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SCIENCE DYNAMICS REVIEW®

*ILLIS QUI SCIENTIAM AMANT
ČASOPIS PRO ROZVOJ SYSTÉMOVÉ VZDĚLANOSTI*



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TRES MATRES BONÆ

pariunt tres filios malos...

-aur-*

Abstract: The article deals with a Latin phrase expressing ancient wisdom about the origin of hatred. An extensive introduction summarizes the issues of emotions and the perception of emotional states, followed by an explanation of the long-term consequences of an individual's interaction with others. A systems causal loop diagram describes the structure of emotional processing of stimuli and includes a cascade of consequences leading to the development of the strongest negative emotional relationship. The subsequent simulation is focused on finding answers to the questions "By what mechanism does truth trigger hate?" and "Can the intensity of experienced hatred be reduced? And if so, how?"

Abstraktum: Articulus tractat sententiam Latinam, quae sapientiam antiquam de origine odii exprimit. In ampla introductione problematica affectuum et perceptionis statuum affectuum summam exponitur, deinde expositio ad longas consequentias interactionis individui cum aliis spectat. Systematica diagramma causalis circuli structuram affectivae stimuli tractationis describit et includit cascadam consequentium, quae ad odii progressionem ducunt. Subsequens simulatio ad quaerendas responsiones quaestionibus "Quo mechanismo veritas odium excitat?" et: "Num fieri potest intensitatem odii percepti minuere? Et si ita, quomodo?" spectat.

The last episode of the "Heritage of Our Fathers" series was, as some may remember, dedicated to a **proverb**. We have learned that even an abstract sentence that a proverb tends to be is modellable if it describes a **dynamic process** or a **dynamizable phenomenon**. It will not be surprising, therefore, that human reasoning, action, and **emotion** can be grasped in an analogous way.

Thanks to psychology, or because of it, a **taxonomy** of emotions has been created so that one can rank them according to their intensity, form sets, and group them together using a variety of criteria. A child gradually learns that emotions can be sorted by **polarity** - into positive and negative. The little man does not care whether the English term "emotion" comes from the Latin *emovere* or *motio*, but knows well that by expressing certain emotions one can **excite** the environment or **set events in motion**. Adults explain that negative emotions are not good for a person and therefore such emotions should be controlled or avoided altogether. This puts the child in a state of an **internal conflict**. The child learns that some emotional expressions that have worked perfectly well so far are not **appropriate** according to the educators' messages. As far back as his or her short memory goes, all it took to get everything desired was to start screaming, and in more

complicated cases to complete the performance by falling on the floor and kicking legs, and now society is trying to force the child to cancel, or at least severely restrict, a strategy that so far has worked perfectly? The child begins to try other methods and gradually discovers that those emotions that are perceived by the people around as good, compared to the bad ones, work worse in many ways. A simple, calm and unrepentive expression of interest in an ice-cream or a stuffed animal is often ignored by the environment and the little person gets into situations where he/she acts "correctly" but ends up empty-handed rather than with the desired object. True, no one is angry with them, but the question remains whether the anger of the people around is not a **fair price to pay** for a treat or other treasures. To make matters worse, even the expression of positive emotions is not appropriate **in all situations**. Loud and mimed joy at the funeral of a wealthy aunt, whose death was still being celebrated by the parents that morning in anticipation of a significant cash income, is met with resentment by other relatives, and a verbal explanation of attitude based on observing parental joy and shouting, "Well, finally!" does not make the wider social group any less displeased. Gradually they come to realize that some emotions are easy

while another difficult to elicit in themselves and others and that the degree of effort, or even the possibility or impossibility of eliciting them, depends on **mood**. At a certain age the child is then able to discover that in the company of certain persons positive emotions are more easily evoked even when the mood is low, because of the deep and positive **feeling** attached to these figures. And that the same individuals, for the same reason, evaluate his or her own expressions with a greater degree of understanding, and so it makes sense not to destroy such feeling for them below an **acceptable limit**. Although the child knows this well, it does not prevent repeated testing and occasional crossing of the line. The child learns gradually the meaning of one's own emotions and, equally important, the ability to **perceive the emotions** of those around them. If they gain the ability to **correctly** read the emotional expressions others, they can develop (eventually automated) **response mechanisms** that will lead to **advantageous social interaction outcomes**. An underdeveloped ability to perceive one's own and others' emotions is in some cases a concomitant of pathological conditions, both congenital and acquired or developed during life. Specifically, one can mention the inability of psychopaths to read **fear** in the faces of others, or the **altered reactivity** to emotional stimuli in persons suffering from anorexia or autism [1]. The evolving understanding of the concept of **time**, as a fundamental determinant of events, has led individuals to recognize that emotions exhibit **time-dependent behavior**. Wise social fantasists felt a compelling need to give **time-dependent emotional expressions** a name, and so, after

millennia of fumbling in the dark, we got the category of **affects**. The taxonomy became more complicated and even created room for national specificity, since the compatibility of terms is higher or lower according to the language in which the issue of emotions is described. In some, emotions and affects are synonymous, differing in their (unfortunately undefined) timeline; in others, someone eager for public recognition of their genius** has tried to describe other subtle nuances that differentiate the categories, and there are those who consider them to be completely separate sets of concepts related to incommensurable phenomena. Whichever school you hold, try in this article to work from my understanding of affect as an expressive, yet time-limited, emotional response to a stimulus. The ability to immediately recognize affect in another person requires flawless decoding of **facial expressions** (possibly also gesticulation). Without this ability, the likelihood of successful social interactions is



Fig. 1 Facial expression representing one of the basic emotions. Identify which emotion it is and the features needed for a proper identification.

** We have discussed the taxonomy in detail in SDR 8 [2].

negligible. Opinions differ as to which facial expressions corresponding to affect are **basic**. Many taxonomies conflate emotions, affects, and moods, and so it is not possible to determine in general terms which are basic, leaving it to a matter of opinion. For the purposes of our interpretation, those facial expressions that require no further specification by the person being observed or knowledge of the situation in which the affected individual is in will be considered basic for safe identification. From this perspective, basic emotions may include **anger, joy, sadness, fear, surprise, confusion, and disgust**.

The "non-basic" emotions are then considered to be various combinations, mixtures or amorphous blends of different emotions, arising from the activity of congruent or conflicting manifestations of the autonomous and

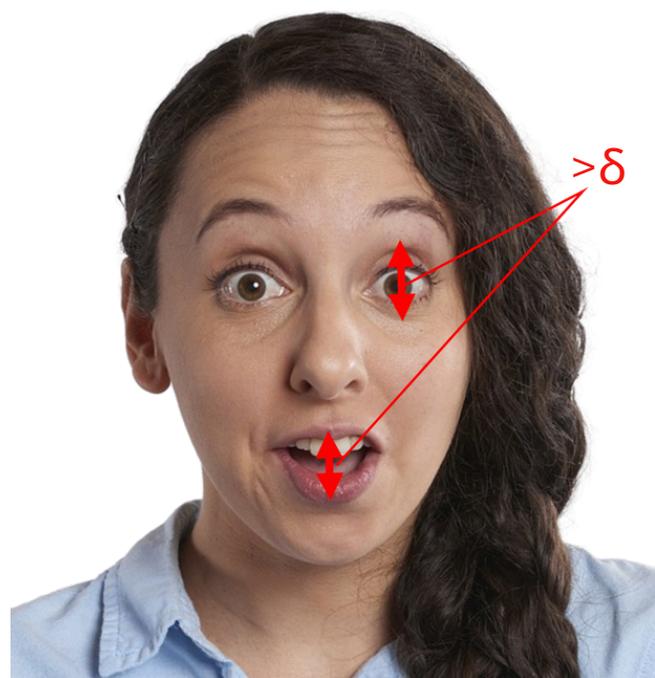


Fig. 2 Facial expression with marked markers to determine the emotion experienced by the subject.

limbic systems and some cortical structures. Let us begin, as always, with something simple. In Figure 1 you will find an emotional expression and your

task is to identify it **correctly**. Not only that, but you must also describe the features you used to identify the expression. Contrary to the prevailing tendency in contemporary society, the correct answer is not a matter of opinion; the meaning of the emotional expression in the picture is not fluid, and thus a failure to determine a single correct meaning is simply a case of incompetence. The expression belongs to the list of basic emotions listed above, and it obviously is a surprise. The key identifying features of the facial expression meaning can be found in Figure 2.



Fig. 3 Surprise variant.

The most important markers in Figure 2 are **dilated eyes** and **open mouth**. In accordance with folklore, the lady in the picture has "dropped her chin" in surprise and has "bulging eyes" to boot. However, this combination of markers is not exclusive to surprise. Which other basic emotion looks very similar? That's right, it's **fear** or **startle**. How are they different

from surprise? If you answered that in fear there is a movement of the head (or body) away from the (potential) source of danger, whereas in surprise the movement is the opposite, your answer is correct. We are not done with the picture yet. Now try to determine the polarity of this emotion. If it is not clear what I mean, go back to the second paragraph, or refer to Figure 3. It also shows a surprised expression, but this time modified. Three, or better yet four, features are needed to decode it. For the neutral or slightly negative surprise in Figures 1-2, paying attention to the widened eyes and open mouth is enough for identification. These are also present in Figure 3, but by analyzing the expression from Figure 3, explained in Figure 4, we see that the *musculus orbicularis oculi* (the one around the



Fig. 4 Markers of facial expression and gesticulation in happy surprise.

eyes), the *musculus zygomaticus* (the face) and (although covered by the hands) the *musculus risorius* (the mouth) are additionally active, forming a complex expression of **joyful surprise**.

It can be clearly seen that the smile is **spontaneous** and therefore **sincere**, the simultaneous involvement of all three muscles cannot be faked, it is necessary to truly experience joy (but that can be faked). It thus differs markedly from the machined, will-controlled, so-called "American" smile, for the formation of which the *musculus buccinator* is used with more or less bravura. Some of us have photos in our family albums of unhappy three-year-old chaps at official happy family photoshoots, who could only be forced to grin by activating the aforementioned trumpeter muscle.



Fig. 5 Hyperactivation of the orbicularis oculi, in the medial part, without lateral contraction.

Perhaps just for the sake of completeness, it should be noted that the research on smiles has not stopped with these two types, and the somewhat obsessive-compulsive colleague Ekman* and his team of followers have identified eighteen of them! Personally, I feel that they failed to identify one of the most important ones. They left out the famous idiotic smile that can be seen, for example, in political debates, on the faces of people who have run out of arguments**.

*to whom I remain eternally grateful for the generous provision of visual material for my research into so-called ADHD.

** we do not cite evidence in this case and refer to the nearest TV show featuring the leaders of whatever

Now look at Figure 5 and try to identify the emotion the lady is experiencing. Is it one of the basic ones described above? Can it be identified even with the hands over the mouth? And is it an emotion at all? The bulging eyes in this case, combined with the covered mouth, are an expression of fear, and without the accompanying gestures, the mouth would be seen to be open, with teeth not bared. Can the reason for the fear experienced be deduced from the picture? The covered mouth may indicate that the girl has blurted out something she shouldn't have. Equally, however, the palms may be muffling any screaming that often accompanies the acute experience of fear - especially in combination with the XX configuration of chromosome 23. Thus, bulging eyes alone are not enough to identify some basic emotional expressions. Figure 6 shows another emotional expression.



Fig. 6 Mouth closed and eyes bulging, hand position deliberately not shown.

Try to determine which emotion it expresses. If you have a hard time, look for markers and try to **imitate** the expression. Maybe that will put you in the same emotional state as our model.

A quicker determination of the emotion would benefit from showing the position of the hands, but they are deliberately cut off in Figure 6. Perhaps an equation that applies when experiencing this emotion might help:

$$\text{Number of chins} > 1$$

I counted three in the picture, their number is apparently a function of the subject's **confusion intensity** and **fatness**. Determining the polarity of an emotion depends on the context; for the subject it can be neutral to negative, the surroundings can be a source of mischievous glee, expressed in Figure 7.



Fig. 7 Sincere or mischievous joy, reaching the verge of hysterical expression.

I counted three in the picture, their number is apparently a function of the subject's confusion intensity and fatness. Determining the polarity of an emotion depends on the context; for the subject it can be neutral to negative, the surroundings can be a source of mischievous glee, expressed in Figure 7. when, unlike the emotional expressions shown so far, the eyes are even closed, the outer corners of the eyes are wrinkled, and the mouth is wide open. As

can be seen, the number of chins again increases above the standard value. Even in a lady who does not suffer from a lack of collagen. The gallery of emotions would not be complete without the somewhat rarer emotional expression in Figure 8. It is characterized by a crooked mouth and the activity of the *musculus corrugator supercilii* (the eyebrow furrower). It can generally be described as an expression indicating aversion, dislike, and, depending on the intensity of the stimulus, disgust. Remember that with this emotion the insula is hyperactivated. In confusion, we are not always able to determine the polarity of the emotion, but the positive context of

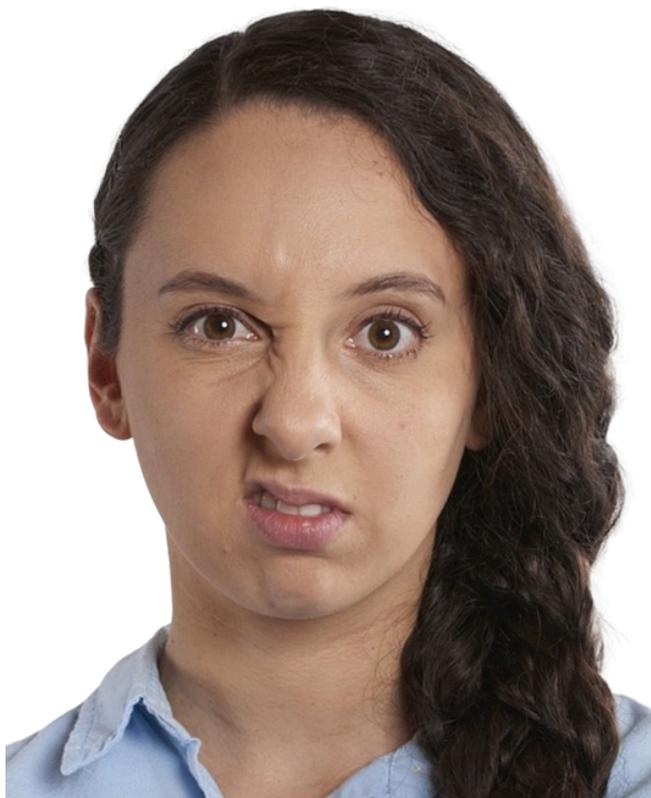


Fig. 8 Expression of displeasure, aversion or disgust.

disgust is hard to imagine*, and it is indifferent whether the emotion is due to visual, olfactory, or tactile sensation, or a combination of these. Now try to produce an expression of disgust on your own face, by recalling one of these sensations from memory. If perhaps you are unable

* Unless the subject of certain, especially far-eastern aberration...

to do so, I offer as a stimulus a poem that my brother taught me when he was in the first grade of elementary school:

*There's a TB spittle running across the screen.
Long as a bus, and filthy green.
It twists and stretches like a jelly,
...so we'd better lick it off the telly!*

I have no idea whether the author is Milton or Rilke, but if the poem didn't work, search the internet for the story of a gentleman who learned from a stewardess that in case of nausea he should use a bag stored in the pocket of the seat in front of him, and what came of it. If even that doesn't help, it's regrettable to note that one of your circumventricular organs, specifically the *area postrema*, is probably hyposensitive.



Fig. 9 Damsel in anger...

The list of negative emotions cannot do without the most prominent one, which can be found in a somewhat exaggerated form in Figure 9. Once again we return to the bulging eyes, the teeth are this time bared and, as with disgust, *m. corrugator supercilii* is present. What we see in Figure 9 is rather fury, and surely there are those among the readers who will not hesitate to describe the condition as **rage**.

Experience teaches us that the person with the facial expression in Figure 9 is in a state where trying to make them laugh is pointless, and if the choice is between flight and fight, the latter is the more likely course of action. It makes sense to irritate the person further only if, unlike us, s/he is locked in a tight cage from which there is no escape.

For all the specific facial expressions conveying emotion, one gradually learns to develop an appropriate interaction strategy, from crying with those who cry and rejoicing with those who rejoice to running away from those who are frantic. If the child succeeds, he or she has a chance to become proficient in the veneer of social bonding. But this cannot conclude the issue of emotions. We now know that an emotional expression can be identified by a combination of markers, and that some of them are found virtually unchanged in neutral as well as positive or negative emotional expressions. The combination of emotional and cognitive activity gives rise to so-called **higher emotions**. The next time you want to chastise your wife, daughter or granddaughter for her boundless curiosity, please remember that this is one of the higher emotions. Figure 10 was originally intended to capture the next one on the list. I wanted to show you a maiden blush, as a concomitant of shame, but I have been unable, despite immeasurable effort, to find a workable model in the capital of the realm in which this text was written.

In terms of time and subject, we can distinguish between short affects and slightly longer emotions, which we consider either basic or higher, depending on the degree of involvement of cognitive structures, and which are manifested in ourselves or in others. Emotional expressions can be observed

in the face, sometimes accompanied by gesticulation. We form long-term emotional relationships with other people on the basis of their behavior, and this brings us to the main theme of this work, expressed in the Latin sentence whose first three words form its title. If you are really educated, you know, more or less, the work of Horatio. Perhaps you have read Vergilius in its original edition. Then you will have no difficulty in understanding the following text:

Tres matres bonæ pariunt tres filios malos: veritas odium, pax ocium, nimia familiaris contemptum.

In it, we learn about three good mothers who gave birth to three evil sons. We'll focus on the first mother and her offspring. In the **higher languages**, the problem of the lexical genus arises. Fortunately, English is not one of those, so we don't need to dwell on that here. So **truth** begets **hate**. Why and how does this happen? To understand, we need to go back to the time when the sentence was first written. Once upon a time, truth was seen as an **independent entity**, **distinct** from **opinion**. The gradual devaluation of words and the death of knowledge, which was both a cause and a consequence of the transformation of the philosophical departments into **misosophical** ones, created a world in which it is possible to declare "truth is relative" or "I have my truth and you have yours" and not end up excommunicated from the company of the scholars[3]. It follows from Comenius' conception of *Prima philosophia* that *veritas quattuor attributa habet* [4]. For the benefit of the literate, I give it first in the original, so as not to lose its meaning in translation:

1. Veritas metaphysica, quæ est congruentia rei cum se ipsa: atque huic nihil est oppositum.

2. *Veritas physica, quae est congruentia rei cum idea sua, cum res talis est, qualis esse debet: huic oppositum est vitium, sive degeneratione, sive depravatione fiat.*

3. *Veritas logica, quae est congruentia conceptus mentis cum re: huic opponitur error sive falsa imaginatio.*

4. *Veritas ethica, quae est congruentia linguae cum mentis conceptu: oppositum ejus est mendacium.*

For the uneducated, may I add that the **metaphysical truth** is the coincidence of a thing with itself, its opposite is **nullity**. **Physical truth** is the conformity of a thing to its idea (or purpose), where the thing is as it should be. Its opposite is **defect**, caused by deterioration or degeneration. **Logical truth**, which is the conformity of a thing to its mental concept, the opposite of which is **error** (logical fallacy - illogicality) and **ethical truth**, which is the conformity of a statement to a mental concept. Its opposite is a **lie**.

The *Prima philosophia* also includes statements about the **dependence** of phenomena - about **causality**, of which we will make particular use in our interpretation of the following:

1. *Nihil sine causa.*
2. *Nihil sui ipsius causa.*
3. *Causa est dignior suo effecta.*
4. *Qualis causa, tale effectum.*

So it remains to state that nothing is **without** a cause, nothing is the cause of **itself**, the cause is **more important** than the effect, and the effect is **determined** by the cause. This is the philosophy that laid the foundations of European knowledge and power. That is why, at a

time of destruction of the whole concept, we are also witnessing the demise of what once aspired to become the highest culture and eternal civilization.

We have defined the truth, it remains to describe the **offspring**. Hatred is classified as an emotional relationship. These are often made up of a set of emotions and cognitive processes, and it is therefore not surprising that we place love, envy, jealousy and friendship, among others, in the same group. We know well from experience and previous lectures that if we want to attempt a systems grasp of anything, we must first formulate a question to which we will seek an answer by systems means.

We will ask three such questions. The first is, "By what mechanism does truth produce hatred?" And the second (and third), "Is it possible to reduce the intensity of hatred? And if so, how?"

According to that ancient statement, a system diagram can be drawn easily. It won't even have too many elements. If truth breeds hatred, the diagram may look like Figure 10.

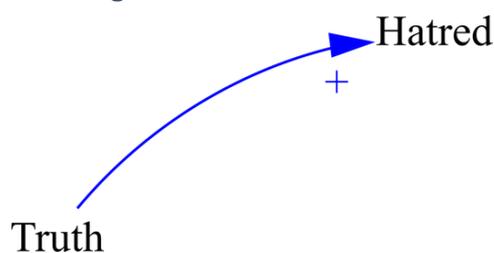


Fig. 10 The relationship between truth and hatred according to ancient wisdom.

Looking at the diagram, one cannot help but feel that I have made my job a little easier. Try to imagine the mechanism of how such a relationship works. See Figure 11 for my suggestions. You will find two solutions in the form of two differently written equations. Both are true, and the process by which they are supposed to generate hatred is not entirely clear to me. If you doubt their validity, something is wrong. With you. Maybe a traumatic memory of your first year of primary

school when you didn't get the right result, one can imagine that the seed of hate was planted. Hatred for what? Math? Hate is the strongest negative emotional relationship and cannot be felt towards an object, it is reserved for a person or an anthropomorphized subject.

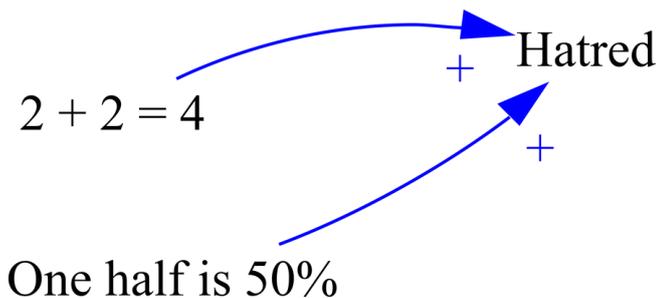


Figure 11 True statements and hatred..

It is possible to feel aversion towards an object or an animal, the need to deal with it may provoke anger, but the target of hatred is ultimately a person, or a group of people (no matter how large). In certain cases, the object of my hatred may be myself, or a group of which I am a member. Look at Figure 12.

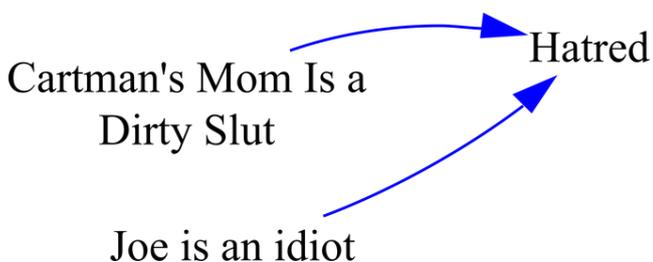


Fig. 12 More true statements and hatred.

How does it differ from the 11? First and foremost, they are **statements**. A statement is defined as a proposition whose accuracy can be doubted. If statements are not true, it is easy to understand that they will elicit a negative response. But according to the ancient saying we have studied, it is the truth that provokes hatred. So let's assume that both the statement about Cartman's mom and the statement about Joe are true*. Before you start spinning theories and drawing diagrams in your head, let me try to stop

you. The mere fact that a statement is ancient, old, uttered by, say, the Prime Minister, President or King himself, does not necessarily make it **exhaustive**, let alone **true**. This also applies to statements of truth. Let us search together for the origin of the ancient wisdom under examination. We find that the author of the statement is Publius Terentius Afer and that what has made it into the summary wisdom given on page 8 left is only the second part of the sentence, "*Obsequium amicos, veritas odium parit*". It finally makes sense! *Qualis causa, tale effectum*-only an emotional message will evoke an emotion. That flattery makes friends and truth breeds hatred, we've known for a long time. The production of hatred is therefore a consequence of presenting a truth **unpleasant** to the **recipient** of the message. The range of such messages is wide, few saints have walked the earth in the past nor does it want to be better now, so there is something to be found on everyone. But certain conditions must be met. Hate is not an affect and strictly speaking not an emotion, it is an **emotional relationship** and it takes **time** to develop. In other words, it needs a substrate. First a relationship must be formed, which may be primarily affectionate, but is subsequently consumed by hatred, or develops as hateful from the beginning. Is it possible to define the emotions that go with hatred? List them in Table 1:

Table 1 Space for your list.

* Liane - proof in the South Park that is bigger, longer and uncut...
 Joe - proof provided by Joe on a continuous basis.

When you have finished the list, pay attention to Figure 13. There are three emotional expressions. Which one can be related to hate? The correct answer is - all of them. From the rage on the left, labeled A, to the B-rated fury in the middle, to the expression on the right under the letter C. We've learned that hate is induced by truth. But is (emotional) truth its one and only trigger? Absolutely not. Hate can be triggered by **truth** or **lies**, by **traumatic events**, by **violence**, but also by the **desire for love**. But the impulse alone, as mentioned above, is not enough. Hate, like all emotional relationships, must be fed by something. That something, according to the fourth rule of causality, is either a **persistent unpleasant truth**, a **repeated propagandistic lie**, or the ongoing **pain** caused by trauma or violence, which does not have to be brachial. Anger that does not end in catharsis, the proverbial pushing of the victim into a corner from which there is no escape. A lingering sense of futility and helplessness that develops into despair. A lie that provokes hatred need not be an **objective** lie, but it must be **perceived** as such. If it is a lie or a pressure that threatens the core values

of the subject, the likelihood of developing hatred approaches one. In the context of systems thinking, then, it is a clash of mental models. The discordant model is imposed or being imposed on the subject resulting in an internal conflict that triggers a cascade of consequences leading to hate.

Let us now attempt to create a simple systems diagram that captures the described dynamics. First on your own, then confront your creation with the diagram in Figure 14. The diagram must be generalized enough to cover the triggers of hate mentioned in the previous paragraph. Start from the idea that the subject under study has an initial **comfort zone** in the parameter of interest. This is confronted at some point by circumstances or some other zone imposed by an **external force**. The degree of overlap of these zones, or rather the degree of non-overlap - determines the intensity of the resulting **conflict**. The intensity of the conflict, together with the **capacity to adapt** then determines the degree of **despair**, which with a time delay triggers the hatred build-up. The higher the intensity of hatred, the lower the willingness to adapt, retroactively affecting both the level of despair and the

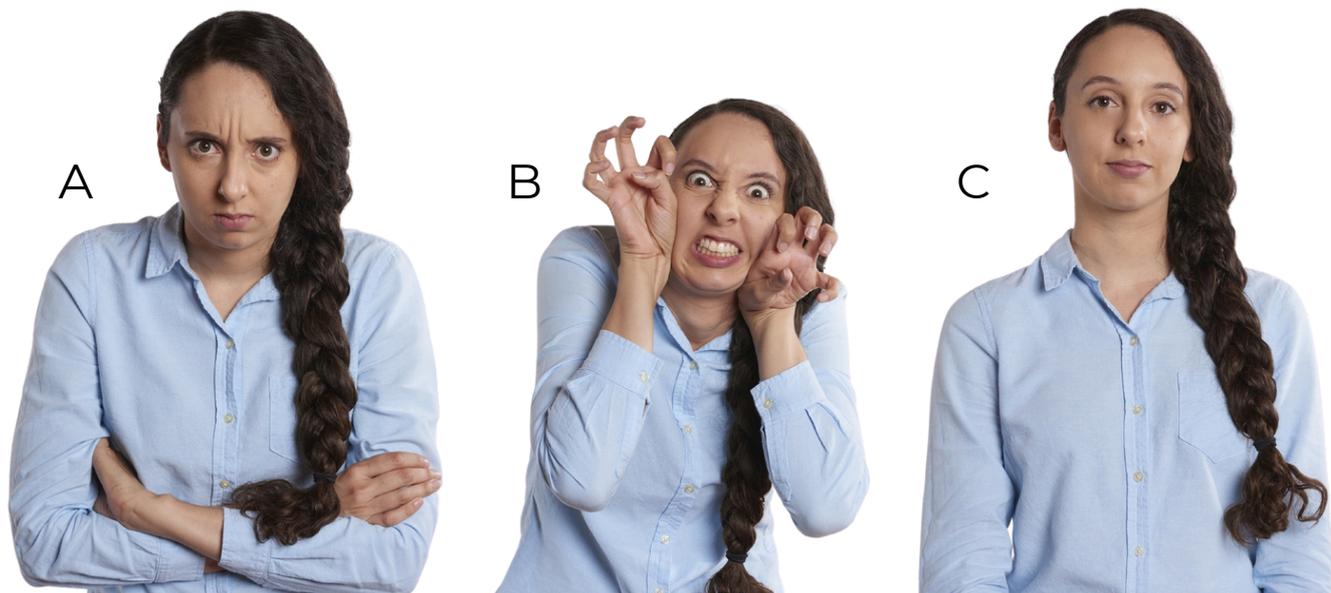


Fig. 13 Which expression can be associated with hatred?

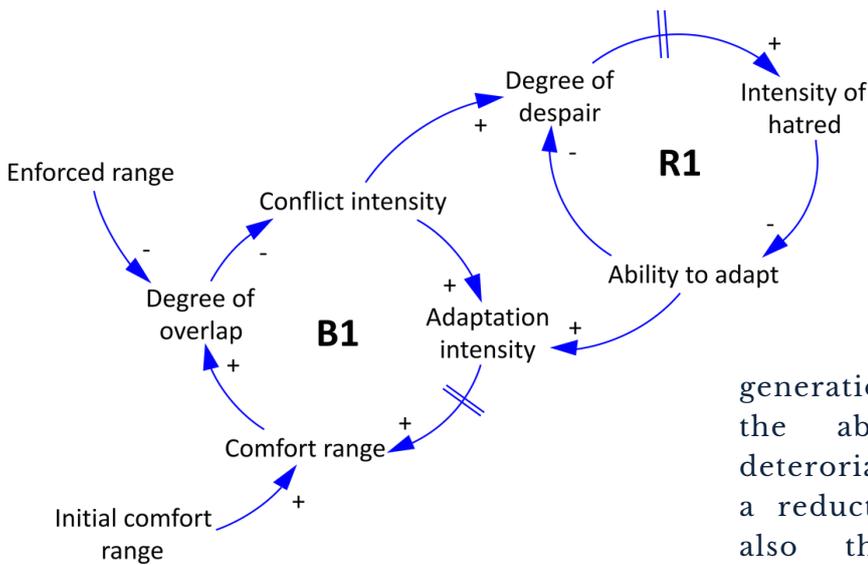


Fig. 14 The core of the dynamic structure of hatred

adaptation process. The full diagram, at least in terms of our paper, can be found in Figure 15. It adds two feedback loops. R2 is formed as a consequence of the "natural" outcome of hatred, which is the **desire for revenge**, which, depending on the intensity of the desire, takes up more and more of the hater's time, devoted to both plotting revenge and ruminating on the same topic. The more time is devoted to revenge, the less time is left for ordinary activities.

Although 'ordinary activity' may sound trivial, it includes **income-generating activity, family care, including building and maintaining social ties in the wider community, community service, scientific research** and, in relation to the rising generations - **teaching**. Lack of time for the above activities leads to a deterioration of **social relationships**, and a reduction in work performance may also threaten the **revenge-planning individual economically**. The deterioration of the economic situation and the quality of social ties deepen the sense of despair. Especially in cases where "premorbid" social status was perceived as a constant, forming the foundation of the individual's emotional stability. The R3 loop simply expresses the benefit of externalized hatred, bringing relief from the existence of other listening and understanding individuals with a sympathetic viewpoint. The relief that

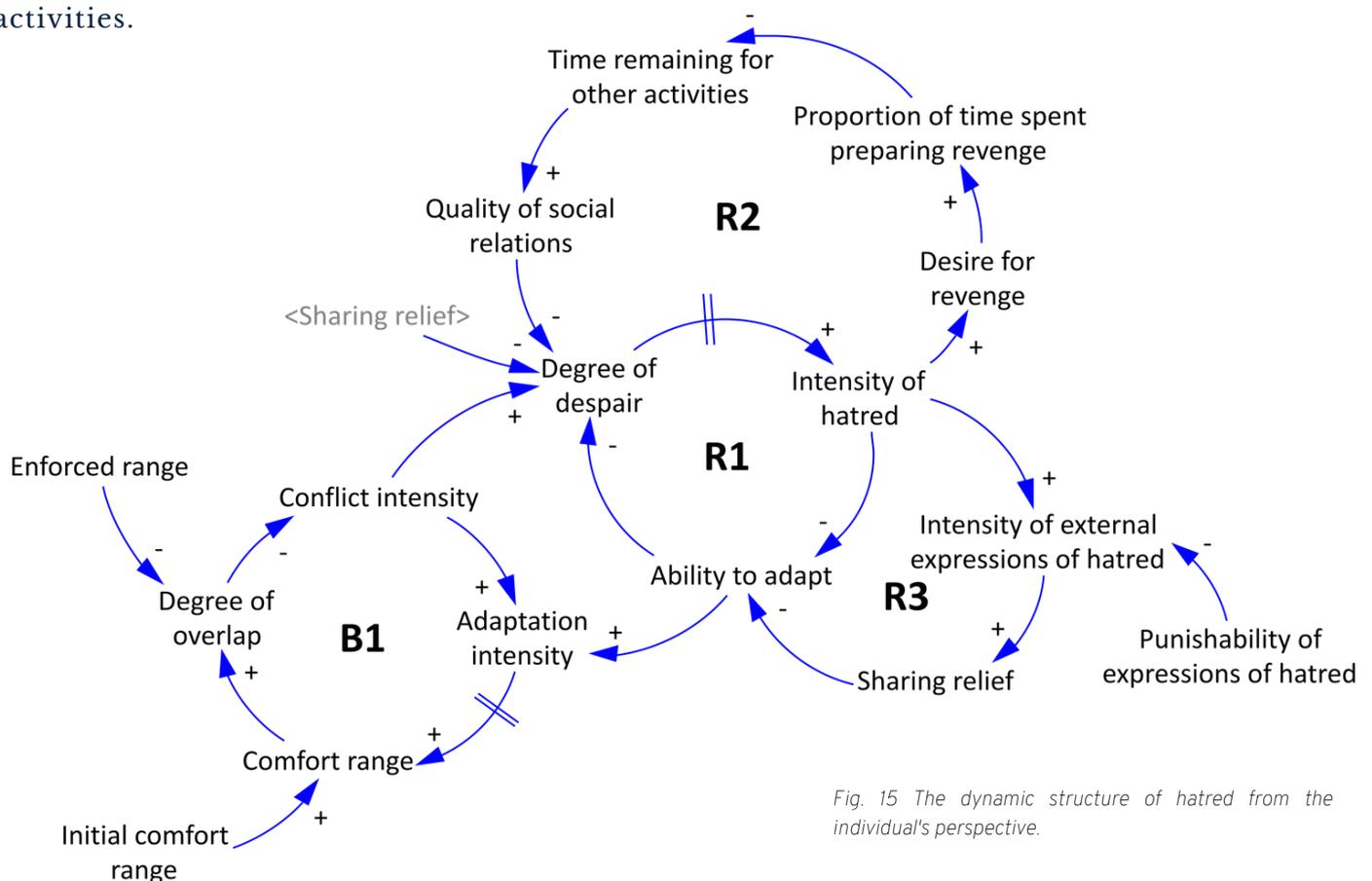


Fig. 15 The dynamic structure of hatred from the individual's perspective.

arises from sharing, while reducing the intensity of despair, also reduces the need to adapt to the new situation.

It remains to reflect on the logic of the public policy makers who came up with the idea of outlawing hate. If hate is the strongest negative emotional relationship, the opposite emotional relationship is love. In terms of dynamics, it is indifferent whether the leaders desire to eliminate hate *an sich*, or target a particular variety, equipped with an adjective and a prohibition intended to prevent hate crimes, with much higher penal rates than for **common crimes**, committed, according to this logic, apparently **out of love**. Looking at the diagram, it is fairly easy to deduce that the threat of punishment clashes with the need to vent internal tensions, and that punitiveness will curb outward expressions only until the intensity of hatred **exceeds a critical threshold** beyond which the hater no longer cares not only for their possessions and liberty, but their own life is no longer of value to them.

I suppose the logic of overlapping ranges (zones) is clear. If perhaps it is not, study diagram 1. It shows three modalities. The comfort zone expresses the space in which the individual is accustomed to operate, representing his or her attitudes, beliefs, relationships, and possessed and professed values. The imposed zone expresses the circumstances (accidents, crime), laws and social attitudes of the rest of the population that the individual is forced to accept. If the two zones coincide, the overlap value is 100. This is an index, i.e. a dimensionless variable whose value is in the interval $\langle -100, 100 \rangle$. In the first example, the ranges overlap, but the imposed zone is broader, so it includes attitudes, opinions and values that the individual does not share. The overlap in this case is equal to fifty. In the second

example, there are complete outliers, the value of the overlap is -100. The third example also shows non-overlap zones, the zone spacing is not maximum, but the imposed zone additionally covers a significant portion of the axis outside the comfort range. The resulting (non)overlap value in this case is -70. Thus, positive values are the fraction of overlap in the **larger** of the ranges, negative values are a function of the **zones distance** and the **size** of the imposed range. A simpler way of expressing the initial stimulus of the hate cascade is not known to me.



Diagram.1 The logic of overlapping ranges (zones).

Now we know enough and we can start creating the **simulation model**. While the mental simulation of the causal loop diagram allowed us to explore the relationships within the system, the interaction of the four (actually five, one left unlabeled) feedback loops is **beyond**

the capabilities of the human brain. Let me remind you that this article is part of the "Science Dynamics Masterclass" lecture series, so I won't insult you by providing the equations of the model, which I'm sure you can formulate yourself. I offer only the flow diagram of my solution in Figure 16. The model uses only the basic elements and can thus be created entirely in Vensim PLE.

The model contains five exogenous variables. Four are used to set the comfort and imposed zone ranges (Initial comfort range min and max, Imposed range min and max), and the last one is used to set the punitiveness of the externally expressed hatred (*Punishability of expression of hatred*). The simulation is set for 200 weeks with a simulation step of one week and we make do with the Euler integration method. The first scenario, denoted S1, has the parameters shown in Figure 2. The initial comfort range is set from 5 to 15, the imposed range from 10 to 30, and the penalty remains at zero. This scenario can be imagined as a consequence of applying the so-called Overton window, i.e., shifting the norm from an initial range that more or less coincided with the comfort zone to a region where the overlap with the comfort zone is only 25%. A similar story

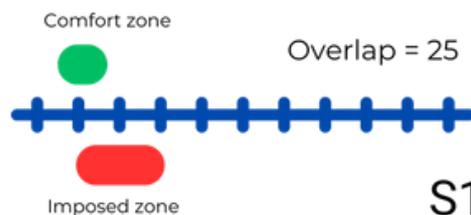


Diagram 2 Parameters of scenario S1.

would apply to a victim of a crime; a serious illness caused by an infection not caused by the individual, and so on. The conflict caused by the lack of overlap will induce despair and then **low intensity** hatred, peaking at about 1.8 out of a hundred possible, and eventually, through the ability to adapt, a gradual decrease in intensity to below a measurable level. With increasing time, it would then disappear completely. The second scenario, denoted S2, is based on the initial parameters given in diagram 3. In the S2 scenario, the overlap between the comfort zone and the imposed zone is zero, and the imposed zone covers an area that is alien and hostile to the subject and is perceived as threatening to the subject's way of life, worldview, values, property, family, nation, or state. Scenario S3 has the same parameters as S2, but the variable *Punishability of expression of hatred* is set to maximum. In Figure 17, we can see the patterns of the *Intensity of external expressions of hatred* in all scenarios. The unrestricted

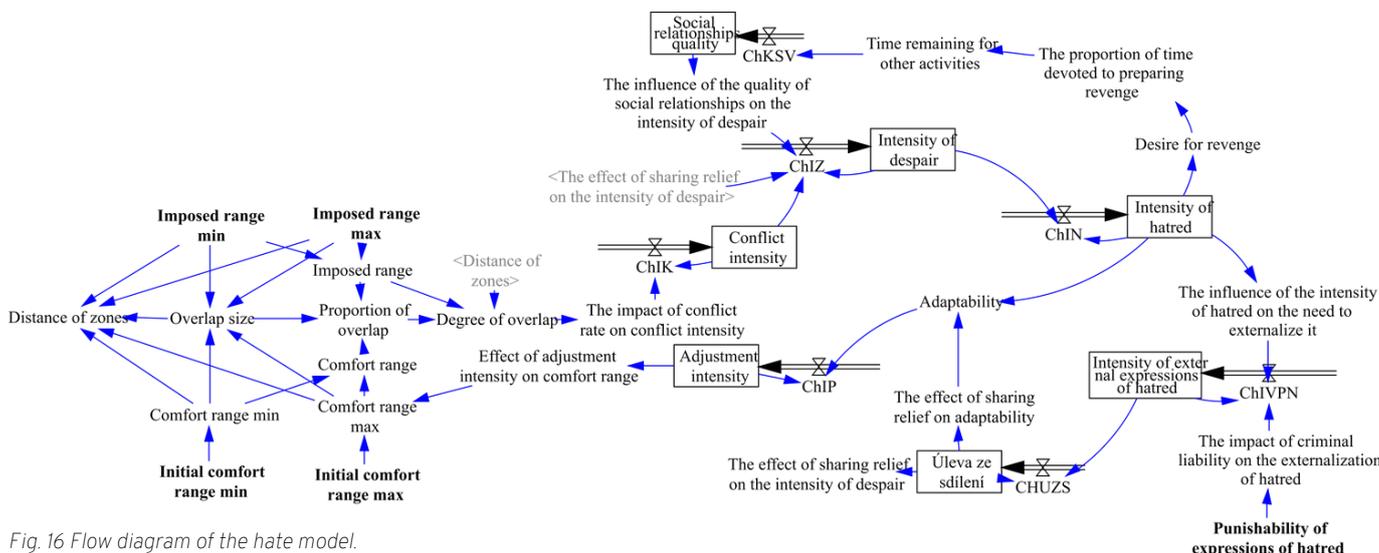


Fig. 16 Flow diagram of the hate model.

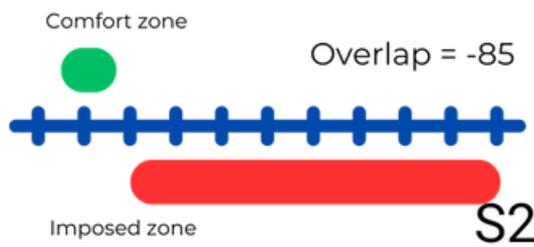


Diagram 3 Parameters of scenario S2.

hatred in scenario S2 kicks in around step 20 of the simulation, while the punished hatred stays low until step 150 to eventually reach values higher than the unrestricted hatred in a flash...

The *Intensity of hatred* in all scenarios is shown in Figure 18. We can clearly see that the **criminalization** of hate leads to its **intensification**. But explain this to those who even punish selectively, while they stir up hatred for selected subjects as their life program. The answer to the first question can be found in Figure 15. The answer to the second is yes, and the answer to the third is yes, if we provide time, space, and support for adjustment, as long as the intensity of despair does not **exceed a critical threshold**. If you have thought of replacing hatred with **contempt**, I must disappoint you. Contempt inevitably leads to **hubris**. And if hatred is bad, then hubris is the **beginning of all that is evil**. Otherwise there is nothing but prevention - the cause is more important than the effect

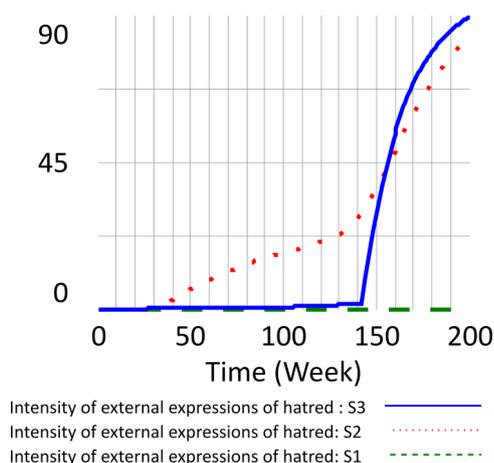
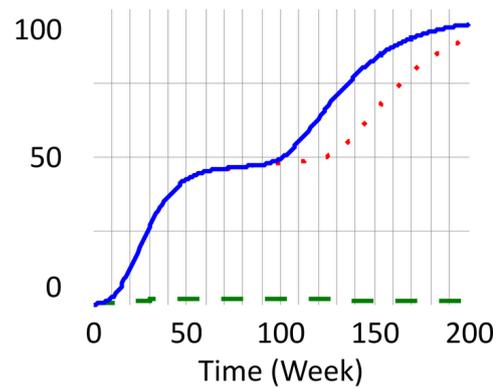


Fig. 17 Evolution of externalization intensity in scenarios S1-3...

1. Susta, M., et al., *The sight of one's own body: Could qEEG help predict the treatment response in anorexia nervosa?* Front Psychol, 2022.
2. -Aur-, *Taxonomuji, tedy jsem.* Science Dynamics Review, 2020, II(8):
3. Liessmann, K.P., *Theorie der Unbildung : die Die Irrtümer der Wissensgesellschaft.* 2006, Wien:
4. Comenius, J.A.ä., V.e.t. Balik, and V.e.t. Schifferova, *Prima philosophia - spisy o prvni filosofii.* 2017, Prague.



Intensity of hatred : S3 ————
 Intensity of hatred : S2
 Intensity of hatred : S1 - - - - -

Fig. 18 Hate intensity in scenarios S1-3.

here too - it means not creating reasons for hatred. The author of the ethical and moral principles on which our civilization is based commanded his followers (correctly translated): "Do not hate your enemies", because he knew well that if the intensity of hatred exceeds the point of no return, it will end in the destruction of the haters and their surroundings.

Some **hated** individuals are under the mistaken impression that they are hated, in the sense of the rule *veritas odium parit*, because they **proclaim the truth**. *Quod erat demonstrandum*, their actions may have **nothing to do with the truth**. Do you invoke hatred by lying for the greater good, forcing others to accept the unacceptable, or do you drive them to despair by destroying their world, pledging justice and equality paid for by their assets, enforcing democracy and progressive tolerance that outlaws opposing views and attitudes? The cynic adds: "Serves you right!" If they hate you for proclaiming an inconvenient truth*, you deserve admiration and support.

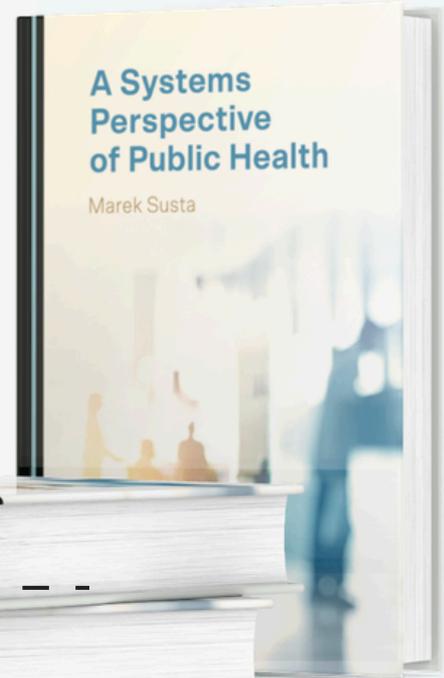
If you feel that the intensity of hatred is increasing in your country and you want to know what that means, the answer is simple. The people are massively shifting from a **sensory** to a **mythical** perception of reality and the country is headed for war. We will discuss this phenomenon in detail in a future article. Let's hope we can do it before the signal to attack sounds.

* I mean the truth with all of the four attributes, not ideology...

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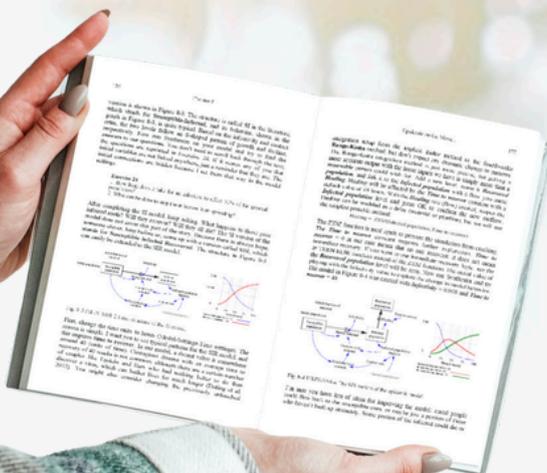
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