

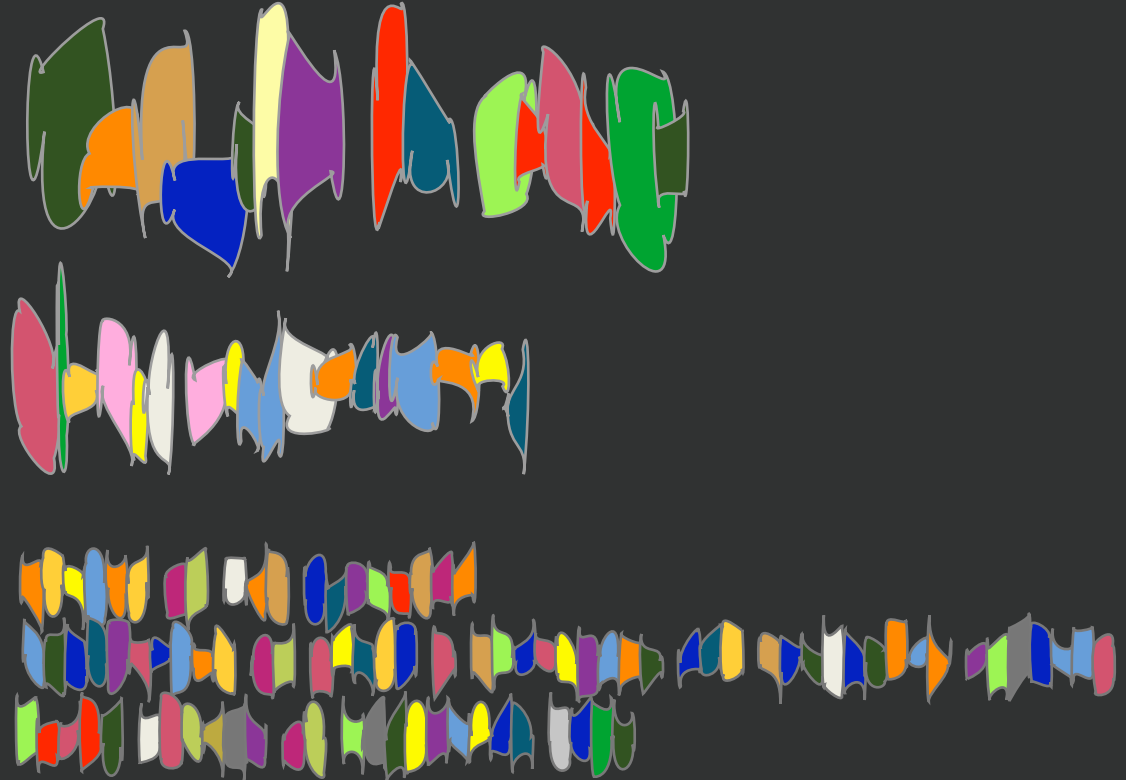
Remarks on Colour

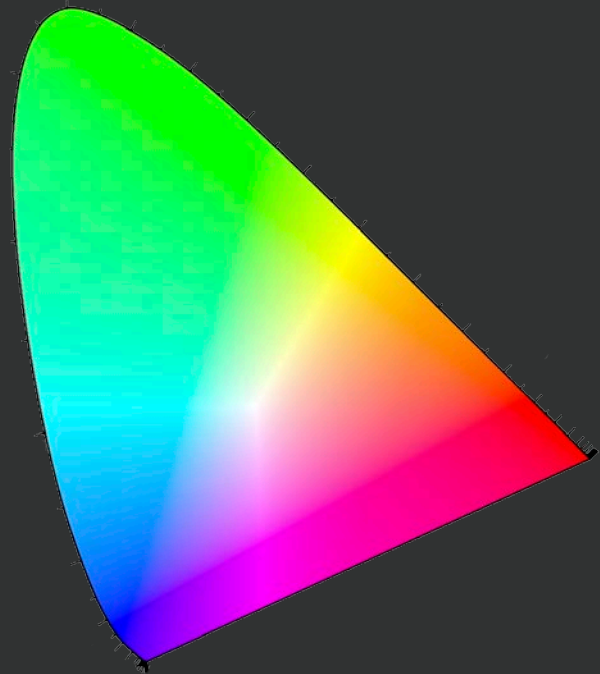
Ludwig Wittgenstein

edited by Gem Anscombe

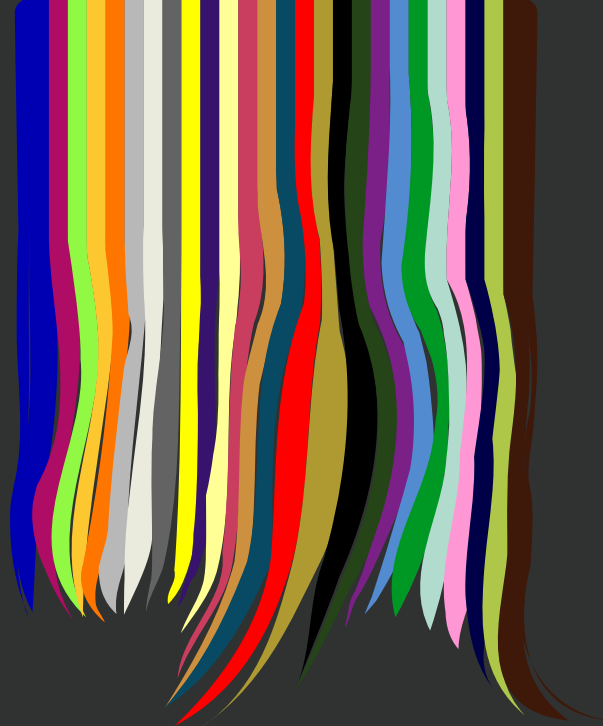
translated by Linda L. McAlister and Magaete Schattle

colour glyphs by Christian Faur





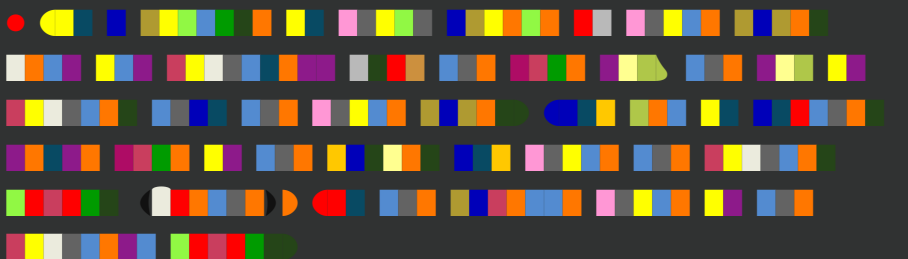
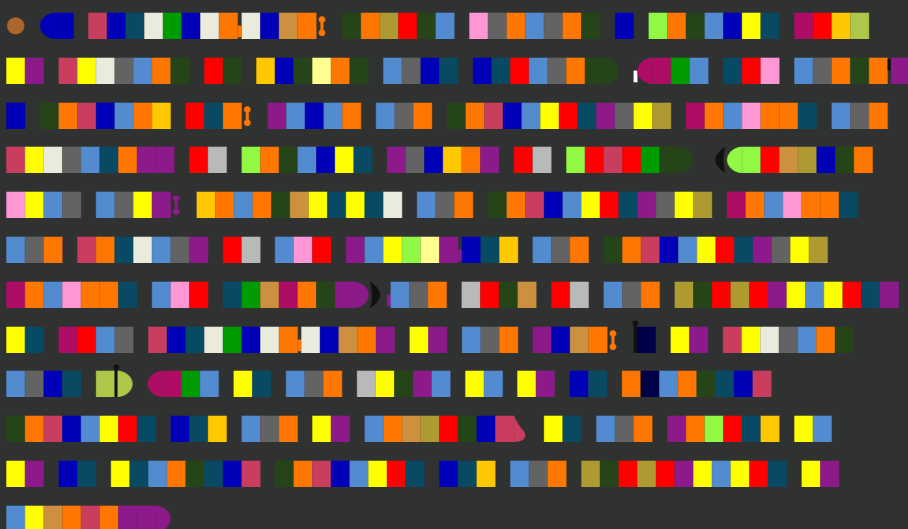
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1. a language-game: e.g. to say that a piece of paper is lighter than another - but now the other is related to a third: state the relationship between the lightness of certain shades of colour. (compare with this: determining the relationship between the lengths of two sticks - and the relationship between two numbers.) - the form of the propositions in both language-games is the same: "x is lighter than y". but in the first it is an external relation and the is temporal, in the second it is an internal relation and the proposition is timeless.

2. in a picture in which a piece of white paper gets its lightness from the blue sky, the sky is lighter than the white paper - and yet in another sense blue is the darker and white the lighter colour. (Goethe). on the palette white is the lightest colour.

3. Lichteberg says that very few people have ever

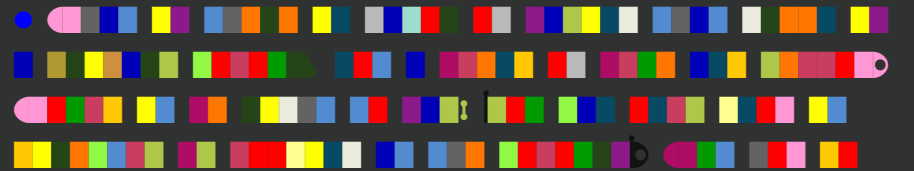
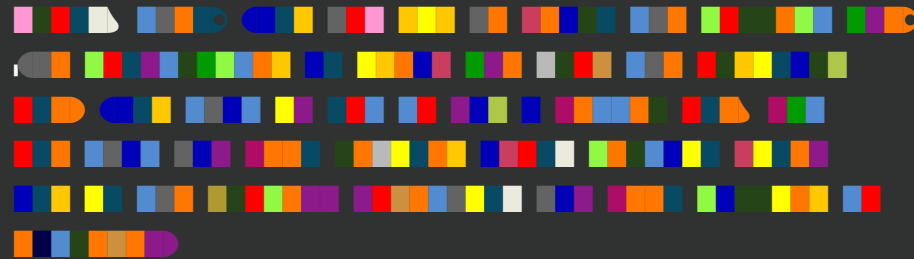


seen pure white. so do most people use the word wrong, then? and how did he learn the correct use? - he constructed an ideal use from the ordinary one. and that is not to say a better one, but one that has been refined along certain lines and in the process something has been carried to extremes.

4. and of course such a construct may in turn teach us something about the way we in fact use the word.

5. if i say a piece of paper is pure white, and if somehow we placed next to it and it then appeared grey, in its normal surroundings i would still be right in calling it white and not light grey. it could be that i use a more refined concept of white in, say, a laboratory (where, for example, i also use a more refined concept of precise determination of time).

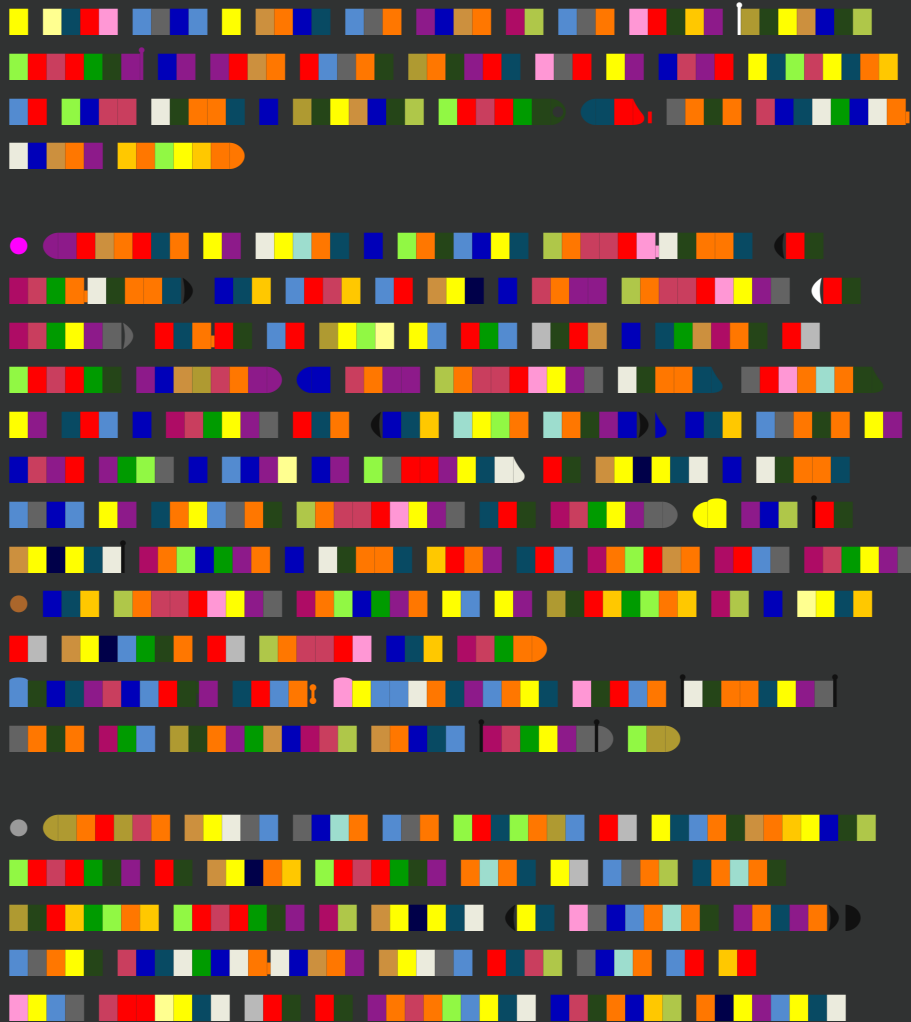
6. what is the evil in favor of saying that green is a primary colour - not a blend of blue and yellow? would it be right to say: "you can only know it directly by



looking at the colours?" but how do i know that i mean the same by the words "primary colours" as some other person who is also inclined to call green a primary colour? no,- the language-games decide.

7 someone is given a certain yellow-green (or blue-green) and told to mix a less yellowish (or bluish) one out to pick it out from a number of colour samples, a less yellowish green, however, is not a bluish one (and vice versa), and the one is also such a task as choosing, or mixing a green that is neither yellowish nor bluish. I say "or mixing" because a green does not become both bluish and yellowish because it is produced by a kind of mixture of yellow and blue. Translator's note: Wittgenstein wrote "greenish" here but presumably meant "bluish". cp. 111, 5-158

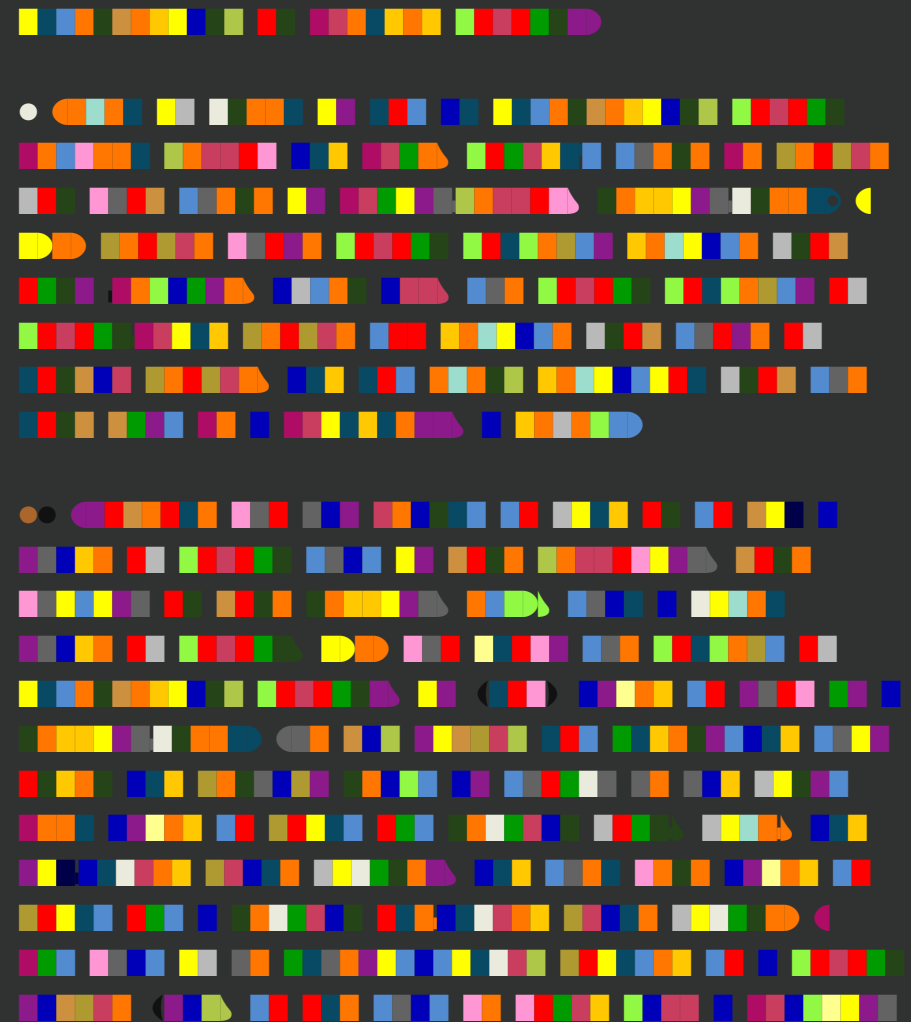
8 people might have the concept of intermediate colours or mixed colours even if they have produced colours by mixing in



whatever sense), their language-games might only have to do with looking for or selecting already existing intermediate or blended colours.

9 even if green is not an intermediate colour between yellow and blue, could it then be people for whom the one is bluish-yellow, reddish-green? i.e. people whose colour concepts deviate from ours - because, after all, the colour concepts of colour-blind people too deviate from those of normal people, and not every deviation from the norm must be a blindness, a defect.

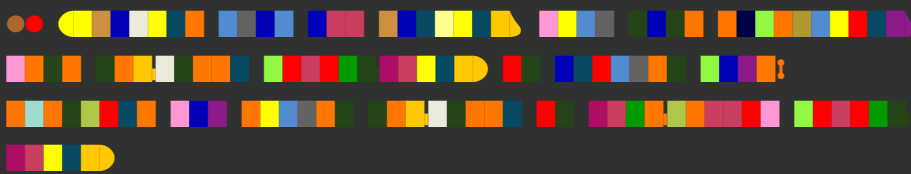
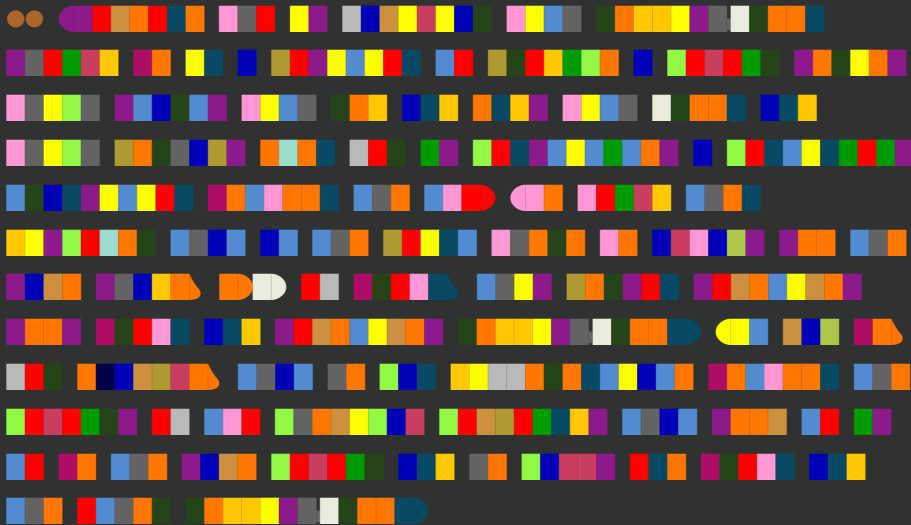
10 someone who has learnt to find or to mix a shade of colour that is more yellowish, more whitish or more reddish, etc., than a given shade of colour, i.e. who knows the concept of intermediate colours, is (now) asked to show us a reddish-green, he may simply not understand this order and perhaps react as though he had first been asked to point out regular four-, five-, and six-angled



plane figures, and then we are asked to point out a regular one-angled plane figure. but what if he unhesitatingly pointed to a colour sample (say, to one that we would call a blackish brown)?

11 someone who is familiar with reddish-green should be in a position to produce a colour series which starts with red and ends with green and which perhaps even for us constitutes a continuous transition between the two. we would then discover that at the point where we always see the same shade, e.g. of brown, this person sometimes sees brown and sometimes reddish-green. it may be, for example, that he can differentiate between the colours of two chemical compounds that seem to us to be the same colour and he calls one brown and the other reddish-green.

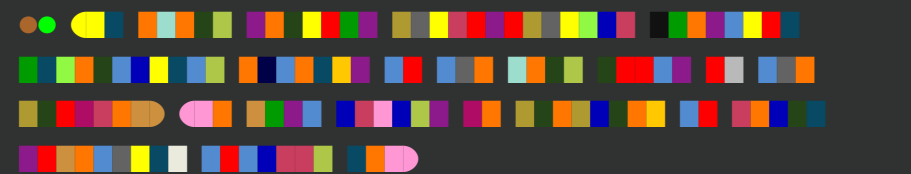
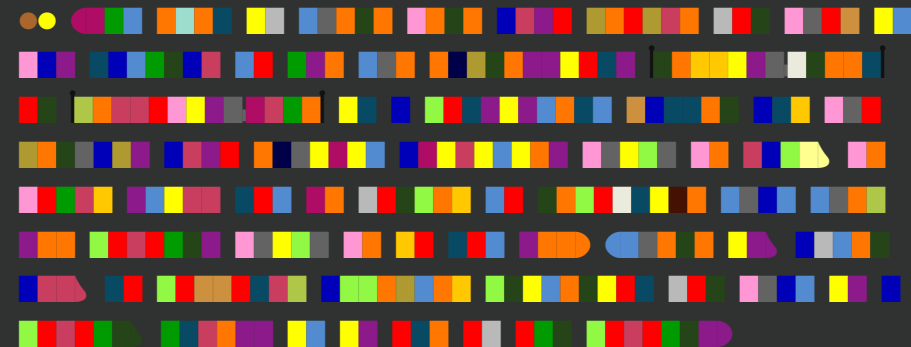
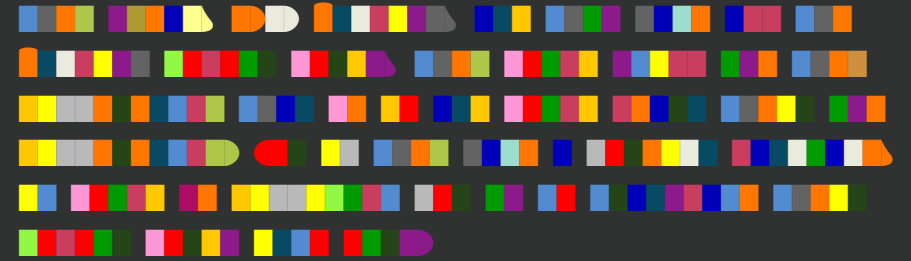
12 imagine that all mankind, with a few exceptions, were red-green colour blind. or another case: everyone was either red-green or blue-yellow colour blind.



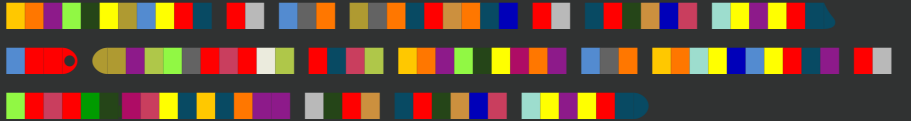
13 imagine that the concept of colour-blind people, and the one could easily be one. they would not have the same colour concepts as we do. for even assuming they speak, e.g. English, and thus have all the English colour words, they would still use them differently than we do and would learn their use differently. so if they have a foreign language, it would be difficult for us to translate their colour words into ours.

14 but even if the one we are also people for whom it was natural to use the expressions "reddish-green" or "yellowish-blue" in a consistent manner and who perhaps also exhibit abilities which we lack, we would still not be forced to recognize that they see colours which we do not see. the one is, after all, no commonly accepted criterion for what is a colour unless it is one of our colours.

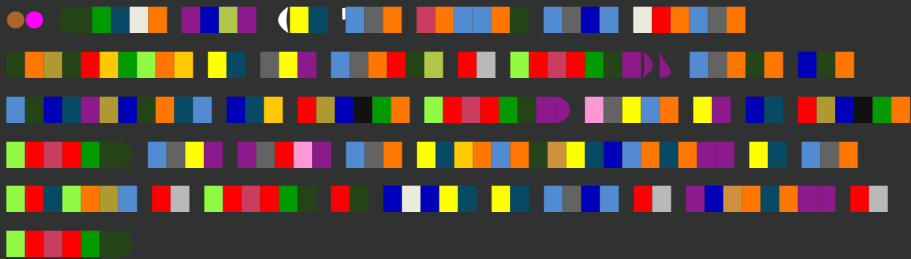
15 in every serious philosophical question uncertainty extends to the very roots of the problem. we must always be prepared



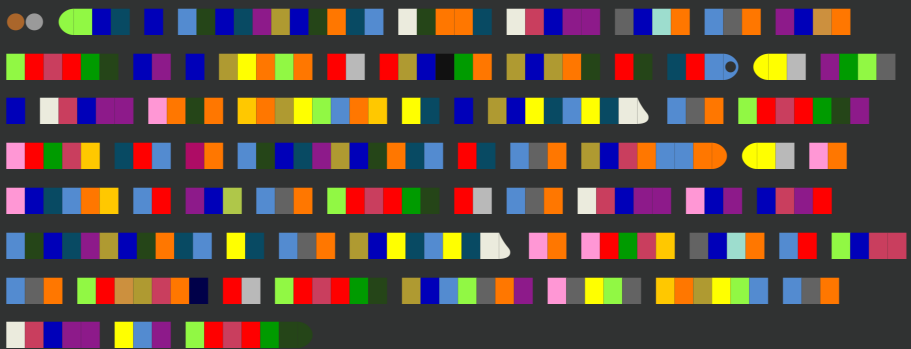
to learn something totally new.



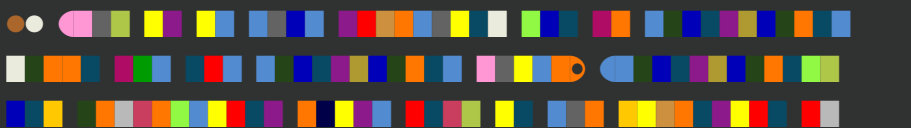
16. the description of the phenomena of colour blindness is part of psychology; and the effect of the description of the phenomena of normal vision, too? psychology only describes the deviations of colour blindness from normal vision.



17. Künze says (in the letter that Goethe reproduced in his theory of colours), the effect of transparent and opaque colours. white is an opaque colour. this shows the indeterminateness in the concept of colour, or again in that of sameness of colour.



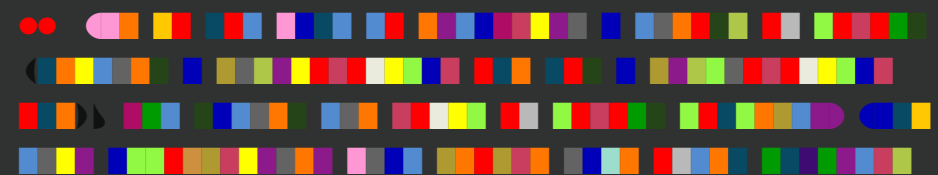
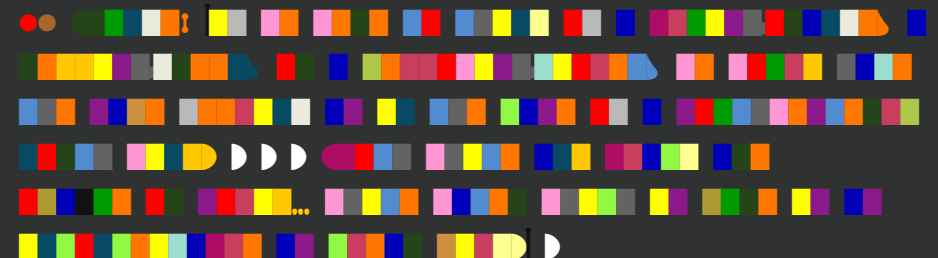
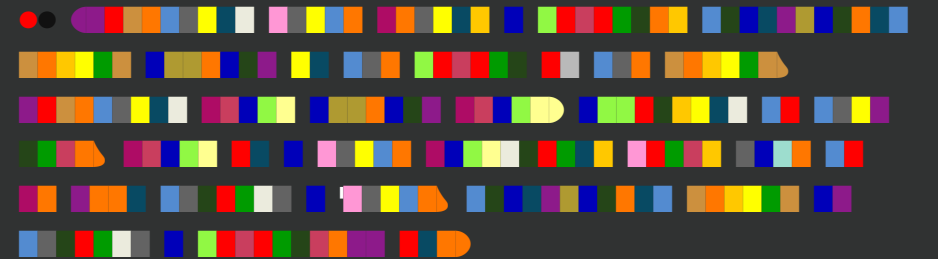
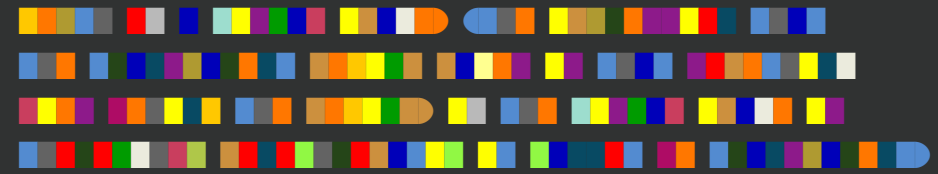
18. can a transparent green glass have the same colour as a piece of opaque paper or not? if such a glass were depicted in a painting, the colours would not be transparent on the palette. if we wanted to say the colour of the glass was also transparent in the painting, we would have to call the complex of colour patches which depict the glass its colour.



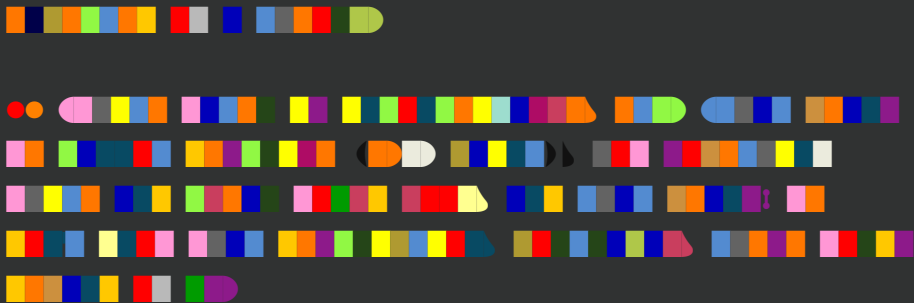
19. why is it that something can be transparent green but not transparent white? transparency and reflections exist only in the dimension of depth of a visual image. the impression that the transparent medium makes is that something lies behind the medium. if the visual image is thoroughly monochromatic it cannot be transparent.

20. something white behind a coloured transparent medium appears in the colour of the medium, something black appears black. according to this rule, black on a white background would have to be seen through a white transparent medium as though a colourless one.

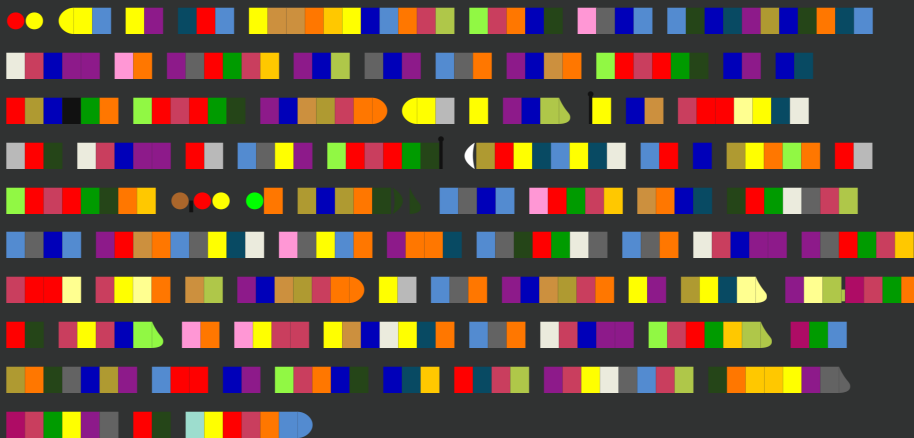
21. Künze: if we were to think of a bluish-orange, a reddish-green, or a yellowish-violet, we would have the same feelings in the case of a southwesterly north wind. ... both white and black are opaque or solid... white white which is pure is as inconceivable as clear milk."



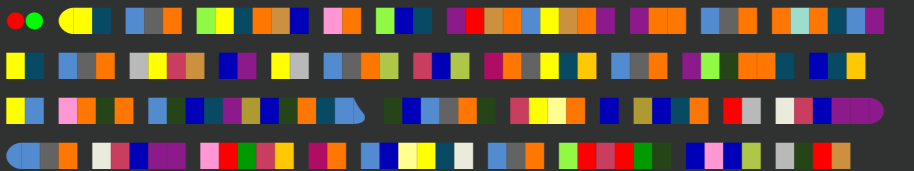
22 we do not want to establish a theory of colour (neither a physiological one nor a psychological one), but rather the logic of colour concepts. and this accomplishes what people have often unjustly expected of a theory.



23 "white white" is inconceivable, etc. that means we cannot describe (e.g. paint), how something white and clear would look, and that means: we don't know what description, potentially, these words demand of us.



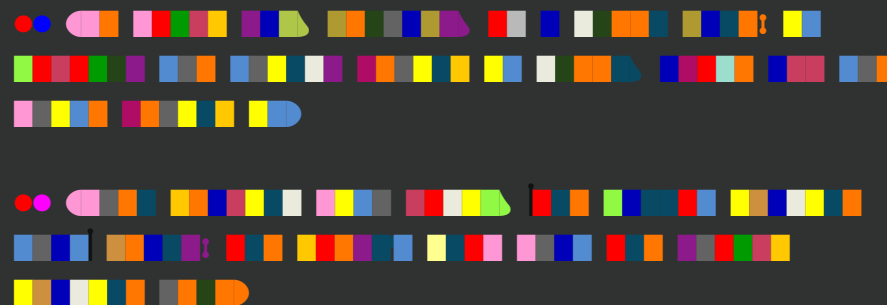
24 it is not immediately clear what transparent glass we should say has the same colour as an opaque colour sample. if i say, "i am looking for glass of this colour" (pointing to a piece of coloured 1-24 5e paper that would mean roughly that something white seen through the glass should look like my sample. if the sample is pink, sky-blue or lilac, we will imagine the glass cloudy, but perhaps too as clear, and only slightly reddish, bluish or violet.



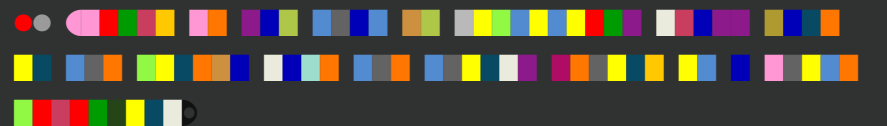
25 in the cinema, we can sometimes see the events in the film as if they lay behind the screen and it were transparent, like a pane of glass. the glass would be taking the colour away from things and allowing only white, grey and black to come through. (here we are not doing physics, we are regarding white and black as colours just like green and red). - we might thus think that we are here imagining a pane of glass that could be called white and transparent. and yet we are not tempted to call it that: so does the analogy with, e.g. a transparent green pane break down somewhere?



26 we would say, perhaps, of a green pane: it colours the things behind it green, above all the white behind it.



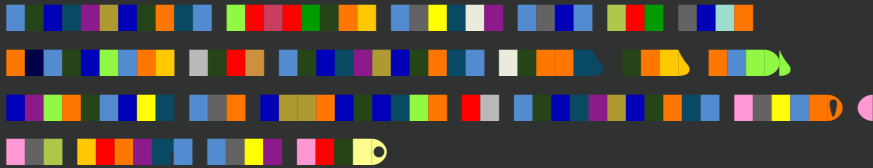
27 when dealing with logic, "one cannot imagine that" means: one doesn't know what one should imagine here.



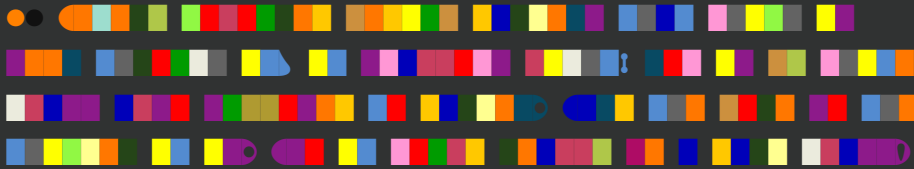
28 would we say that my fictitious glass pane in the



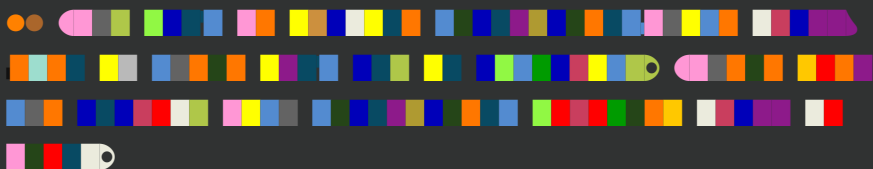
cinema gave the things behind it a white colouring?



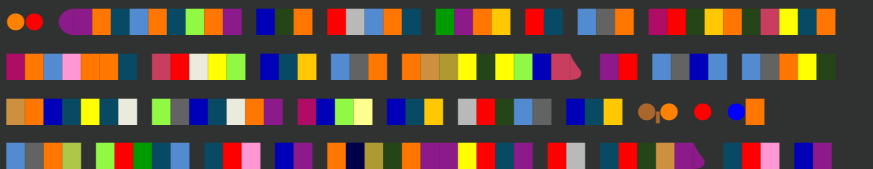
29 from the rule for the appearance of transparent coloured things that you have extracted from transparent green, red, etc., use that in the appearance of transparent white! why doesn't this work?



30 every coloured medium darkens that which is seen through it, it swallows light: now is my white glass also supposed to darken? and the more so the thicker it is? so it would really be a dark glass!



31 why can't we imagine transparent-white glass, even if there isn't any in actuality? where does the analogy with transparent coloured glass go wrong?



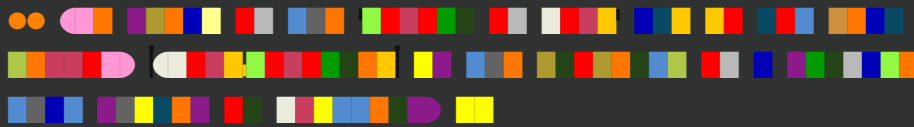
32 sentences are often used on the borderline between logic and the empirical, so that their meaning changes back and forth and 1-3 2 6e they count now as expressions of norms, now as expressions of experience. + (for it is certainly not



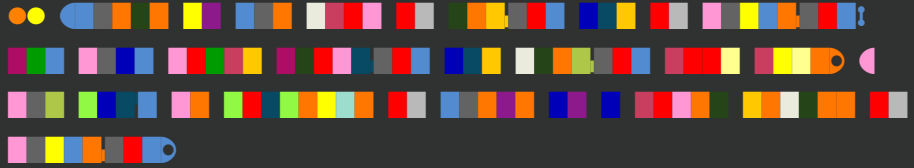
an accompanying mental phenomenon this is how we imagine 'thoughts' - but the use, which distinguishes the logical proposition from the empirical one.)



33 we speak of the 'colour of gold' and do not mean yellow. 'gold-coloured' is the property of a surface that shines or glitters. ii



34 the red is the glow of red-hot and of white-hot: but what would brown-hot and grey-hot look like? why can't we conceive of these as a lower degree of white-hot?



35 "light is colourless". if so, then in the sense in which numbers are colourless.



36 whatever looks luminous does not look grey. everything grey looks as though it is being illuminated.



37 what we see as luminous we do not see as grey. but we can certainly see it as white.

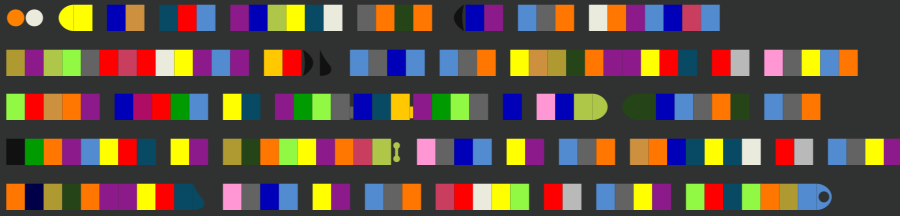


38 i could, then, see something now as weakly

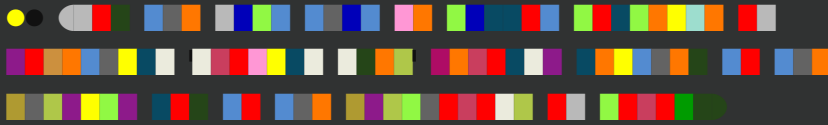


luminous, row as grey.

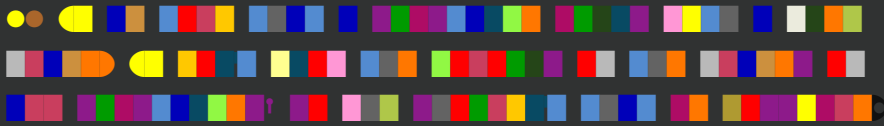
39. I am not saying he e (as the gestalt psychologists do), that the impression of white comes about in such-and-such a way. Rather the question is precisely: what is the meaning of this expression, what is the logic of this concept?



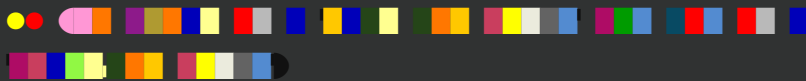
40. For the fact that we cannot conceive of something glowing grey belongs neither to the physics nor to the psychology of colour.



41. I am told that a substance burns with a grey flame. I don't know the colours of the flames of all substances; so why shouldn't that be possible?



42. We speak of a darkened light but not of a black-ed light.

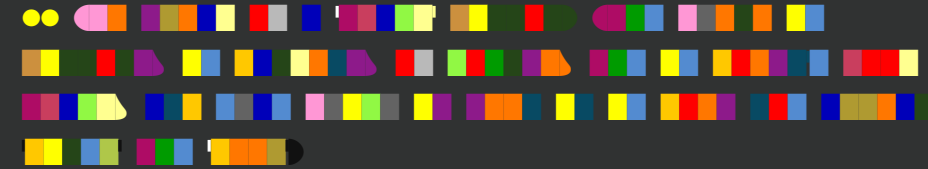


43. A smooth white surface can reflect things: but what, then, if we made a mistake and that which appeared to be reflected in such a surface we really beheld it and seen though it? would the surface then be white

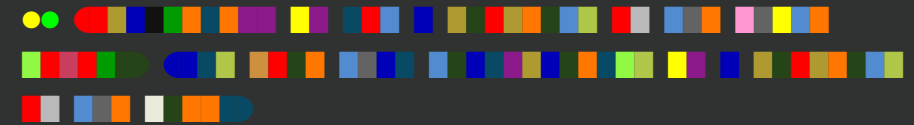


and transparent?

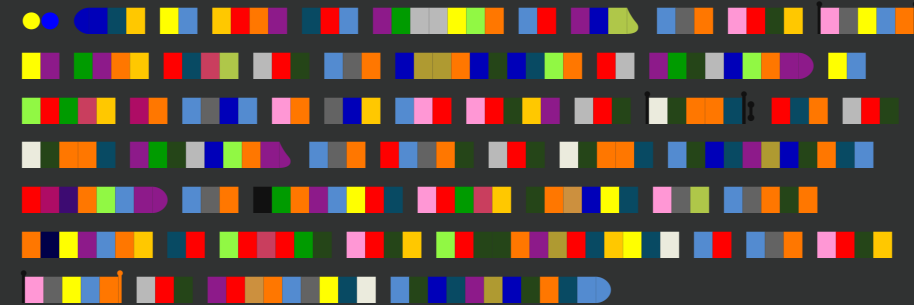
44. We speak of a 'black' mirror, but when it mirrors, it darkens, of course, but it doesn't look black, and that which is seen in it does not appear 'darker' but 'deeper'.



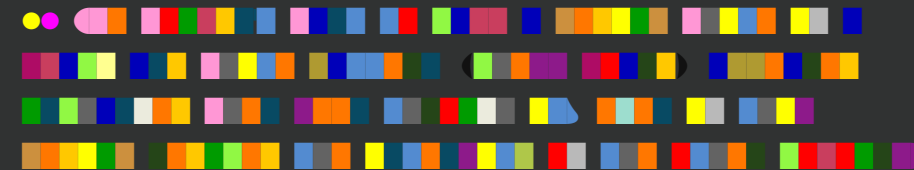
45. Opacity is not a property of the white colour any more than transparency is a property of the green.



46. And it does not suffice to say, the word 'white' is used only for the appearance of surfaces, it could be that we had two words for 'green': one for green surfaces, the other for green transparent objects, the question would remain why there existed no colour word corresponding to the word 'white' for something transparent.



47. We wouldn't want to call a medium white if a black and white pattern (chess board) appeared unchanged when seen through it, even if this medium reduced the intensity of the other colours.



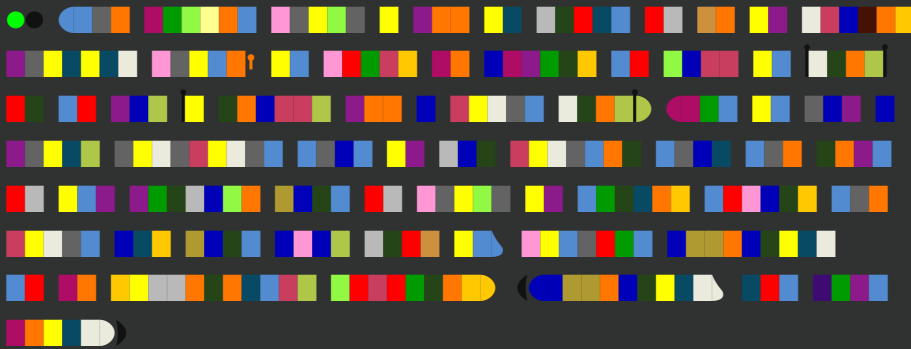
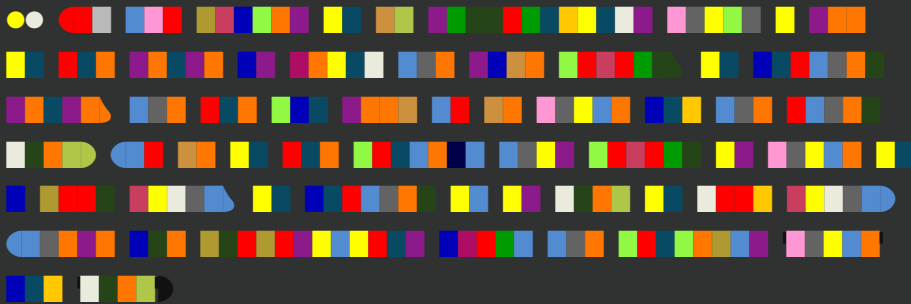
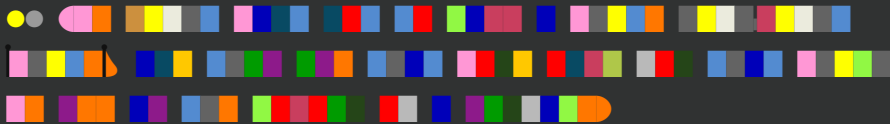
48. We might want not to call a white high-light 'white',

and thus use that word only for that which we see as the colour of a surface.

49 of two places in my surroundings which I see in one sense as being the same colour, in another sense, the one can seem to me white and the other grey, to me in one context this colour is white in a pool of light, in another it is grey in good light. These are propositions about the concepts 'white' and 'grey'.

50 the bucket which I see in front of me is glazed shining white; it would be absurd to call it 'grey' or to say 'I really see a light grey', but it has a shiny highlight that is brighter than the rest of its surface part of which is turned toward the light and part away from it, without appearing to be differently coloured. (appearing, not just being.)

51 it is not the same thing to say: the impression of white or grey comes about under such-and-such conditions (causal), and: it is an impression in a certain context of colours and



for me.

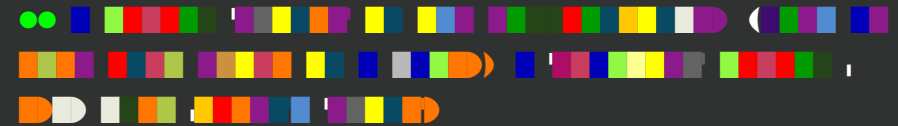
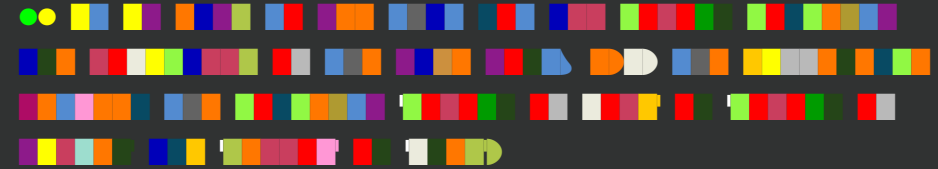
52 white as a colour of substances (in the sense in which we say snow is white) is lighter than any other substance-colour, black darker. The colour is a darkening, and if all such is removed from the substance, white remains, and for this reason we can call it "colourless".

53 there is no such thing as phenomenology, but there are indeed phenomenological problems.

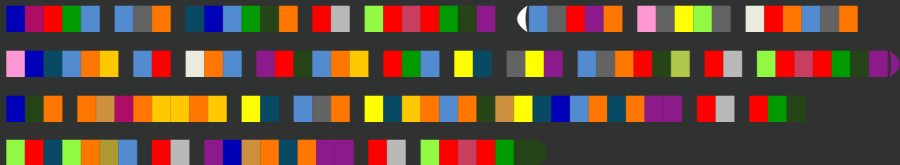
54 it is easy to see that not all colour concepts are logically of the same sort, e.g. the difference between the concepts 'colour of gold' or 'colour of silver' and 'yellow' or 'grey'.

55 a colour 'shines' in its surroundings. (Just as eyes only smile in a face.) A 'blackish' colour - e.g. grey - does not 'shine'.

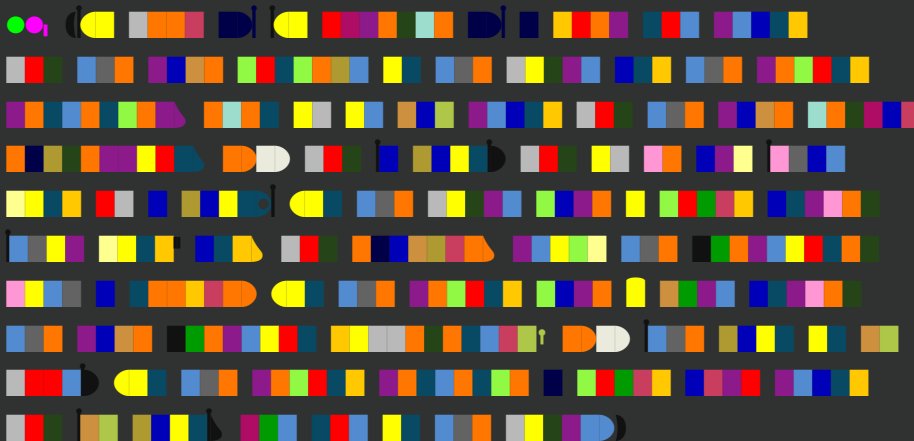
56 the difficulties we encounter when we reflect about the nature of colours (those which goethe



wanted to get sorted out in his theory of colours) are embedded in the indeterminate-ness of our concept of sameness of colour.



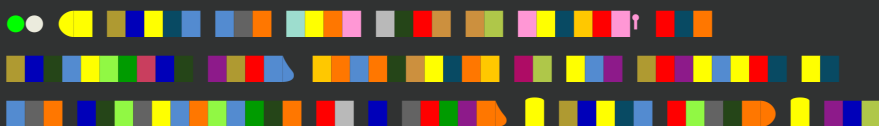
57- ["i feel x." "i observe x." x does not stand for the same concept in the first and the second sentences, even if it may stand for the same verbal expression, e.g. for "a pain" for if we ask "what kind of a pain?" in the first case i could answer "this kind" and, for example, stick the questioner with a needle. in the second case I must answer the same question differently; e.g. "the pain in my foot". in the second sentence x could also stand for "my pain", but not in the first.]



58 imagine someone pointing to a place in the iris of a disembodied eye and saying: "the walls in my room should be painted this colour".

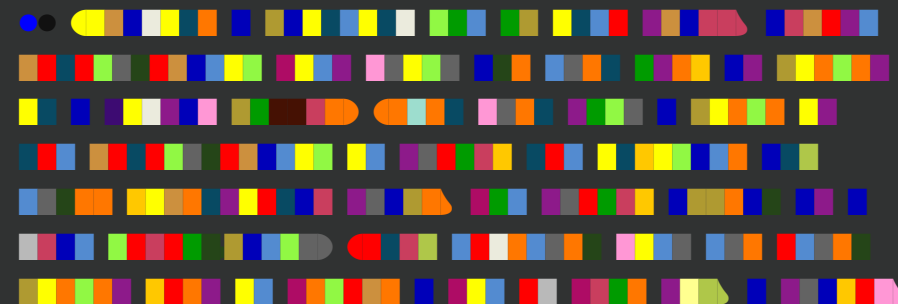
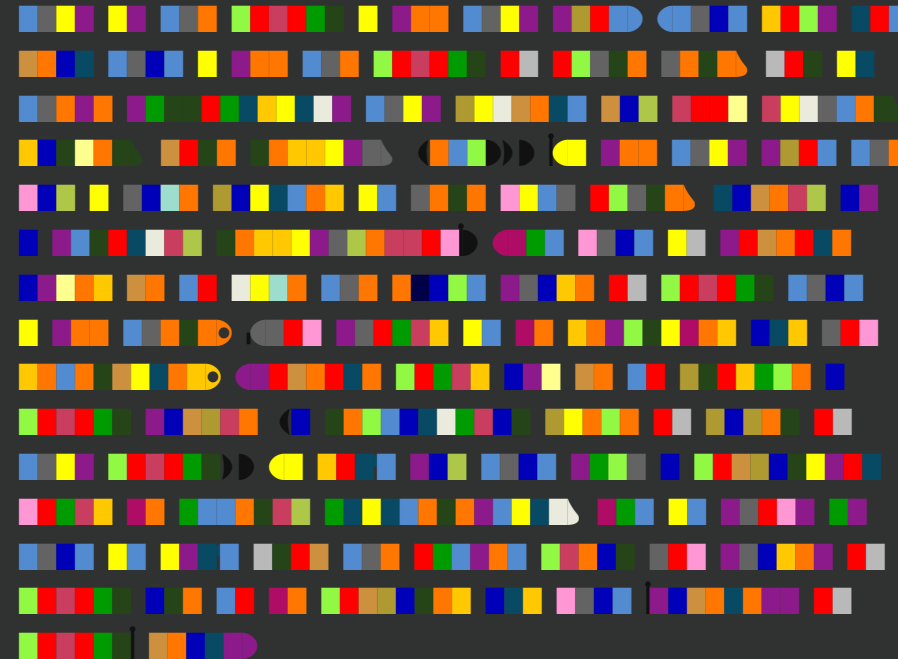


59 i paint the view from my window; one particular spot, determined by its position in the architecture of a house, I paint ochre. I say this is the



colour i see this spot. that does not mean that i see the colour of ochre here, for in these surroundings this pigment may look lighter, darker, more reddish, (etc.). "i see this spot the way i have painted it here with ochre, namely as a strongly reddishyellow". but what if someone asked me to give the exact shade of colour that i see there? - how should it be described and how determined? someone could ask me to produce a colour sample (a rectangular piece of paper of this colour). i don't say that such a comparison would be utterly uninteresting, but it shows us that it isn't from the outset clear how shades of colour are to be compared and what "sameness of colour" means.

60 imagine a painting cut up into small, almost monochromatic bits which are then used as pieces in a jigsaw puzzle. even when such a piece is not monochromatic it should not indicate any three-dimensional shape, but should appear as a flat

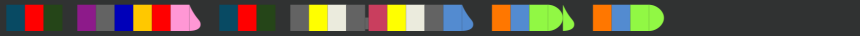


colour patch. only together with the other pieces does it become a bit of blue sky, a shadow, a high-light, transparent or opaque, etc. do the individual pieces show us the real colours of the parts of the picture?

61 we are inclined to believe the analysis of our colour concepts would lead ultimately to the colours of places in our visual field, which are independent of any spatial or physical interpretation: for here there is neither light nor shadow, nor high-light, etc., etc.

62 the fact that I can say this place in my visual field is grey-green does not mean that I know what should be called an exact reproduction of this shade of colour.

63 i see in a photograph (not a colour photograph) a man with dark hair and a boy with slicked-back blond hair standing in front of a kind of lathe, which is made in part of castings painted black, and in part of smooth axles, gears, etc., and next to it a gating made of light

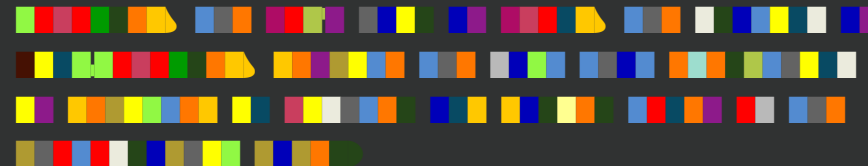


galvanized wire. i see the finished iron surfaces as iron-coloured, the boy's hair as blond, the gating as zinc-coloured, despite the fact that everything is depicted in light and dark tones of the photographic paper.

64 but do i really see the hair blond in the photograph? and what can be said in favor of this? what reaction of the viewer is supposed to show that he sees the hair blond, and doesn't just conclude from the shades of the photograph that it is blond?- if I were asked to describe the photograph I would do so in the most direct manner with these words. if this way of describing it won't do, then I would have to start looking for another

65 if the word "blond" itself can sound blond, then it's even easier for photographed hair to look blond!

66 "can't we imagine certain people having a different geometry of colour than we do?" that, of course, means:



can't we imagine people having colour concepts other than ours? and that in turn means: can't we imagine people who do not have our colour concepts but who have concepts which are related to ours in such a way that we would also call them "colour concepts"?

67 look at your room late in the evening when you can hardly distinguish between colours any longer - and now turn on the light and point what you saw earlier in the semi-darkness - how do you compare the colours in such a picture with those of the semi-dark room?

68 when we're asked "what do the words 'red', 'blue', 'black', 'white' mean?" we can, of course, immediately point to things which have these colours, - but our ability to explain the meanings of these words goes no further: for the rest, we have either no idea at all of their use, or a very rough and to some extent false one.

69 i can imagine a logician

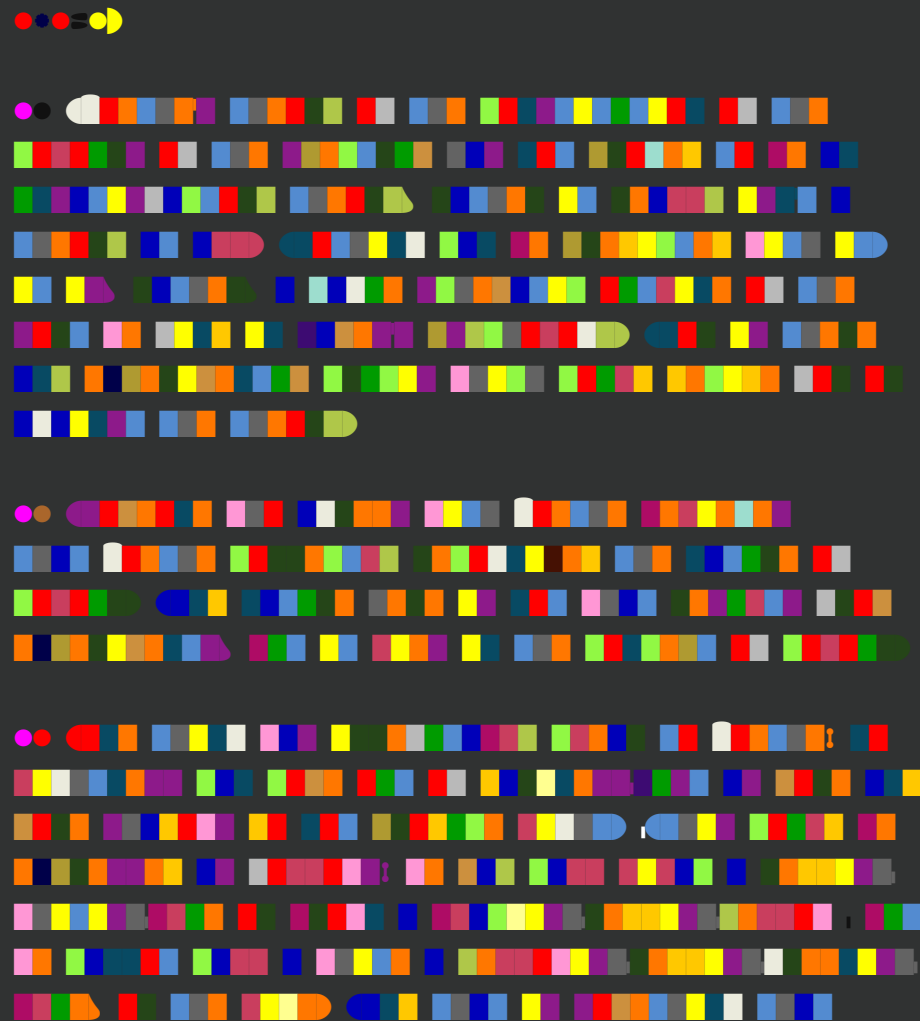


who tells us that he has now succeeded in really being able to think $2 \times 2 = 4$.

70 Goethe's theory of the constitution of the colours of the spectrum has not proved to be an unsatisfactory theory, (athe it really isn't a theory at all. nothing can be predicted with it. it is, (athe a vague schematic outline of the sort we find in James's psychology. no is the early experimentum crucis which could decide for or against the theory.

71 someone who agrees with Goethe believes that Goethe correctly recognized the nature of colour - and nature here is not what results from experiments, but it lies in the concept of colour.

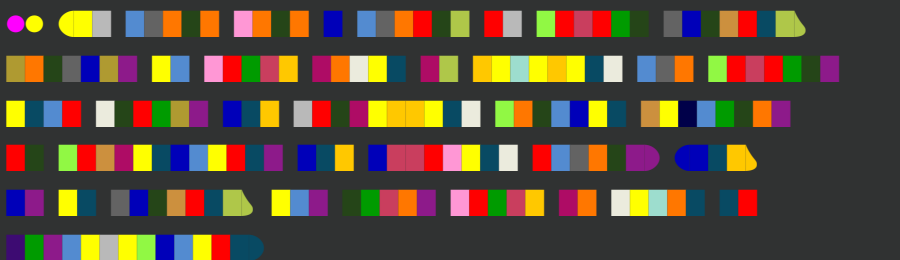
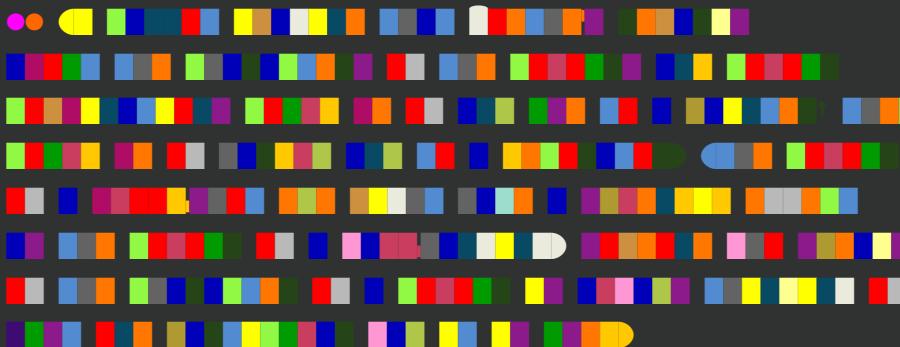
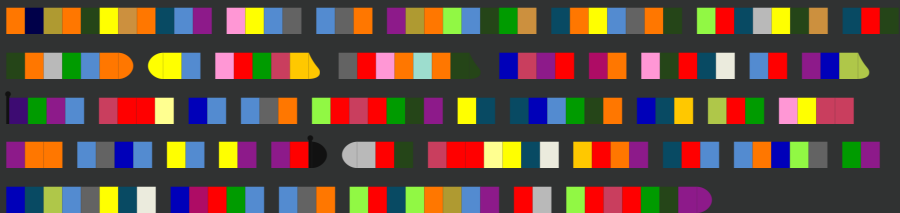
72 one thing was irrefutably clear to Goethe: no lightless can come out of darkness - just as more and more shadows do not produce light. - this could be expressed as follows: we may call lilac reddish-whitish-blue or brown a blackish-reddish-yellow - but we cannot call a white a



yellowish- eddish-g ee ish-blue, o the like. and that is something that experiments with the spectrum neither confirm nor refute. it would, however, also be wrong to say, "just look at the colours in nature and you will see that it is so". for looking does not teach us anything about the concepts of colours.

73 i cannot imagine that Goethe's remarks about the characters of the colours and colour combinations could be of any use to a painter: they could be of hardly any to a decorator. the colour of a blood-shot eye might have a splendid effect as the colour of a wall-hanging. someone who speaks of the character of a colour is always thinking of just one particular way it is used.

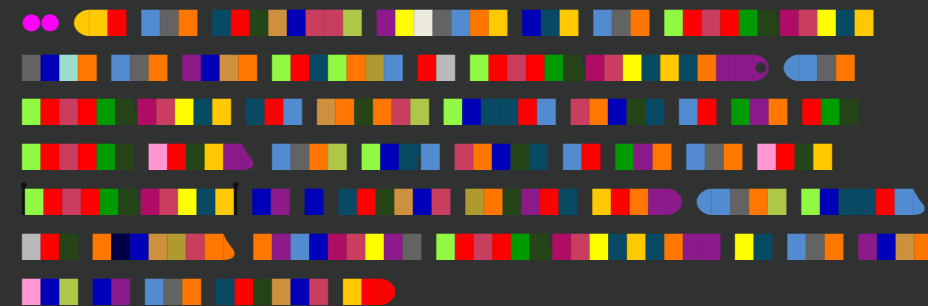
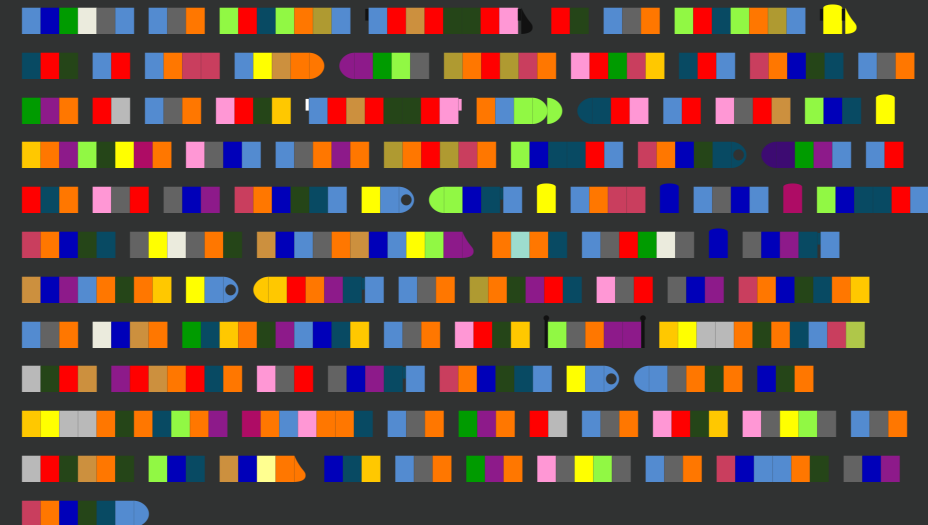
74 if there were a theory of colour, perhaps it would begin by dividing the colours into groups and forbidding certain mixtures or combinations and allowing others. and, as it has many, its rules would be given no justification.



75 the empty be mental defectives who cannot be taught the concept 'tomorrow', or the concept 'I, too, to tell time. such people would not learn the use of the word 'tomorrow' etc... how to whom can I describe what these people cannot learn? just to one who has learnt it? can't I tell A that B cannot learn higher mathematics, even though A hasn't mastered it? doesn't the person who has learned the game understand the word "chess" differently from someone who hasn't learnt it? the same differences between the use of the word which the former can make, and the use which the latter has learnt.

76 does describing a game always mean giving a description through which someone can learn it?

77 do the normally sighted and the colour-blind have the same concept of colour-blindness? the colour-blind not merely cannot learn to use our colour words, they can't learn to use the word "colour-blind" as a normal



pe son does. they cannot, for example, establish colour blindness in the same way as the normal do.

78 the e could be people who didn't unde stand our way of saying that orange is a tthe reddish-yellow, and who would only be inclined to say something like that in cases whe e a t ansition from yellow th ough orange to ed took place befo e thei eyes. and fo such people the exp ession " reddish-g ee!" need p ese it no difficulties.

79 psychology desc ibes the phe omena of seei g.- fo whom does it desc ibe them? what ig oance can this desc iption eliminate?

80 psychology desc ibes what was obse ved.

81 can o e desc ibe to a bli d pe son what it's like fo someone to see? - ce tainly. the bli d lea a g eat deal about the diffe ence between the bli d and the sighted. but the question was badly put; as though seei g we e an activity and the e we e a desc iption



of it.

82 I can, of course, obse ve colour blindness; the why not seeing? - i can obse ve what colour judgements a colour blind pe son - o a normally sighted pe son, too - makes unde ce tain circumstances.

83 people sometimes say (though mistakenly), "only I can know what I see", but not: "only i can know whethe I am colour blind." (No ag ain: "only I can know whethe I see o am bli d".)

84 the statement, "I see a red circle" and the statement "I see (am not bli d)" are not logically of the same so t. how do we test the truth of the fo me and how that of the latte ?

85 but can I believe that I see and be bli d, o believe that I'm bli d and see?

86 could a psychology textbook co tain the sentence, "the e e people who see"? would this be wrong? but to whom will it communicate anything?



87. how can it be nonsense to say, "the e a e people who see" if it is not nonsense to say "the e a e people who a e bli d"? but suppose i had neve head of the existence of bli d people and one day someone told me, "the e a e people who do not see", would I have to unde stand this sentence immedi tely? if i am not bli d myself must i be conscio s that I have the ability to see, and that, the efo e, the e may be people who do not have this ability?



88. if the psychologist teaches us, "the e a e people who see", we can then ask him: "and what do you call 'people who see'?" the answe to that would have to be: people who behave so-and-so unde such-and-such ci cumstances.

