memory of the brain.

Appropriately developed **associative memory** is indispensable for intelligent behaviour.

If a person does many actions and reactions out of spite of their own personality (or physiology) they usually **lose enthusiasm** (pleasure, vigour) for subjects, work, life.

Intelligence can also **cooperate** with personality (physiology) and lets a person to be fulfilled easier, deeper or faster.

Intelligence enables to achieve pleasure at **the spiritual level**.



## **Intelligence can imitate, substitute, reinforce or temper personality**

**EXAMPLE:** An unsystematic person (!**SYS**) can realize (thanks intelligence) that collating and sorting of documents is profitable for him and thanks this he can faster achieve his goals, wishes, desires coming from other parts of his personality, e.g. **INS** + **MAX**. This person can sort some things though this is not a pleasure for him.

Such behaviour (collating, sorting and ordering) will not be characteristic for all his behaviour, e.g. an inspirant part of his personality (**INS**) does not like to plan, sort but likes to be spontaneous. Sorting does not change his personality into **SYS** and his children will be probably also unsystematic if his wife genes do not change this feature of the child personality.

**CONCLUSION:** This person will systematize when necessary (**intelligence**) and be spontaneous for pleasure if he can afford to do it (**personality**).



## **Intelligence can imitate, substitute, reinforce or temper personality**

**OPOSITE EXAMPLE:** A **systematic** person (**SYS**) will systematize, sort, plan and schedule everything before he starts to act.

An intelligent person can temper such behaviour when it can spoil something (e.g. pleasure of somebody else who has an enthusiastic idea for e.g. holiday) or is harmful, e.g. in art and poetry. This **modified behaviour** does not mean that personality of this person has changed. His children will be probably also systematic if his genes will be dominant.

**CONCLUSION:** This person will avoid sorting, planing and scheduling of some things (**intelligence**) and be systematic for pleasure if it spoils nothing (**personality**).

# Comparison of a proposed typology to other popular personality models

| PERSONALITY TYPES COMPARISON       |               | Proposed primary personality types |           |             |             |           |           |           |           |           |           |             |
|------------------------------------|---------------|------------------------------------|-----------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|
|                                    |               | 1                                  | 2         | 3           | 4           | 5         | 6         | 7         | 8         | 9         | 10        | 11          |
|                                    |               | DOM                                | MAX       | INS         | DIS         | VER       | SYS       | ASS       | HAR       | EMP       | TAO       | BAL         |
| Hippocrates temperaments           | Phlegmatic    | any                                | 0 - 20%   | 0 - 10%     | any         | 70 - 100% | 70 - 100% | 60 - 100% | 60 - 100% | 0 - 60%   | 60 - 100% | 60 - 100%   |
|                                    | Choleric      | 80 - 100%                          | any       | any         | any         | any       | any       | 0 - 30%   | 0 - 10%   | 0 - 30%   | any       | 0 - 40%     |
|                                    | Melancholic   | 0 - 30%                            | any       | any         | any         | 60 - 100% | any       | any       | 60 - 100% | 70 - 100% | 0 - 10%   | 0 - 40%     |
|                                    | Sanguinic     | 70 - 100%                          | 40 - 100% | 70 - 100%   | any         | 0 - 10%   | 0 - 20%   | 0 - 10%   | 40 - 100% | 70 - 100% | 0 - 10%   | 30 - 70%    |
| Jung types                         | Extravert     | 70 - 100%                          | 60 - 100% | 60 - 100%   | any         | 0 - 30%   | 0 - 10%   | 0 - 10%   | 0 - 60%   | 70 - 100% | 0 - 30%   | 0 - 60%     |
|                                    | Introvert     | any                                | any       | 0 - 70%     | 40 - 100%   | 70 - 100% | 40 - 100% | 70 - 100% | 40 - 100% | 0 - 30%   | 70 - 100% | 40 - 100%   |
| Mayers Briggs personality features | introversion  | 0 - 50%                            | 0 - 50%   | conditioned | conditioned | any       | any       | 50 - 100% | 50 - 100% | 0 - 50%   | 50 - 100% | conditioned |
|                                    | extraversion  | 50 - 100%                          | 50 - 100% | conditioned | conditioned | any       | any       | 0 - 50%   | 0 - 50%   | 50 - 100% | 0 - 50%   | conditioned |
|                                    | intuitiveness | any                                | any       | 50 - 100%   | 0 - 50%     | 0 - 50%   | 0 - 50%   | any       | any       | any       | any       | any         |
|                                    | sensuality    | any                                | any       | 0 - 50%     | 50 - 100%   | 50 - 100% | 50 - 100% | any       | any       | any       | any       | any         |
|                                    | logic         | 50 - 100%                          | any       | 50 - 100%   | any         | 50 - 100% | 50 - 100% | any       | any       | 0 - 50%   | 50 - 100% | 50 - 100%   |
|                                    | ethics        | any                                | any       | any         | any         | 0 - 50%   | any       | any       | 70 - 100% | 70 - 100% | any       | 50 - 100%   |
|                                    | rationality   | 50 - 100%                          | any       | 0 - 50%     | any         | 70 - 100% | 70 - 100% | any       | any       | any       | 50 - 100% | any         |
|                                    | irrationality | any                                | 40 - 100% | 50 - 100%   | any         | 0 - 30%   | 0 - 30%   | any       | any       | any       | any       | any         |
| Mayers Briggs personality types    | ENTJ          | 50 - 100%                          | 50 - 100% | any         | any         | 50 - 100% | 50 - 100% | any       | any       | any       | 50 - 100% | 50 - 100%   |
|                                    | INTJ          | 50 - 100%                          | 50 - 100% | 0 - 50%     | any         | 50 - 100% | 50 - 100% | 50 - 100% | any       | any       | any       | 50 - 100%   |
|                                    | ENTP          | 50 - 100%                          | 50 - 100% | 50 - 100%   | 50 - 100%   | any       | any       | any       | any       | any       | any       | any         |
|                                    | INTP          | 50 - 100%                          | any       | any         | any         | 50 - 100% | 50 - 100% | 50 - 100% | any       | 0 - 50%   | 50 - 100% | any         |
|                                    | ESTJ          | 50 - 100%                          | any       | any         | any         | any       | 50 - 100% | any       | any       | any       | 50 - 100% | any         |
|                                    | ISTJ          | 50 - 100%                          | any       | any         | 50 - 100%   | 50 - 100% | 50 - 100% | 50 - 100% | 0 - 50%   | 0 - 50%   | 50 - 100% | 50 - 100%   |
|                                    | ESTP          | 50 - 100%                          | 50 - 100% | 50 - 100%   | any         | any       | any       | any       | any       | any       | 50 - 100% | 50 - 100%   |
|                                    | ISTP          | 50 - 100%                          | 50 - 100% | 0 - 50%     | 50 - 100%   | 50 - 100% | 50 - 100% | 50 - 100% | 0 - 50%   | 0 - 50%   | 0 - 50%   | any         |
|                                    | ISFP          | 50 - 100%                          | any       | any         | any         | any       | any       | any       | 50 - 100% | 50 - 100% | any       | any         |
|                                    | ESFP          | 50 - 100%                          | 50 - 100% | 50 - 100%   | any         | any       | any       | any       | any       | 50 - 100% | any       | any         |
|                                    | ISFJ          | any                                | any       | any         | any         | 50 - 100% | 50 - 100% | 50 - 100% | 50 - 100% | any       | any       | 50 - 100%   |
|                                    | ESFJ          | any                                | any       | 50 - 100%   | any         | any       | any       | any       | 50 - 100% | any       | 50 - 100% | any         |
|                                    | INFP          | any                                | 50 - 100% | any         | any         | any       | any       | any       | 50 - 100% | 50 - 100% | any       | any         |
|                                    | ENFP          | any                                | any       | any         | any         | any       | any       | any       | any       | 50 - 100% | any       | any         |
| INFJ                               | 50 - 100%     | any                                | any       | any         | any         | any       | any       | 50 - 100% | 50 - 100% | any       | any       |             |
| ENFJ                               | 50 - 100%     | any                                | any       | any         | 50 - 100%   | any       | any       | any       | 50 - 100% | any       | 50 - 100% |             |



# **Examples of practical adaptation and implementation of this personality model**



# An Intelligent Internet Shop-Assistant Recognizing a Customer Personality for Improving Man-Machine Interactions

The screenshot displays a web interface for an e-commerce site. At the top, there is a navigation bar with links for 'Wishlist', 'Contact Us', and 'Track an Order', along with a search bar and a shopping cart icon. The cart contains 4 products with a total value of 450.00 zł. Below the navigation bar, there is a red header with buttons for 'Home', 'Chatbot', 'All Products', and 'On Sale'. The main content area is divided into two sections: 'Virtual Assistant' and 'Offer Presentation'. The 'Virtual Assistant' section features a chat window with a female avatar and a text-based conversation. The 'Offer Presentation' section displays a grid of eight mobile phone products with their respective prices.

**Virtual Assistant**

Chatbot: Rozumiem że cena ma być mniejsza od 340\$. Przyjela do wiadomosci. Czy moge jeszcze w czymś pomóc

Klient: Chciałbym jeszcze dobrą baterię

Chatbot: Co Pan rozumie przez dobrą baterię?

Klient: Więcej od 650 mAh

Chatbot: Rozumiem, przyjęłam do wiadomości. Czy chciałby Pan coś jeszcze dodać?

Klient: Nie dziękuje

Chatbot: Proszę czekać Panu ofertę. Proszę spojrzeć na ekran od tego okienka.

**Offer Presentation**

|                                 |                                |                                |                                |
|---------------------------------|--------------------------------|--------------------------------|--------------------------------|
|                                 |                                |                                |                                |
| Sony Ericsson Z558<br>\$307.00  | LG KF750 Secret<br>\$390.00    | LG KE850 Prada<br>\$331.00     | Samsung ZV30<br>\$289.00       |
|                                 |                                |                                |                                |
| Philips Xenium 9@9e<br>\$298.00 | Sony Ericsson W980<br>\$373.00 | Sony Ericsson C902<br>\$383.00 | Sony Ericsson C702<br>\$374.00 |

*Master's dissertation of Stanisław Magierski and Grzegorz Miklaszewski*



# Conversation engine of this chatbot

preprocessing

inflection

transformation

pattern matching

customer's

requirement

discovering

I would like to have handy  
with colorful display, price  
less then 100\$.

Preprocessing

I would like to have handy  
with colorful display , price  
less then 100 \$ .

Inflection  
transformation

I would like to have handy  
with colorful display and price  
less then 100\$

Synonyms

I want have phone  
with colorful display and price  
less then 100\$

Pattern  
matching

want [like]

[feature1] , [feature2]

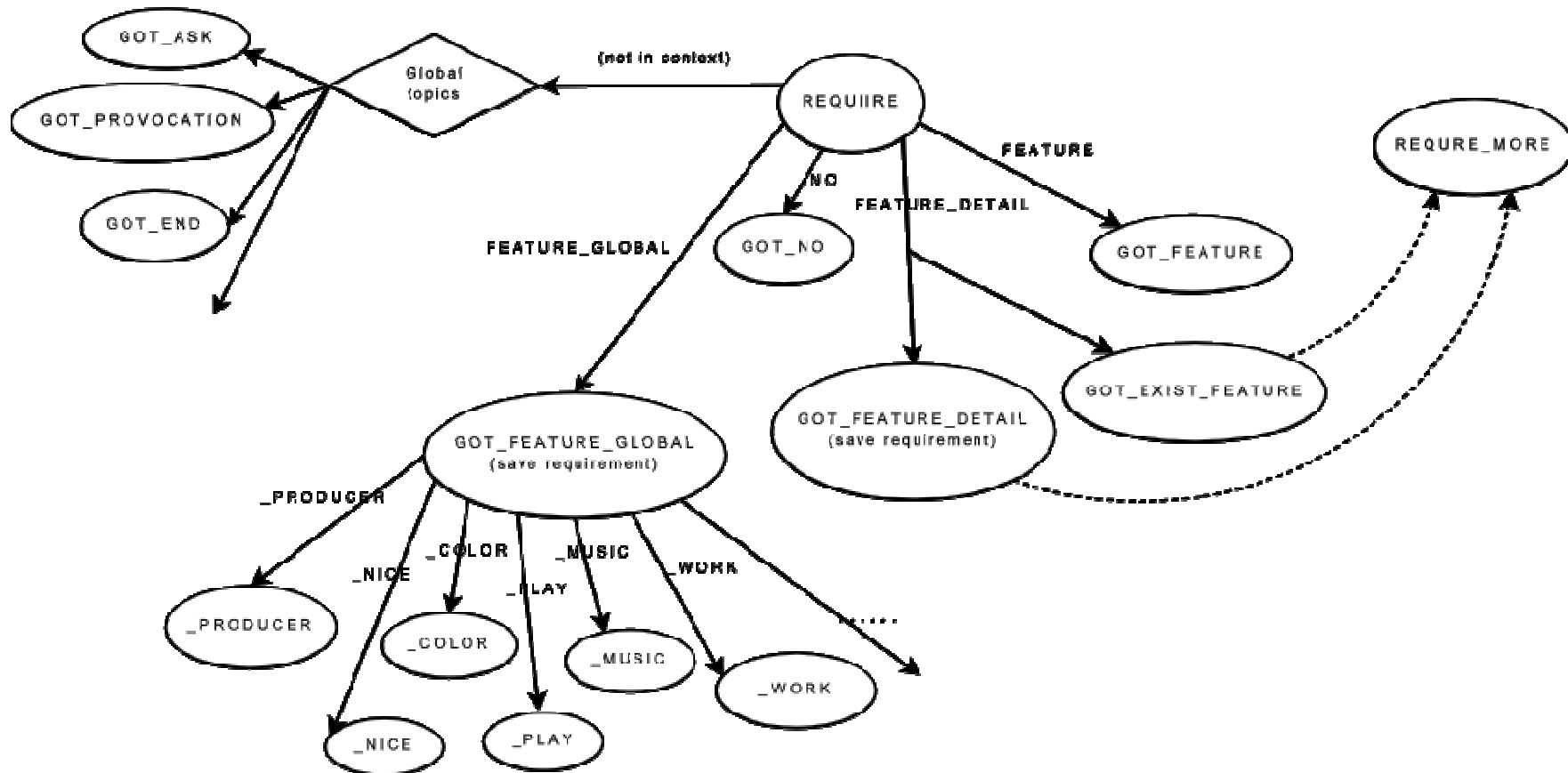
price less then  
{product.price:<=}

phone with  
colorful display



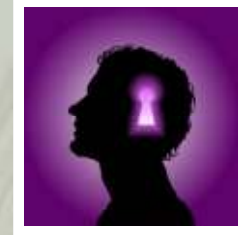
# Conversation structure of this chatbot

conversation opening → free talk → inquires stage → presentation





# Understanding a customer



gender  
personality

- |                     |                       |
|---------------------|-----------------------|
| ▪ Dominant (DOM)    | ▪ Assurant (ASS)      |
| ▪ Maximalist (MAX)  | ▪ Harmonious (HAR)    |
| ▪ Inspiring (INS)   | ▪ Emphatic (EMP)      |
| ▪ Discovering (DIS) | ▪ Task-Oriented (TAO) |
| ▪ Verifying (VER)   | ▪ Balancing (BAL)     |
| ▪ Systematic (SYS)  |                       |

needs  
requirements  
mood





## Example of linguistic recognition of personality types: Systematic (SYS)

| The words and phrases for HPT - Systematic                               | Weight |
|--|--------|
| First, second, third, fourth, fifth, next, last, at last, ..             | 1      |
| After the other spread out, time, on time, rank, level, systematize, ... | 2      |



# Default presentation – untuned to personality type of a customer

Virtual Assistant

Chatbot: what do you mean by long stanby?  
For example you can specify capacity of your desired battery.  
Customer: I don't know  
Chatbot: Do you wish your mobile phone to have vibration alert ?  
Customer: No please  
Chatbot: Understand, maybe you want your mobile phone to have USB?  
Customer: Actually yes, I want that  
Chatbot: Thank you for all your requirement

Send

Offer presentation

Standard introduction text

Minimal product information

|                                     |                                    |                                    |                                    |
|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <br>Sony Ericsson Z558<br>\$307.00  | <br>LG KF750 Secret<br>\$380.00    | <br>LG KE850 Prada<br>\$331.00     | <br>Samsung ZV30<br>\$288.00       |
| <br>Philips Xenium 9@9e<br>\$298.00 | <br>Sony Ericsson W980<br>\$373.00 | <br>Sony Ericsson C902<br>\$383.00 | <br>Sony Ericsson C702<br>\$374.00 |
|                                     |                                    |                                    |                                    |



# Presentation tuned to DOM type

Respectful text

Virtual Assistent

Chatbot: what do you mean by long stanby?  
For example you can specify capacity of your desired battery.  
Customer: I don't know  
Chatbot: Do you wish your mobile phone to have vibration alert ?  
Customer: No please  
Chatbot: Understand, maybe you want your mobile phone to have USB?  
Customer: Actually yes, I want that  
Chatbot: Thank you for all your requirement

Send

Products adjusted to Your requirements

|   |   |  |   |
|---|---|--|---|
| 1 in rating<br><br>Sony Ericsson Z558<br>\$307.00 | Your required parameters<br>Touch screen: yes<br>Organizator: yes<br>USB: yes | 2 in rating<br><br>LG KF750 Secret<br>\$380.00 | Your required parameters<br>Touch screen: yes<br>Organizator: yes<br>USB: yes |
| 3 in rating<br><br>LG KE850 Prada                 | Your required parameters<br>Touch screen: yes<br>Organizator: yes<br>USB: yes | 4 in rating<br><br>Samsung ZV30<br>\$288.00    | Your required parameters<br>Touch screen: no<br>Organizator: yes<br>USB: yes  |
| 5 in rating<br>                                   | Your required parameters  | 6 in rating<br>                                | Your required parameters  |

Information about product match ranking

The choosen parameters by the customer (he chooses and decides)



# Presentation tuned to SYS type

Maximum technical details that are easy to compare  
 In tabular systematic format of the data

| Name              | Sony Ericsson TM506                            | Sony Ericsson G502                    | Sony Ericsson T303                   | Sony Ericsson G900                    | Sony Ericsson G700                    | Sony Ericsson W980                             | Sony Ericsson C902                             | Sony Ericsson C702                             | Sony Ericsson Z770                    | Sony Ericsson T280                   | Sony Ericsson R300 Radio             |
|-------------------|--|---------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|--|--|--|---------------------------------------|--------------------------------------|--------------------------------------|
| Photo             |  |                                       |                                      |                                       |                                       |  |  |  |                                       |                                      |                                      |
| Price             | \$390  | \$358                                 | \$293                                | \$209                                 | \$164                                 | \$273  | \$383  | \$274  | \$340                                 | \$268                                | \$300                                |
| 3G network        | yes  | yes                                   | no                                   | yes                                   | yes                                   | yes  | yes  | yes  | yes                                   | no                                   | no                                   |
| GPRS              | yes  | yes                                   | yes                                  | yes                                   | yes                                   | yes  | yes  | yes  | yes                                   | yes                                  | yes                                  |
| Color             |  | Black, Red                            | Black, Silver                        |                                       |                                       | Black, Red, Brown                              | Black, Red                                     | Black, Silver                                  | Black, Red, Brown                     | Pink, Black, Red, Brown              | Black                                |
| Network           | GSM 1800, GSM 1900, GSM 850, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 850, GSM 900 | GSM 1800, GSM 1900, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 850, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 850, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 850, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 900, GSM 2100 | GSM 1800, GSM 1900, GSM 850, GSM 900 | GSM 1800, GSM 1900, GSM 850, GSM 900 |
| Alert type        | AAC, Polyphonic, MP3                           | MP3, Polyphonic                       | Polyphonic, MP3                      | Polyphonic, MP3                       | Polyphonic, MP3                       | Polyphonic, AAC, MP3                           | MP3, Polyphonic                                | MP3, Polyphonic                                | MP3, Polyphonic, AAC                  | MP3, Polyphonic                      | AAC, Polyphonic, MP3                 |
| Resolution width  | 1600px   | 1600px                                | 1280px                               | 0px                                   | 0px                                   | 2048px   | 640px  | 2048px   | 1600px                                | 1280px                               | 640px                                |
| Resolution height | 1200px   | 1200px                                | 1024px                               | 0px                                   | 0px                                   | 1536px   | 480px  | 1536px   | 1200px                                | 1024px                               | 480px                                |



# Presentation tuned to ASS type

Virtual Assistant

Chatbot: what do you mean by long standby?  
For example you can specify capacity of your desired battery.  
Customer: I don't know  
Chatbot: Do you wish your mobile phone to have vibration alert?  
Customer: No please  
Chatbot: Understand, maybe you want your mobile phone to have USB?  
Customer: Actually yes, I want that  
Chatbot: Thank you for all your requirement

Send

Your satisfaction is our priority

|   |  |
|---|--|
| <p>Sony Ericsson Z558<br/>warranty: 2 years<br/>\$307.00</p>  | <p>LG KF750 Secret<br/>warranty: 2 years<br/>\$380.00</p>    |
| <p>LG KE850 Prada<br/>warranty: 2 years<br/>\$331.00</p>      | <p>Samsung ZV30<br/>warranty: 2 years<br/>\$288.00</p>       |
| <p>Philips Xenium 699e<br/>warranty: 2 years<br/>\$298.00</p> | <p>Sony Ericsson W980<br/>warranty: 2 years<br/>\$373.00</p> |
| <p>Sony Ericsson C902<br/>warranty: 2 years<br/>\$382.00</p>  | <p>Sony Ericsson C702<br/>warranty: 2 years<br/>\$374.00</p> |

**Still Need Help?**  
For additional customer support please contact  
Kate Roberts at  
support@thewinningpage.com

**Rest Assured**

**Satisfaction Guaranteed**  
If you're not satisfied with any item, return it anytime within 365 days for an exchange or refund of its purchase price.

**Privacy**  
We will not share or trade online information that you provide us (including e-mail addresses).

**Security**  
All personal information you submit is encrypted and secure.

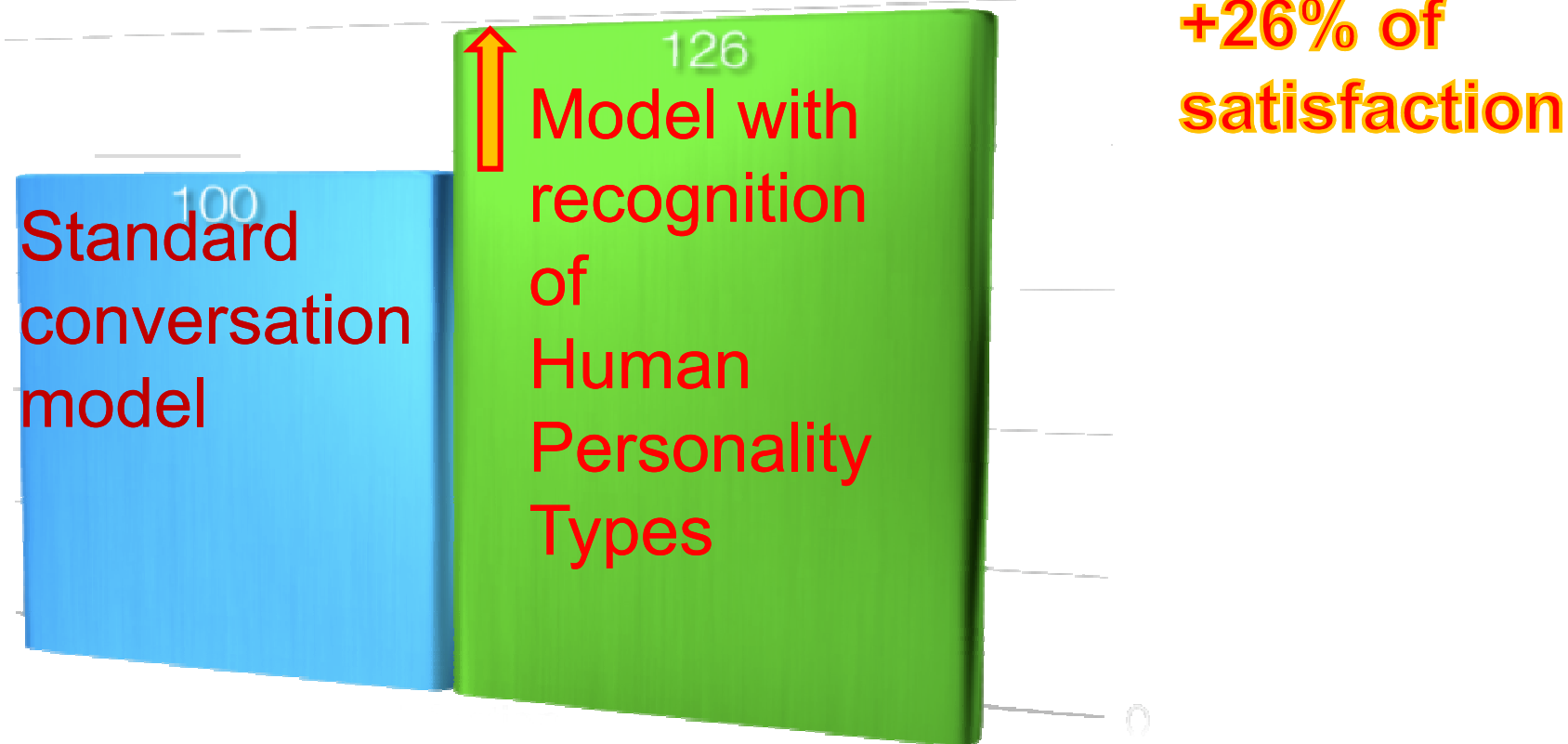
Contact information if something happend

Rest assured certificates, guarantee and badges



## Results of achieved satisfaction of customers

$$\text{SatisfactionImprovement} = 100\% * \left( \frac{\text{ExperimentalGroupPoints}}{\text{ControlGroupPoints}} - 1 \right)$$





## **EXAMPLE OF passive personality recognition during a talk** <http://maximiolo.aspx.sk/>

**Passive personality recognition** during a talk to a simple chatbot has been implemented in the master's dissertation „*Internet psycholinguistic system automating the people character programs recognition*” by Maksymilian Imioło.

The constructed system enables to classify personality for talks in polish language and is available in the web site: <http://maximiolo.aspx.sk/>

# Talk to about the desirable mobile phone

Historia rozmowy:

Pytanie:  
Jaka byłaby Twoja wymarzona komórka? Proszę opisz ją dokładnie.

Odpowiedź:  
Przede wszystkim funkcjonalna z GPS, dużą i łatwą do przeglądania książką telefoniczną, ładna, możliwie nie duża, ale z dużym kolorowym wyświetlaczem umożliwiającym korzystanie z Internetu, GPSa, poczty. Chciałbym ponadto, żeby pewne numery można było łatwo i szybko wybierać przez naciśnięcie jednego klawisza lub komendę głosową. Liczą się też dodatkowe aplikacje, budzik, przypomnienie o ważnych datach itp. Nie powinna się psuć i mieć długi okres gwarancyjny. Zależy mi też na dużej pamięci, żeby mogła pomieścić dużo kontaktów, dane, zdjęcia. Konieczni musi mieć aparat o dużej rozdzielczości z lampą błyskową.

Pytanie:  
Proszę, powiedz mi co rozumiesz mówiąc, żeby była to funkcjonalna komórka i dlaczego Ci tak na tym zależy?

Wpisz odpowiedź:

PRZED E WSZYSTKIM FUNKCJONALNA Z GPS (DOM-7 MAK-7 ASE-7 )DUZA (MAK-8) I LATWA DO PRZEGLADANIA KSIĄZKA TELEFONICZNA ŁADNA MOZLIWIE NIE DUZA (MAK-8) ALE (ASE-7) Z DUŻYM (MAK-8) KOLOROWYM WYSWIETLACZEM UMOZLIWIĄJĄCYM KORZYSTANIE Z INTERNETU GPSA POCZTY CHCIAŁBYM (HAR-7) PONADTO ZEBY PEWNE (ASE-9) NUMERY MOZNA BYŁO ŁATWO I SZYBK O (ZAD-8) WYBIERAC (DOM-10) PRZEZ NACISNIĘCIE JEDNEGO KŁAWISZA LUB KOMEND E GŁOSOWA LICZA SI E TEZ DODATKOWE APLIKACJE BUDZIK ( Zdrobnienie ) PRZYPOMINANIE O WAZNYCH DATACH ITP NIE POWINNA SI E PSUC I MIEC (DOM-9) DLUGI OKRES GWARANCYJNY ZALEZY MI TEZ NA DUZEJ PAMIECI ZEBY MOGLA POMIESCIC DUZO (MAK-9) KONTAKTOW DANE ZDJECIA KONIECZNI MUSI (DOM-9) MIEC (DOM-9) APARAT (MAK-7) O DUZEJ ROZDZIELCZOSCI Z LAMP A BLYSKOWA . PRZED E WSZYSTKIM (SYS-12) Z DUŻYM (MAK-14)

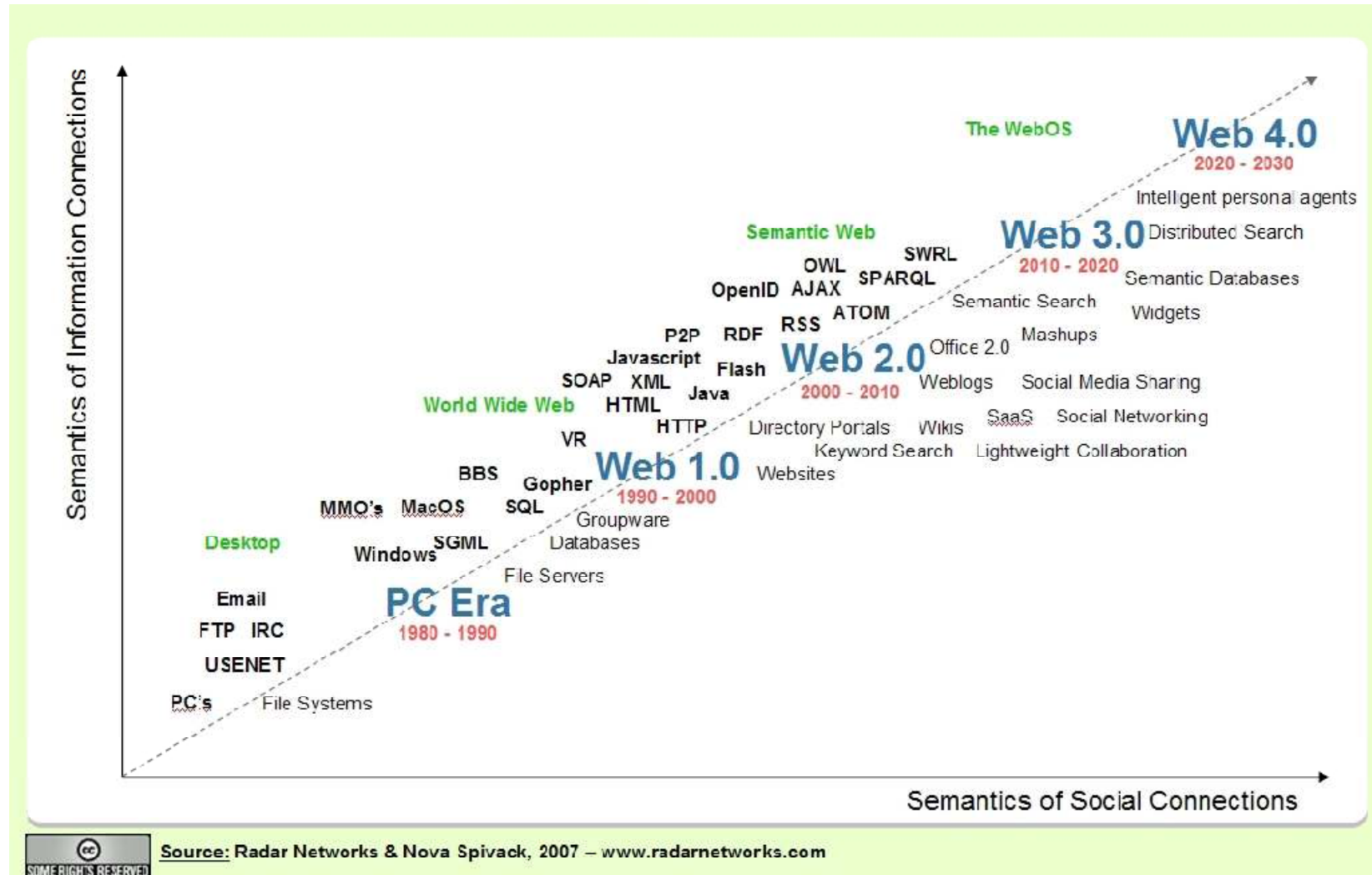
Aktualna skala określenia typu osobowości 28%

| Program | Intensywność słów | Intensywność fraz |
|---------|-------------------|-------------------|
| DOM     | 37                | 0                 |
| MAK     | 47                | 14                |
| INS     | 0                 | 0                 |
| ODK     | 0                 | 0                 |
| WER     | 0                 | 0                 |
| SYS     | 0                 | 12                |
| ASE     | 16                | 0                 |
| HAR     | 7                 | 0                 |
| EMP     | 0                 | 0                 |
| ZAD     | 8                 | 0                 |
| ROW     | 0                 | 0                 |

Recognition of characteristic words, phrases and inflection

Classification of them and results of personality determination

# Predicted development of Internet and intelligent Internet technologies



## **Will everybody have an own intelligent cyberagent in future?**

In not far future everybody can have an own intelligent cyberagent, which helps him to care of his businesses and interests and fulfills one's needs.





# Conclusion

## **The goal of work:**

- construction of personality model that can be used at the computer linguistic level,
- check usefulness of this model for raising satisfaction of people talking to chatbot system equipped with these psycholinguistic skills and able to adapt its way of talking to a recognized personality.

## **Experiments have shown that:**

- ✓ this model is useful and easy to use,
- ✓ satisfaction raises,
- ✓ is adaptable in many modern systems:  
e-commerce, e-shop, e-business, e-learning, CRM, chatbots

**Thank you for your attention!**