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Даниила Борисовича Эльконина

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To the 120th Anniversary
of Daniil Elkonin

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Opening Remarks

2024 is the year of the 100th anniversary of Cultural-Historical Psychology. One can argue about the specific choice of anniversary date. But 100 years ago, the founder of CHP Lev S. Vygotsky made 2 debut reports, in Petrograd (on January 6th at the 2nd Congress of Psychoneurology in Petrograd) and on November 26th at the 2nd All-Russian Congress of the Social and Legal Protection of Minors in Moscow), which became milestones not only in Vygotsky's scientific biography, but also in the history of science as a whole.

Of course, the future year of 1925 could "claim" the "status" of the year of the CHP centennial. In this year, on November 5th, Vygotsky successfully defended in absentia (due to illness) his dissertation on "The Psychology of Art", as a result of which he was awarded the title of senior researcher, which corresponds to the modern PhD. Vygotsky's research was appreciated at the moment of its presentation on November 9th, 1925, a contract was already signed for the publication of "The Psychology of Art" monograph, but the book did not see the light of day until 1965, and three years later, in 1968, it was reprinted.

Decades later, Vygotsky's student Daniil B. Elkonin qualified this work as a programmatic text that outlined the beginnings of *non-classical* cultural-historical psychology. This year two anniversary dates "converged" — the centennial of CHP and the 130th anniversary of its promoter D.B. Elkonin, who was born on February 29th, 1904. The 1st issue of our journal for this year is dedicated to his anniversary.

The idea of the issue belongs to the son and successor of Daniil B. Elkonin, Boris D. Elkonin, editor-in-chief of the "Cultural-Historical Psychology" journal (2014–2023). He managed to collect the substantial "core" of the issue's materials, but this work was interrupted by his death on November 15th, 2023. This issue is both a dedication to Daniil Elkonin's anniversary and a tribute to Boris D. Elkonin's memory.

Both D.B. Elkonin and B.D. Elkonin thought of the subject of psychology exclusively in the *categories of development*. This was the idea of L.S. Vygotsky, who believed that *general psychology was possible only as a genetic psychology*. Consequently, "developmental psychology" is not only a section of psychology, but also its "supporting structure". It is possible to study the processes of development of certain mental functions, but this will not bring results unless development appears to the researcher as a special phenomenon — "as such". D.B. Elkonin highly appreciated P. Teilhard de Chardin's book "The Phenomenon of Man", who wrote in the introduction: "I study only a phenomenon, but the *whole phenomenon*".

Daniil Borisovich and Boris Daniilovich and collaborators studied development in this quality of phenomenon, and their followers continue to study it.

This is what allows us to speak of the unified scientific school of D.B. Elkonin—B.D. Elkonin. We hope that the reader of this issue will appreciate it.

Editorial Board of the Cultural-Historical Psychology Journal

НАУЧНАЯ ШКОЛА Д.Б. ЭЛЬКОНИНА И Б.Д. ЭЛЬКОНИНА В КУЛЬТУРНО-ИСТОРИЧЕСКОЙ ПСИХОЛОГИИ РАЗВИТИЯ И ОБРАЗОВАНИЯ

THE SCIENTIFIC SCHOOL OF D.B. ELKONIN AND B.D. ELKONIN IN CULTURAL-HISTORICAL PSYCHOLOGY OF DEVELOPMENT AND EDUCATION

ИСТОРИЯ НАУКИ
HISTORY OF THE SCIENCE

Два письма к Д.Б. Эльконину

Л.С. Выготский

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Two Letters to D.B. Elkonin

L.S. Vygotsky

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Предисловие к публикации. Два письма Л.С. Выготского Даниилу Борисовичу Эльконину печатаются здесь впервые. Возможностью их опубликования мы обязаны А.Р. Лурии. Именно в его архиве сохранился машинописный экземпляр верстки «Писем к ученикам и соратникам». Верстка была сделана в 1986 году Татьяной Александровной Нежной, редактором «Вестника Московского университета». Составил подборку и подготовил многочисленные комментарии к письмам Андрей Андреевич Пузырей. Однако в 1986 году, когда в стране шла антиалкогольная кампания, издание писем было запрещено. Поводом для запрета стала шуточная фраза Л.С., обращенная к первой жене А.Р. Лурии: «Если сделаете из Александра Романовича пьяницу, я привяжусь к нему вдвое сильнее...» (среди друзей А.Р. было хорошо известно, что он не пьет).

Машинопись с версткой потерялась, ее не было ни в редакции, ни у А.А. Пузырея. Она нашлась только через 16 лет — в 2002 году ее обнаружила и передала в редакцию «Вестника» Т.В. Ахутина. Находка состояла из 33 листов, по две печатных страницы на листе. Это был четвертый или пятый экземпляр машинописи, напечатанный на светло-салатовой бумаге. Отдельно были 3 листа белой бумаги по одной странице на листе.

Текст 33 листов был опубликован и теперь хорошо известен как «Письма к ученикам и соратникам»¹. На 3 отдельных страницах были два письма Л.С. Выготского Даниилу Борисовичу Эльконину. В библиографии писем Выготского, составленной Гитой Львовной Выгодской, указывается, что в архиве Эльконина содержится 5 писем 1932–1933 гг. (Выгодская, Лифанова, 1996, с. 410). По-видимому, надеясь на нахождение всех писем Даниилу Борисовичу, эти два письма не были включены в общую подборку 2004 года.

Текст писем Л.С. Выготского печатается без купюр. Все подчеркивания принадлежат самому автору. Вставки, необходимые для понимания сокращений Выготского, помещены в квадратные скобки. Комментарии составлены Т.В. Ахутиной.

¹ *Выготский Л.С.* Письма к ученикам и соратникам // Вестн. Моск. ун-та. Сер. 14. Психология. 2004, № 3. С. 3–40.

Москва, 2 окт. 32 г.

Дорогой Даниил Борисович!

Посылаю Вам — 1) текст факторного теста + 2) программу для аспирантов (как бригаду по программам). Программу прошу — отпечатать, передать аспирантам для руководства, передать 1 экз. Е.О. [Зейлигер-Рубинштейн]² для кафедры и сохранить для передачи мне оригинал и 1 отпечатанный экземпляр. Программу я пытался составить для семинарских занятий, т. е. не навязывая докладчику годового конспекта. Удачно ли вышло, не берусь судить; обсудил в комиссии по программам.

Вторую программу — исследовательского семинара на IV к[урсе] — я попрошу Вас составить (заголовки тем + исследовательские подтемы + литература) Она более чем на $\frac{3}{4}$ готова у Вас.

Теперь о делах по списку, составленному в Ленинграде:

1) «Догнать и перегнать» здесь достать нельзя, распродана, готовится 2-е издание.

2) Тест препозиций я передал в свое время Шиф [Ж.И.]³; у нас в лаборатории больше экз[емпляров] нет. А во 2 МГУ у Артемова [В.А.]⁴ мне получить не удалось — все откладывают. Может быть, Вы получите у Шиф — [у] нее, наверное, сохранился мой экземпляр.

3) У Лизы не достал записи интонаций, у нее был тот же самый Серезников, которого мы смотрели у Выг. в Ленинграде.

4) До сих пор не могу получить своего Грея — как получу, — вышлю или привезу с собой.

5) М.А. [Левиной]⁵, пожалуйста, передайте, что по наведенным мной справкам аспирантский вопрос (об односторонних) еще не решен, но скорее всего их не оставят на 2-ой год, а выпустят осенью.

6) Темы для аспирантов по исследовательской работе привезу с собой.

7) Е.О. [Зейлигер-Рубинштейн] и М.А. [Левиной] передайте, пожалуйста, что я до сих пор не знаю, сумею ли приехать 9-го. В Медвузе⁶ застал еще большую путаницу, чем до моего отъезда; нет расписания, занимаемся от раза к разу, ничего не известно заранее; мои студенческие дела тоже осложняются; мне не разрешают пропускать лекции и уезжать на 10 дней — я пытаюсь добиться разрешения. В общем, путаница ужасающая. Я боюсь, как бы не свелось на нет полученное мной ранее согласие на регулярные отъезды на 10 дней. Сейчас работа в двух городах невыразимо трудна. Я делаю все зависящее от меня, чтоб сохранить в силе все обусловленное при моем первом приезде. Обещают 5—6-го выяснить все эти дела — тогда напишу немедленно дополнительно, в частности, и дне приезда. При всех обстоятельствах не позже 13-го — как Вы просили — надеюсь приехать в Ленинград. Из-за этой неопределенности я задержал и высылку программы, и выполнение остального.

Крепко жму руку.
С дружеским приветом
Ваш ЛВыготский

² Е.О. — Евгения Осиповна (Иосифовна) Зейлигер-Рубинштейн (1890—1969). В 1920-х годах работала в ЛГПИ под руководством М.Я. Басова, после смерти которого заведовала основанной им кафедрой педологии (1931—1936). Имя Е.О. Зейлигер, как и других ниже упоминаемых ленинградских коллег и знакомых (М.А. Левиной, Ж.И. Шиф, Е.В. Князевой), содержится в адресной книге Л.С. Выготского, составленной им в одной из записных книжек. (Опубликована в книге: *Выготский Л.С. Записные книжки. Избранное* / Под ред. Е. Завершневой и Рене ван дер Веера. М., 2017. С. 347—349, 359).

³ Шиф — Жозефина Ильинична Шиф (1904—1978) — российский психолог, защитила диссертацию под руководством Л.С. Выготского.

⁴ Артемов Владимир Алексеевич (1897—1982) — психолог, специалист в области психологии речи и обучения иностранным языкам. Работал во 2-м МГУ, позднее переименованном в Московский государственный педагогический институт.

⁵ М.А. — Мира Абрамовна Левина — педолог, детский психолог, занималась изучением игры. На I педологическом съезде, где присутствовал Выготский, выступила с докладом об игре у дошкольников (Зейлигер, Левина, 1928). Г.Л. Выгодская сообщает, что в 1936 году после Постановления ЦК о лженауке педологии уже уволенный с работы Д.Б. Эльконин и М.А. Левина пошли к Первому секретарю Ленинградского обкома, члену Политбюро ЦК А.А. Жданову, чтобы заступиться за Выготского (Выгодская, Лифанова, 1996, с. 344—345).

⁶ В 1931 году Выготский поступил на медицинский факультет Украинской психоневрологической академии (г. Харьков). и успел закончить три курса.

Дорогой Д.Б.

Только сейчас взял билет. Приеду на 8 дней 13-го утром, пробуду до 20-го. Обо всем переговорим. Я виноват за то, что не писал тебе⁸, но —

1) у меня очень сложные и запутанные обстоятельства, о которых расскажу, которые не давали возможности писать;

2) все время думал о работе с тобой⁹.

Большое спасибо за деньги (220 руб.), которые я получил. Посылаю тебе доверенности: 1) за работу с аспирантами II пол[овина] марта, I и II половина апреля + 2) за педо[логию]¹⁰ — I и II пол[овины] апреля + 3) еще ты писал о лаборатории.

В общем, будь добр — получи все — и не высылай — я получу лично. Прошу их (?) взять, потому что боюсь, что сдадут в банк. Рад, что с Гизом м[ожет] б[ыть], что и выйдет. Говорил со Смирновым и Гайсиновичем¹¹. Они послали отзыв по ошибке Казенб (?)¹² в Институт Герцена¹³. Получи там. Свою статью привезу 13-го с собой.

Жму руку. Прости. Будь здоров. Твой ЛВыготский.

Свой отзыв и предисловие, если нужно, я дам с величайшей охотой (соединить первый раз наши имена) — 13-го.

О Князевой — сговоримся¹⁴.

⁷ Год написания письма не известен. По содержанию письма можно предположить, что оно написано в 1934 году и является предпоследним письмом Выготского. В написанном за 5 дней до этого письме от 1 мая 1934 года Л.С.В. просит прощения у вдовы проф. В.А. Вагнера за то, что он не мог ответить ранее на ее сообщение о смерти ее мужа, потому что ему самому «привелось пережить в эти месяцы большое несчастье, которое душевно парализовало меня и не давало взяться за перо» (Выгодская, Лифанова, 1996, с. 387). Г.Л. Выгодская поясняет, что в марте 1934 г. «в семье Льва Семеновича произошло несчастье — был арестован его двоюродный брат Лев Исаакович Выгодский», родной брат Давида Выгодского, ближайшего друга и родственника Л.С. (Выгодская, Лифанова, 1996, с. 367). Не только содержание, но и форма письма — наличие большого количества сокращений, описки свидетельствуют о том, что письмо писал торопящийся и взволнованный человек. Е. Завершнева отмечает, что записи, датированные 1934 годом, отличаются «высокой сокращенностью записи, а также особенностями почерка (крупный, неровный, дрожащий)». (*Выготский Л.С. Записные книжки. Избранное / Под ред. Е. Завершневой и Рене ван дер Веера. М., 2017. С. 359, 550*).

⁸ Ранее Л.С. Выготский обращался к Д.Б. на Вы, «ты» свидетельствует о сближении ученых, на ты Выготский был и с А.Р. Лурией и А.Н. Леонтьевым.

⁹ Возможно, Л.С. Выготский имеет в виду работу по теме Игра. В Записных книжках Л.С. Выготского есть запись от 11 декабря 1932 г.: «Вечером по дороге на Моховую [т. е. домой к Д.И. Выгодскому] договор с Элькониным об игре и [учебном] труде» и далее есть еще упоминания имени Эльконина в контексте обсуждения игры.

¹⁰ Лекции по педологии.

¹¹ Смирнов и Гайсинович, возможно, — сотрудники издательства (Гиз).

¹² Казенб — имя не закончено, уточнить его не удалось, знак (?), возможно, принадлежит Выготскому.

¹³ Институт Герцена — ЛГПИ было присвоено имя А.И. Герцена в 1920 г.

¹⁴ Князева — Евгения Викторовна Князева — педагог, дефектолог, заместитель заведующего отдела СПОН (социально-правовая охрана несовершеннолетних) и председатель комиссии по делам несовершеннолетних по Ленинградской области.

Послесловие. Письма Л.С. Выготского к ученикам — это окна в его внутренний мир. То же самое относится и к его письмам Д.Б. Эльконину. Они содержат не только деловую переписку, связанную с чтением Л.С. Выготским лекций в ЛГПИ (Ленинградском государственном педагогическом институте), где с 1929 г. работал Д.Б. Эльконин. Они отражают растущее сближение ученых. Первое письмо относится к 1932 году. Об этом времени Д.Б. вспоминал: «Я тогда еще был молод и еще не готов к научной работе. И хотя Лев Семенович был старше меня только на 8 лет, тем не менее разница между нами была колоссальная. Лев Семенович был уже совершенно зрелым с устоявшейся системой взглядов ученым, я же был начинающий ученик». Далее Д.Б. рассказывает о своем докладе на заседании кафедры об игре. Выдвинутые им положения были подвергнуты «совершенно уничтожающей критике». «Единственный человек, который выступил в защиту моих положений, был Л.С. Выготский. Затем последовал «разговор по-гречески» в кафе с чашками кофе/чая (Выгодская, Лифанова, 1996, с. 410). Чуть позже в лекции студентам ЛГПИ Выготский назвал идею Эльконина об игре «самой плодотворной мыслью» и продолжил: «Мне кажется весьма плодотворным и отвечающим сути дела и положительное определение игры, которое выдвигается при этой идее на первый план, а именно что игра — это своеобразное отношение к действительности, которое характеризуется созданием мнимых ситуаций или переносом свойств одних предметов на другие» (Выготский, т. 4, с. 348). Второе письмо, которое, мы полагаем, было написано в 1934 году, в преддверии близкой смерти, отражает более близкие отношения между учеником и Учителем. В нем Л.С. Выготский обращается к Д.Б. на «ты» (так он обращался и к А.Р. Лурии и А.Н. Леонтьеву). Стоит обратить внимание и на пожелание Выготского продолжить совместную работу и «с величайшей охотой» написать предисловие к работе Д.Б., чтобы «соединить первый раз наши имена». Такое предисловие не было написано, поскольку 9-го мая состояние здоровья Л.С. Выготского резко ухудшилось и 11 июня он умер. Но Д.Б. Эльконин, как и любой бы другой ученик, был счастлив прочитать такие слова от своего Учителя.

Т.В. Ахутина

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Д.Б. Эльконин

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Quotations from D.B. Elkonin's speech at the meeting of the Academic Council of the Psychological Institute dedicated to his 80th anniversary

D.B. Elkonin

For citation: Elkonin D.B. Quotations from D.B. Elkonin's speech at the meeting of the Academic Council of the Psychological Institute dedicated to his 80th anniversary. *Kul'turno-istoricheskaya psikhologiya = Cultural-Historical Psychology*, 2024. Vol. 20, no. 1, pp. 9. DOI: <https://doi.org/10.17759/chp.2024200102>

Цитаты из речи Д.Б. Эльконина на заседании Ученого совета Психологического института, посвященного его 80-летию (Вестник Московского университета. Серия 14. Психология. № 4, 1989. С. 20–24)

• «У меня все время ощущение, что я в каком-то громадном долгу перед моим учителем. Вы знаете, кто был мой учитель. Это был Лев Семенович [Выготский]. Собственно, все, что я сделал, смог сделать, это только потому, что за моей спиной стоял он — не только как ученый, но и как человек, и как научный работник, который воспитал во мне некоторые, мне кажется, важные качества. Это, во-первых, абсолютная бескорытность по отношению к науке. От нее, от науки, нечего ждать в смысле каких-то почестей, наград. Не стоит. Если вы будете ждать от нее этого, то вы в науке никогда ничего не сделаете. И скажу вам совершенно честно, что я работал абсолютно бескорыстно, никогда не думал о том, что это мне вообще даст. Была бы правда!»

• «Я честно говорю, я в детской, педагогической психологии, да и вообще в психологии до сих пор остаюсь человеком военным. Я терпеть не могу ни-

каких компромиссов, я терпеть не могу никакой пошлятины в науке... я терпеть не могу ничего такого, что привносится в науку, кроме ее собственной внутренней логики». [Аплодисменты]

• «Наука для меня не способ жить, а это есть просто моя жизнь. Я должен вам сказать честно: я от нее получил полную порцию удовольствия. Несмотря на то, что внешних ударов и неудовольствий и раньше, и теперь было сверхдостаточно. <...> Я бы сказал так: я работал свободно, будучи увлеченным ее содержанием и способом ее исполнения. Мне кажется, простите за хвастовство, это самое важное мое качество: полная свобода, полное отсутствие каких бы то ни было внешних побудителей, приспособления и т. п.»

• «Я прожил такую интересную жизнь! С кем я только ни был знаком: с В.М. Бехтеревым, с А.А. Ухтомским, с Л.Л. Васильевым — изумительным физиологом. Я уже не говорю о москвичах. Я был учеником Льва Семеновича, Александр Владимирович Запорожец был моим другом, Алексей Николаевич [Леонтьев]... Ведь это же были, понимаете, Люди!!! А с кем поведешься, от того и наберешься. Эти люди меня и сделали. Я и есть совокупность *этих* общественных отношений. [Аплодисменты]

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THEORY AND METHODOLOGY
ТЕОРИЯ И МЕТОДОЛОГИЯ

Correlation of Motive and Method in Action Development

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The article raises a question how the cultural-historical psychology today should be researched. The analysis of transitions of periods of childhood, periods (ages) and epochs of development, presented in D.B. Elkonin's understanding of the essence of periodization of child's development requires the identification of the situations when clearly appears the correlation of motive, purpose and method in the cumulative action of a child and an adult. Identifying such situations requires a change in the position of the researcher-experimenter, a consideration of the way and conditions of the child-adult interaction, i.e., a consideration of situations in which the Mediating Action unfolds. It's required from the researchers in Nonclassical Psychology.

Keywords: non-classical psychology, cumulative action, mediatory action, productive action, goal-termination, mediation situations, motive, goal, method in productive action.

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Соотношение Мотива и Способа в актах развития действия

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В статье ставится методологический вопрос о способе исследования в современности Культурно-исторической психологии. Анализ переходов фаз периодов детства, самих периодов (возрастов) и эпох развития, представленный в понимании Д.Б. Элькониним сущности периодизации развития в детстве, требует выделения тех ситуаций, в которых явственно выступает соотносительность мотива, цели и способа в Совокупном действии ребенка и взрослого. Выявление подобных ситуаций требует изменения позиции исследователя-экспериментатора — не лишь отстраненного рассмотрения действия другого человека, а рассмотрения способа и условий самого взаимообращения ребенка и взрослого, т. е. рассмотрения ситуаций разворачивания Посреднического действия. Таково требование к исследованиям в Неклассической психологии.

Ключевые слова: Неклассическая психология, Совокупное действие, Посредническое действие, Продуктивное действие, целеопределение, ситуации посредничества, мотив, цель, способ в продуктивном действии.

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1

In the article by D.B. Elkonin on the periodization of childhood development [21, p. 60–77] the shift of leading activities occurs as an adjustment of *proportion* of “motive and purpose-oriented” and “procedure and technique-oriented” aspects of a child’s action. The foundation for that adjustment is the change of *proportion* of the form of communication of a child with an adult and the form of action of a child with an object. Herewith, D.B. Elkonin was insisting that “communication” and “action” and therefore “motive” and “method” of the action are not heterogeneous but *interconnected* realities.

The key question of the article is *how*, from what *position*, what *method* of action consideration the very *proportion* of its motive and method can be observed and not merely assumed. What are the *situations* in which that very proportion can act as their purpose, “center”? After all, you cannot seriously believe that our Teachers had simply been assuming that “if [the child] does it, then he wants to”. To illustrate the point of the key question of the article, I’ll ask a simple question. When does a thoughtful educator notice the correlation between the motive and the method of pupil’s action? Only when he impetuously runs to the blackboard to show his solution for the assignment, or when the pupil asks a *question* related to the point of the assignment¹?

For A.N. Leontyev the answer to the question on the correlation between an action’s motive and method lied in the term “Aim” – discernment of the relation between the motive and the aim as the action’s “Purpose”. In the definiteness of the aim the action’s motive and method become correlated². However, the very constitution of the act of aim definition and not just attainment of an aim distinct in its features, as it were, is *under question*; discernment of the aim’s *conditions and mode of givenness* also requires a special analysis, and the subject of that analysis is the differentiation between the form and the type of those actions which have a directly given aim and those whose unfurling is its *revelation*. Thus, description from outside, so to speak, of another person’s action that has already taken place in terms of “motive-aim-method” is not the position from which the very acts of their correlation can be discussed.

2

In 1978 D. B. Elkonin published the article “Notes on Development of Object Actions in Early Childhood” [21, p. 130–141] in which he analyzed the meditation experience of the object action formation by his grandson. I believe (and have already written about it), that this article *reconstructs* the subject and method of Activity Approach [18], it reconstructs the Position of the Researcher-Experimenter³.

So, what is reconstructed? The article examines, in the words of D.B. Elkonin, “the Joint Action” [21, p. 518] of a child and an adult and, on closer reading, identifies the *condition* of the mediation effect – that reciprocal reversion⁴ of a child and an adult, that *unfurling* of it in which the action is internalized by the child. The unfurling itself acts as the *research subject*, i. e. it essentially poses the question *how and when* does the word of the adult (“the sign”) become directed towards the child. Here’s when the **Position** of the researcher changes: the action’s unfurling doesn’t act as premanifested, so to speak, as a revealed and “presented” to the researcher or educator reality of his method, motives, and aims.

The revealedness of the action method to the educator often acts as the necessary sequence of operations. In such an approach what’s left is to set the sequence of necessary reference points – the “orienting part” of an action (P.Y. Galperin)⁵, instead of initiating its “orienting function” (A.N. Leontyev) – *transforming* the execution [of the action] into orientation⁶. It is in the success of such transformation, the child’s support for the initiation of his *orientation* specifically that gives rise to the chance of revealedness of an actual “encounter” between the adult and the child in the action’s formation and the “encounter” within it, the correlation between the action’s motive, aim, and method.

I believe, that precisely this position, in which the very situation of the “encounter” between the child and the adult in the action’s unfurling is present, is the key sought-after in the method of study in Cultural-Historical Psychology as “Non-Classical Psychology” [21, p. 471]

3

By introducing the term Mediative Action (MA) in my studies, I tried to recreate and reinforce D.B. Elkonin’s

¹ In process of teaching children how to read led by G.A. Tsukerman [15], [16] with use of D.B. Elkonin’s renewed primary book, children’s questions are putting up on the blackboard.

² See example of “the hunt” from A.N. Leontyev’s book “Problems of the Development of the Mind”, chapter “Emergence of consciousness” [10].

³ Even though D.B. Elkonin himself don’t emphasise this reconstruction.

⁴ “Adress” is the key term in F.T. Michailov’s works [13].

⁵ The very division of the action into “parts” (orientation and completion) already entails a vision of the “necessary” action till the very inclusion of the adult into the process of acting of the child, instead of the act of the inclusion itself. However, firstly, the formation of the 3rd type of orientation (the mastery of reference point formation instruments), taken not just in relation to the result-success but in relation to the method and conditions of mastering the instruments, can change the position of an educator-experimentalist. Secondly, P.Y. Galperin’s view on psyche [6] necessity situations implies a different understanding of orientation - as, in the words of V.P. Zinchenko, orientation of a “living action” [9].

⁶ For example, take a look at perception of Learning Task as overcoming of solving particularly practical task in Developmental Education [21], [8].

idea of a “turn”. It is important to note that D. Elkonin spoke about the correlation between a “motive and purpose-oriented” and a “procedure and technique-oriented” aspects of action, analyzing the essence of age transitions. By reinforcing this view, I believe that MA itself as a Joint Action is only appropriate on the “turns” of activity. Thus, I insist that the answer to the article’s key question on the situation and the phenomenon⁷, the correlation between the motive and the method, the nature of their “encounter” in action is *possible exclusively in examining the transition situations, the situations of MA unfolding appropriately*. The **development** of action is precisely the actuality under questioning⁸ for the answer to given questions.

Because studies that examine such situations are already published⁹ I’ll only briefly describe the mechanism of those situations in four theses.

- In ontogenesis the notion of motive as a “subject of necessity” (especially taking the naturalistic conception of an object as a ready, self-operating thing into consideration) needs to be fully defined. For example, the emergence of the directly emotional communication in the first phase of infancy. An infant’s smile in response to the smile of an adult doesn’t occur by itself, being initially a spontaneous defensive and reflexive reaction (contraction of facial muscles). Firstly, that response needs to be initiated by “cultivating”, forming the address overcoming infant spontaneity¹⁰. Secondly, not some “object” but the *address specifically, the act of Calling serves as a motive*. Using L.I. Elkoninova’s terminology [23], [24] we can say that the Motive is ought to be understood as a Call (understood in terms of activity) and its internalization as an Answer to the Call¹¹.

- Later on, during the period of internalization of object actions both in the adult’s activity (addressing) and in the child’s activity complications arise. The adult is faced with forming such an indication to the boundary (to “it’s not allowed, not like that”) wherein the parent-child attachment will not “break”, but will manage to withstand, and the child is faced with overcoming one challenge (“immediate desire”) in another¹². Here are notable instances of “playful disobedience”, in the words of D.B. Elkonin [21, p. 515]. The child, looking at the adult and repeating his “warnings” (“tut-tut-tut”, “no-no-no”), is actively, looking at the adult, does what is “not allowed” — “crosses” the boundary [18], [20]. But it’s not just “disobedience”, after all, — that’s exactly how and when the purpose of the adult’s words-gestures and the very boundariness become clearly apparent *for the child*¹³. In playful rejection, in Challenging the adult the purpose of the adult’s word-gesture is tested and affirmed, i. e. tested *and affirmed* is the very Action Meth-

od. Here the Method becomes foreseeable and in that sense revealed. Such is the commencement of the Joint Action as meditation (MA).

- Another example from the repeatedly mentioned article by D. B. Elkonin on the formation of object actions. A grandson liked helping the adults and especially taking the dishes from the living room to the kitchen. Meanwhile, his action was cloven [21, p. 136], *oscillating* between a gaze directed towards his grandfather who was walking along with him, and holding the dishes while doing so. In these oscillations the approvals of the adult were affirming the retention, in the words of B.A. Arkhipov, of the “body axis” [1] in motion, and precisely in its retention (through the adult), i. e. in testing the action method, has been emerging and forming his *relationship* with the action’s motive and aim (bringing the dishes to the kitchen). The adult was the mainstay of that relationship specifically.

- My youngest daughter often used to take walks with me. When she was around two years old, she developed the following situation-game. When we were walking in the courtyard she would move away from me a few steps, then a few more and a bit more after that, all the while provocatively-emphatically looking back at me as if to say “Come on, Daddy, run up, take my hand, stop me!”. The girl did not have an “aim” of reaching some place — she was not approaching something, but rather walking away from something. And as I was running up to her, the “catharsis” of the encounter would start playing out. I believe, that the purpose of her performed action was to **test** the boundaries of her “I can” through me. Walking served as an affirmation of the action as *hers*, her own, something internalized. That very “her ownness” (subsequently “I myself”) was the *motive*, which had been appearing and forming as action completion. Here, in the emergence of such a motivation, the action subjectivity’s nascency is performed in ontogenesis. Such is, in my opinion, a stage of interiorization, understood and formed in ontogenesis (unlike functional genesis) a transition from testing the Mainstays of a possible action to testing its possibilities (its Field), which is happening in the new “I can” Motive. In action method’s development (and not in the method “in and of itself”) the subjectivity is formed and formalized as an action’s “motive and purpose-oriented” essence — forming “**my** action”.

So, *firstly*, precisely the method (form) of the address makes the address motivating, “calling” (and not only in infancy but throughout one’s entire life). *Secondly*, in constructing the MA the affirmation of mediation (in the form of “playful” rejection as well) is an affirmation

⁷ In a precise perception through E. Husserl’s phenomenology.

⁸ M. Heidegger differentiated the kinds and subjects of questioning [14]: what is asked about, what is solicited, and what is interrogated. In the article the relationship between the action’s motive and method is asked about, the revealedness of the situations themselves and their correlation is solicited, and not the representativeness of a separate, as it were, ready action, but the situation of its form’s development is interrogated.

⁹ [18], [20], etc.

¹⁰ According to my experience, that happens during peculiar “play” between adult and enfant.

¹¹ According to L.I. Elkoninova’s works, that is the main point of role-playing game.

¹² As D.B. Elkonin said, there’s a “controversial” between motive and method in internalization of action.

¹³ That’s important to notice that after a short period of time a child starts to act “right”.

of the semantic field, the focalization of the “turn” in a situation of a possible action. *Thirdly*, in “oscillations” of the action completion method the “motive and aim-oriented” directionality emerges, gets tested and retained. The “reference points” get *experimented with and tested* specifically, and not merely outlined, and get *retained* only that way, and precisely in that retainment the action method correlates with the motive and the aim. *Fourthly*, the interiorization (individualization) of the action method in ontogenesis happens in testing and formalizing of the action’s Subjectivity as its motive. In all of these instances the action’s completion, i. e. completeness, is realized as **testing and retainment** of its mainstays and its field, and not just as a “technique” of consecutive movement across the given reference points. Precisely in this testing and retainment the Motive is **affirmed** in the Action Method and is *internalized* in that affirmation, it acts as Its Own. Such are the *situations and phenomena* of Motive and Method’s correlation in the completion of the Action Event¹⁴.

Here it must be noted that the term “procedure and technique-oriented” in relation to the Action Method is applicable only to the functional genesis. In ontogenesis, understood as MA’s Development, the completion of an action acts as an attempt-test-retainment of its completeness.

4

The assertions on the completion-completeness of the MA (interiorization on an ontogenic scale) necessitate a return to the notions on aim definition. In the examples above (excluding the last one) the aim was pronounced in its features. Thereby, precisely its accomplishment, carrying out the behavior to a distinctly given “point”, was the criterion of the action completion. Thus, as an example, a mountaineer’s aim, the mountain top, is given and its achievement emerges in the accomplishment’s catharsis. He needs to hold on to the difficult *method* of achievement¹⁵. The world (“the path”) of such an action, following F.E. Vasilyuk and O.I. Genisaretsky [3], we can call *simple* (clearly “composed”) and *difficult* (demanding significant effort to reside in it).

In ontogenesis, development, all the various forms of action (resultant, playful, educational) unfold and alternate. I believe, the completeness of ontogenesis is the formation of the Productive Action [19], the “product’s production”. The aforesaid should not be understood as if the Production is the “final stage” of development. On the contrary, the recreation of an act of development in it becomes a means to reside in the World.

The world of Productive Action’s unfurling is both *complex and difficult* [3]. That world lacks ready, preset

criteria for an action’s completeness, it lacks indications to how it should be concluded. It lacks preset “aim properties” and, unlike the actions of a mountaineer, “the mountain top” is not visible. When Van Gogh started painting the peasants boots, he couldn’t see how the final painting looks, just like Paul Cézanne couldn’t see the final form of a still-life neither in the beginning, nor in the process of painting. Here are appropriate wise words of M.K. Mamardashvili: “...when I draw something, I am not drawing something I see, I draw to see” [12, p. 173]. The same applies to S. Richter who, while performing a piece, *experiments with and tests the completeness itself*, the pronouncedness of the intrigue of the piece’s form, the method of its intonation¹⁶, all the while knowing its last note and chord. The same applies to a scientist or a good journalist who, while working on an article or a book, or making a presentation, is looking for, experimenting with, testing that form, and therefore that *Method*, which will make the intrigue of the piece more pronounced first and foremost for him and, later on, for viewers, listeners, readers. The latter will serve either as an affirmation, or a rejection of his efforts. Production is risky, it’s a Deed.

So, the Production’s success is the formation and testing of the Action, in the **Method** of which the **pronouncedness of its completeness is manifested and affirmed, its Purpose** (the “motive and aim-oriented” basis). The production’s “aim” is *attainment and testing* of the Action Method. Here, the *connectedness* between the Action Method and its Motive acts in its fullest measure.

I believe, the very unfurling of the *Cumulative*, Joint Action precisely is being Produced in the Mediation. The action’s Individualization is not negating but, on the contrary, reinforcing that problem. Thus, for example, when I’m writing this article I’m forming, reconstructing, and attempting to maintain anew the *reciprocal reversion* of my own thoughts and the thinking of Daniil B. Elkonin.

5

• Accentuation and description of the correlation between the motive and the action formation method is only possible when solving the problem of action development’s analysis (in its ontogenesis), unlike the problem of “separate” action’s formation. D.B. Elkonin’s discovery of a new method of understanding childhood development’s periodization necessitates the revision and reconstruction of the Experimental-Genetic Method.

• The unfurling of meditation in the Joint Action of a child and an adult (the unfurling of the MA) becomes the object of study and experimentation. The subject of

¹⁴ In regard to the realizedness of a cognitive act, M.K. Mamardashvili wrote: “any truly performed act of thinking can be considered an event... Aside the fact that a thought affirms a certain content, the very fact of said content’s affirmation and vision is an event” [11, page 103].

¹⁵ Such a retention people call “volition”, scarcely noting that “support” of a volitional principle constitutes the formation of orientation — experimenting with and testing the “twists” of the path.

¹⁶ Through the terms of “Psychology of Art” by L.S. Vygotsky: he is building up a plot and not a story [4]. Story was already given (“boot”, “fish on the plate”, musical notation of symphony, etc.

study are the transition situations, “turn” situations in that unfurling. Such a study can be called “The Clinic of Experimental Genesis”. Such is, in my opinion, the method of operation in the present day of Cultural-Historical Psychology as Non-Classical Psychology.

• In the transition situations of the MA unfurling the affirmation of the Mediator’s address is formed as an affirmation of the Purpose of the “psychological instrument”. The action’s Motive and Method correlate precisely in such affirmation.

• Affirmation of the purpose of the Mediator’s address (the psychological instrument’s purpose) occurs not in “obedient” adherence to instructions, but in experimenting with and testing a possible action’s image¹⁷.

• The MA’s completeness acts as an affirmation by the child (pupil) of his own subjectivity. Here, the action’s method turns into its new motivation.

• In Productive Action, which is, in its essence, a reconstruction of the MA, the formation (experimentation and testing) of an action’s Method is, in fact, its Motive.

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¹⁷ That activity is very possibly homological to phenomena of “exaptation” in phylogenesis.

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The article is an introduction to the project “A Model of a Modern School Based on the System of Developmental Education of D.B. Elkonin—V.V. Davydov”. It was presented to the Presidium of the Russian Academy of Education in 2013. Based on more than half a century experience in the development and implementation of a developmental learning system in the practice of experimental Moscow school 91, the authors prove the relevance of the project in solving the basic problems of modern education. The orientation of the developmental learning system on the principles of activity theory provides an opportunity to achieve high meta-subject results. A retrospective analysis of the stages of the formation of the developmental learning system allows not only to confirm the importance of its fundamental theoretical provisions, but also to identify points of growth, to determine the prospects for further development. The article presents a list of problems, which must be solved in order to achieve an effective implementation of developmental learning in modern educational practice. There is a detailed list of practical content (textbooks, manuals, methodological recommendations, workbooks) created by the authors of educational programs for students of different ages and for teachers.

Keywords: scientific school of D.B. Elkonin—V.V. Davydov, learning activity, learning content, learning cooperation, educational standards, 91 school, project.

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Школа Д.Б. Эльконина—В.В. Давыдова: от истории к перспективам

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Статья знакомит читателей с проектом «Модель современной школы на основе системы развивающего обучения Д.Б. Эльконина—В.В. Давыдова», представленным Президиуму Российской академии образования в 2013 г. Основываясь на полувековом опыте разработки и внедрения системы развивающего обучения в практику работы экспериментальной школы № 91, авторы доказывают актуальность проекта для решения задач современного образования. Ориентация системы развивающего обучения на деятельностные принципы обеспечивает возможность достижения высоких метапредметных результатов. Ретроспективный анализ этапов становления системы развивающего обучения позволяет не только подтвердить важность ее фундаментальных теоретических положений, но и наметить точки роста — определить перспективы дальнейшего развития. Подробно представлен круг задач, решение которых необходимо для эффективного внедрения системы развивающего обучения в образовательную практику. Приведен подробный список практических разработок (учебников, учебных пособий, методических рекомендаций, рабочих тетрадей), созданных авторами учебных программ для учащихся разных возрастов и для педагогов.

Ключевые слова: школа Д.Б. Эльконина—В.В. Давыдова, учебная деятельность, содержание обучения, учебное сотрудничество, образовательные стандарты, школа № 91, проект.

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Introduction

Modern pedagogical science, obviously, does not keep up with the ever-increasing and increasingly diverse and contradictory demands of the school life practice in modern Russia. Thus, the most difficult challenges of the last decade have been the introduction of new (second-generation) educational standards and the transition to distance learning in connection with the pandemic. These events (as well as many more specific problems that arise hourly in the educational process) force us to re-evaluate the importance, experi-

ence and prospects of the theory and practice of learning activity.

The role of the new Primary Education Standard (accepted in 2011) cannot be overestimated. Its introduction, in fact, consolidated the priority of the value of development over the assimilation of specific knowledge and skills in primary school age and, following the fundamental provisions of L.S. Vygotsky's cultural and historical theory, placed the responsibility for achieving a developmental effect on the content of education and on the forms and methods of organizing the educational environment of the school. It means that it proclaimed

“... recognition of the decisive role of the content of education, ways of organizing learning activity and interaction of participants in the learning process in achieving the goals of personal, social and cognitive development of students” [2].

In general, analyzing the fundamental provisions of the 2011 Standard, it should be noted that it contains new value orientations of modern education.

— Firstly, the target priorities of education have been for the first time shifted from the sum of knowledge, skills and abilities that students accumulate during their studies to the developmental effects of education (first of all, to meta-subject results, which can only be based on the scientific content of a school subject, but are not reduced to it).

— Secondly, independence, initiative and responsibility in thinking and acting are understood as the central developmental effects of education, which are necessary for a generation capable of meeting the challenges of the modern world and creating a decent future for themselves and society.

— Thirdly, the ability and propensity for constant self-education (the ability and desire to learn) is understood as a basic value. Its appropriation is the most important means that makes a person successful and productive in the modern labor market. “The formation of a stable system of learning, cognitive and social motives and the personal meaning of learning is the basis for the development of a pupil as a subject of learning activity. In primary school, the foundations of the ability to learn and the ability to organize their activities are formed — the ability to accept, maintain goals and follow them in learning activity, plan their activities, monitor and evaluate them” [2].

It is obvious that the provisions of this Standard can only be provided if the educational practice is based on the fundamental principles of psychological science and offers students special scientific content for mastering, encouraging children to search, research, experiment, as well as discussion and interaction. This practice is offered in the most elaborated form by the educational system of D.B. Elkonin—V.V. Davidov.

On the history of the development of the theory of educational activity

The Laboratory of Psychology of Primary school children under the leadership of D.B. Elkonin has existed at the Institute of Psychology of the Academy of Medical Sciences of the RSFSR since 1953. And in 1959, it “... switched to a new form of research — the organization of experimental classes and the active formation of learning activity of schoolchildren” [1, p. 3] at school No. 91 in Moscow. From the very beginning of the research in the laboratory “the main task... was a study of

the process of formation of learning activity as a leading activity in primary school age” [ibid., p. 4]. In 1960, the first article by D.B. Elkonin was published in the journal “Problems of Psychology”. According to the results of experimental training at school No. 91, in 1962 the book “Problems of psychology of learning activity of younger schoolchildren” was published (edited by D.B. Elkonin and V.V. Davydov). And already in the first decade of the joint work of the school and the laboratory, the most important provisions of the future theory of learning activity were formulated.

So, it was proved that:

- The age possibilities of younger schoolchildren significantly depend on the education system, which, while maintaining and strengthening some age potencies, hinders the development of others. Younger students can show independence, criticality and initiative in thinking and acting, but only under certain learning conditions. These conditions are extremely rare in school, therefore, the named qualities of a child’s mind and ability to act are observed only in the form of exceptions (mainly in gifted children).

- The content of education is the main condition for learning, which develops children’s independence, criticality and initiative in thinking and acting. By changing the conceptual content of a school subject, it is possible to create conditions for development of the children abilities to independently search and discover new ways to solve problems. Thus, D.B. Elkonin and V.V. Davydov wrote that “... the revision of the traditional programs of school subjects went in two directions: firstly, the maximum approximation of the programs to the current state of the relevant field of scientific knowledge (mathematics, linguistics); secondly, the saturation of programs with content that stimulates the mental development of the child” [ibid., p. 5].

- The formation of children’s potential abilities by means of learning organized as joint activity, rather than measuring the developmental effects of traditional learning, is the main method of studying the laws of development in learning. In order to conduct formative experiments, it is necessary to create a new psycho-didactics based on activity theory and appropriate methods to support teaching and learning processes.

In the seventies, the first versions of curricula and teaching materials for mathematics, Russian language, art and literature courses in elementary schools were created. And the repeated testing and processing of these courses in the teaching — learning process in school No. 91 helped psychologists to formulate the basic concepts of learning activity.

- learning activity is aimed at finding and mastering new ways of action (as opposed to teaching aimed at reproducing ready-made patterns of action). Learning activity reproduces research activity: students, under the guidance of a teacher, independently discover new ways

of acting for themselves. In culture these ways of acting are formalized in the form of concepts.

- The *learning problem* is a situation that encourages a student to search for general principles and generalized ways to solve a wide class of problems (as opposed to specific practical tasks that focus on the result rather than the method of solution).

- *Learning actions* include the *transformation* of task conditions to highlight the most significant relationship of the studied object, *modeling* of an essential relationship discovered during the transformation, its *concretization*, *control* and *evaluation* of one's own actions — this is the composition of a jointly distributed learning activity. Participation in jointly distributed learning activity helps a younger student to think and act proactively, critically and intelligently.

- *Learning cooperation* is a special form of interaction between a younger student with peers and a teacher, in which a children's initiative is born and supported, aimed at finding new ways to solve learning problems.

It is not difficult to see how closely the organization of learning activity based on this system of concepts meets the modern requirements of new educational standards developed on the basis of the activity approach.

In 1975–1980, the laboratory of V.V. Davydov, together with the teachers of primary school No. 91, fulfilled the plan-order of the Russian Ministry of Education. As a result of this work, by the end of the 70s, a new primary education system was actually created: the theory of learning activity by D.B. Elkonin–V.V. Davydov and the activity practice itself, provided with methodological materials for lessons for all primary school courses.

However, since 1982, experimental research at School No. 91 has been suspended for various reasons. But the teachers of the school continued to use experimental materials in practice of teaching. Having gained a unique experience of working “in a new way”, in constant dialogue and interaction with students, they could not return to traditional teaching methods. Psychologists from the former laboratory of V.V. Davydov, unable to conduct formative experiments in classrooms, continued to study learning activity, focusing on the academic aspects of this scientific school. During these years, the approaches outlined in the laboratory to the diagnosis of the quality of school knowledge (objectivity, consistency and generalization of concepts) and the developmental effects of learning (reflection, analysis, planning) were systematized. Samples of new diagnostic methods and techniques were created. On the base of the results of the diagnostic data, effectiveness of learning in the form of learning activity in comparison with traditional learning became evident.

Daniil B. Elkonin died in 1984. His students and followers united under the leadership of V.V. Davydov in order to continue research and development within the

framework of the scientific school. The theory of development by means of education, combined with the theory of periodization of child mental development, began to acquire more and more specific and modern outlines.

In the nineties the restructuring of the whole country and its educational system made the theory of learning activity in great demand: the shortage of initiative, independent-minded people capable of intelligently approaching non-standard problems was interpreted as a topical social problem in Russia. The stage of introducing the Elkonin – Davydov educational system into a mass school began, textbooks were urgently created and published in large editions, teacher retraining centers were opened throughout the country.

At that time, a system of advanced training of primary school teachers according to the Elkonin–Davydov system was organized on the basis of school No. 91. Along with psychologists — the authors of the training courses — experimental teachers took part in this work, they designed open lessons with the students, conducted and analyzed the designed lessons, created workbooks and control tasks on the Russian language and mathematics. With the participation of the teachers of school No. 91, a system of non-marking education in primary school (“assessment without a mark”) was designed.

As it was introduced into educational practice, the Elkonin–Davydov system received official status and state recognition. In 1996, by decision of the Ministry of Education, this system became one of the three State primary education systems. In 1998, D.B. Elkonin (posthumously), V.V. Davydov and other researchers in his laboratory were awarded the prize of the President of the Russian Federation in the field of education for the creation of the Elkonin–Davydov system in elementary schools. In 1999, the prize of the Government of the Russian Federation in the field of education was awarded to G.N. Kudina and Z.N. Novlyanskaya (staff of the Psychological Institute), and N.E. Burshtina and M.P. Romaneeva (teachers of school No. 91) for the creation of the course “Literature as a part of the aesthetic cycle of education”. This course is designed to be mastered during ten years of schooling. At the end of the twentieth century, about 10% of the total number of primary schools in Russia practiced the Elkonin–Davydov system. There were many schools that participated successfully in development and addition of this system, such as the Univer Gymnasium (city of Krasnoyarsk), the Eureka-Razvitie school (city of Tomsk), the School of Development (Moscow), etc.

Vasily V. Davydov died in 1998, and starting in 2000, already under the leadership of B.D. Elkonin and V.V. Rubtsov, V.V. Davydov's students and followers began targeted work on the project “Teenage (secondary) School in the Elkonin–Davydov educational system”, as well as to develop and scientifically substantiate tools for evaluating the effectiveness of the educational

process organized at School No. 91. During this period, school No. 91 regains its status as one of the main experimental sites; new training courses and new textbooks on literature, mathematics, biology, geography, physics and chemistry for grades 5-9 (secondary school) were tested there. At the same time, theoretical ideas about the specifics and developing possibilities of educational activities of teenagers were also formed. During 1995–2005, a study was conducted on the formation of learning independence of schoolchildren by means of learning activity (longitudinal observation and testing of students in two parallel classes who studied from the first to the tenth grade according to the Elkonin–Davydov system).

In general, it has been experimentally proven that the consistent and systematic construction of learning activity in lessons in primary and secondary school significantly increases the ability of schoolchildren to reflect in the intellectual sphere (students understand the grounds for their own actions and can act in a situation of contradictions and uncertainty), in the social sphere (a person understands points of view other than his own, and can coordinate different points of view), in the personal sphere (a person understands his deficits and knows how to fill them). In other words, several years before the emergence of new educational standards and the definition of meta-subject goals of education appeared, an idea and technology were developed about how a significant part of them could be achieved.

We are far from the idea that the Elkonin–Davydov system is the only way to achieve new educational goals. However, psychologists and educators who develop and practice Elkonin–Davydov education have collected a lot of evidence that at the moment this is a well-developed and verified way for children to develop the ability to learn, the ability to think and act intelligently and reflexively, to take into account the positions of other people.

Prospects for the development of theory and practice of learning activity

Based on the long-term development of the theory of developmental education by D.B. Elkonin–V.V. Davydov and half a century of practice of learning activity on the basis of school No. 91, we developed a project “Model of a modern school based on the system of developmental education by D.B. Elkonin–V.V. Davydov.” This project was presented at a meeting of the Presidium of Russian Academy of Education in 2013. It was highly appreciated by reputable reviewers (Vice-President of Russian Academy of Education V.A. Bolotov, academician of Russian Academy of Education N.N. Nechaev), but it was not implemented at that time. An analysis of modern social demands on schools, on the one hand, and the current state of primary and secondary educational

practice, on the other, allows us to consider this project as acutely relevant and meeting the challenges of today.

The purpose of the project. It is well known that the developmental effects of learning do not arise by themselves, do not appear as a student stays in an educational institution, but are the result of a *specialty organized joint activity of students and teachers*. One of the main threats to building an education system that meets new goals and values is stagnation, when scientific research is aimed only at peripheral aspects of education and key issues of its modernization are not being developed:

- How should (can) joint activities of students and teachers be organized, developing students' independence and self-dependence, initiative and responsibility of thinking and behavior, ability and desire to learn?

- What is the content of this activity, its structure and forms at all stages of education? How can the stages of education be linked together into a single, holistic process of human education, capable not only of mastering the means and methods of action accumulated in human culture, but also of transforming them into the tools of their own action, into means of solving their own problems?

- What is and how is the professionalism of teachers responding to modern challenges, able to organize joint activities with students in a way that permits to build up the moral and intellectual potential of students with independence, initiative and responsibility, possessing the possibilities of continuous self-education throughout their lives?

The project aims to answer these questions not only theoretically, but also practically.

Project objectives:

- to build a working model (sample) of a school that meets the principles of developmental learning and the requirements of educational standards;

- to provide the professional pedagogical community with technologies and methodological support for the work of primary and secondary schools solving new educational tasks;

- to work out the mechanisms of translation of new pedagogical practices in pedagogical education.

The basis for solving these tasks are:

- theory of educational activity developed by D.B. Elkonin, V.V. Davydov and their collaborators;

- didactic principles of building learning activity, embodied in educational and methodological kits for almost all school subjects included in the curriculum of primary and secondary schools;

- the practice of building learning activity at school No. 91 in Moscow, where the Elkonin–Davydov system was created and developed in constant cooperation between teachers of the school and psychologists of the Psychological Institute of the Russian Academy of Education.

A brief analysis of the creation and development of the Elkonin–Davydov educational system, given in the

article, allows us to answer the question why this system is currently becoming one of the fundamental foundations of activity pedagogy, and why new educational standards can be effectively implemented on its basis.

The content of the project. Currently, it is legitimate to say that the Elkonin–Davydov system is one of those “initial basic units” on the basis of which a new educational paradigm, an activity pedagogy, was born and formed. At the same time, it was school No. 91 that was inextricably linked with the birth, growth and development of the activity pedagogy model based on the Elkonin–Davydov system, both biographically and organically. And for more than half a century of joint work of psychologists and teachers, they created that unique pedagogical organism “Institute–School”, which generated and generates fundamentally new pedagogical practices. However, in order for school No. 91 to really take place as a model, as an operating model of a new type of school, providing solutions to educational problems of today and, most importantly, of tomorrow, it is necessary to understand:

- What should be completed in the Elkonin–Davydov system in order for it to serve as a model and guideline for the general pedagogical community moving to activity practice?

- What should be transformed in the work of School No. 91, Psychological Institute and University (MSUPE) so that the school can become an active resource center for training personnel capable of implementing the principles of an activity approach?

The formulation and solution of these issues defines a new direction of research and development related to the formation of a model of a modern school based on the Elkonin–Davydov system of developmental education that meets both the requirements of new educational standards and the guidelines of activity pedagogy.

An urgent task for the school is the systematic implementation of all training courses that have already been developed within the framework of the Elkonin–Davydov system and have methodological support. We are talking, first of all, about training courses for primary schools. Only when in grades 1–9 most of the lessons will be organized in the form of learning activity, the school, as a model of an activity-based approach to learning, will be able to become the basis for (a) teaching teachers, (b) researching the relationship of learning and development of schoolchildren at different levels of education. To solve this problem, it is necessary to train young teachers. Such training can be organized in the form of workshops, which will be conducted by experienced teachers of school No. 91, involving employees of the Psychological Institute and other authors of training courses on the Elkonin–Davydov system as a resource. Thus, the school acquires the status of a workshop, where new methods and techniques of organizing learning activity are mastered.

The developers of the Elkonin–Davydov system will have to develop and test an integrated school model based on the didactic principles of the Elkonin–Davydov theory and taking into account the requirements of the Federal State Educational Standard. To do this, it is necessary:

- to build a system of children’s and teenagers activities in which learning activity will be only one of the components (It is clear that learning activity can play its leading role in the development of younger schoolchildren only in an ensemble with “slaves”, and in adolescence learning activity itself becomes “guided” by the other activities);

- to substantiate the variety of forms of educational interaction, in which the classroom form will be only one of the components of the educational process;

- Create mechanisms to ensure the normal (“non-traumatic”) nature of educational transitions (transition from preschool to school childhood, and from primary to secondary school);

- rework all educational and methodological materials to include them in the federal list;

- develop and test a system for monitoring and diagnosing meta-subject learning outcomes for grades 1–9, including “starter” diagnostics;

- to develop diagnostic tools for assessing the quality of the educational environment of primary schools.

Thus, the school acquires the status of a laboratory where fundamental and applied research is carried out, training courses and programs are developed and improved.

The most important task is to train personnel to work in the system of developmental education. The technologies of developmental learning involve the construction of qualitatively different relations between the teacher and the students than is customary in a traditional school. A deeper understanding of the scientific foundations of the subject of teaching is required. Special pedagogical techniques are required: the ability to organize group work of students, create a “trap”, organize a meaningful discussion, work with diagrams and models. To solve these problems, MSUPE develops and implements a system of training, professional retraining and advanced training of teaching staff capable of working in accordance with the requirements of the system of developmental education of D.B. Elkonin–V.V. Davydov. Educational modules with video accompaniment on activity pedagogy are being created for pedagogical universities and teacher training centers. Thus, the school acquires the status of an internship site, where the theory of pedagogical education intersects with the practice of working in a developing educational environment.

The tasks set in the project require the participation of a wide range of specialists. These are psychologists and teachers — designers of new developmental learning programs, practical teachers with extensive

experience in testing training courses for primary and secondary schools of developmental learning, research psychologists and diagnosticians who create control and measuring tools to assess the educational and developmental effects of education, as well as specialists in statistics and psychodiagnostics, specialists in clinical psychology, programmers – for the development of digital educational resources. Combining the efforts of all specialists at the experimental school site will make it possible to create a model of a modern school based on the system of developmental education of D.B. Elkonin–V.V. Davydov.

The expected results of the project.

1. An integrated model of the School of Activity Pedagogy developed on the basis of school No. 91 based on the system of D.B. Elkonin–V.V. Davydov in accordance with the requirements for the developing educational environment, the content of the educational process and information-technical equipment of the school.

2. The concept of a training course in the educational system of D.B. Elkonin–V.V. Davydov in accordance with the new Federal State Educational Standards.

3. The main educational program (OOP) of the school in the educational system of D.B. Elkonin–V.V. Davydov (grades 1–9)

4. A complete line of textbooks and educational materials for primary and secondary schools.

5. Educational transition programs for first graders (to primary school) and fourth graders (to secondary school).

6. The program of modular construction of basic school courses (natural sciences).

7. Diagnostic tools for the examination of the quality of the educational environment of the school.

8. A package of diagnostic methods and procedures for monitoring the educational achievements of schoolchildren and the developmental effects of school education.

9. Training, retraining and advanced training programs for personnel to work within the framework of an integrated school model based on the principles of activity pedagogy based on the system of D.B. Elkonin–V.V. Davydov.

The proposed project is still waiting to be implemented. However, work on the development of theory and practice of learning activity is actively underway. Below is an incomplete list of textbooks and teaching aids for schools operating under the D.B. Elkonin–V.V. Davydov system. Many works have been repeatedly republished and finalized on the basis of many years of testing and training practice. In our opinion, it is the best proof that the D.B. Elkonin–V.V. Davydov school has developed a powerful potential for solving urgent problems of modern education.

First class

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We publish reviews of materials for the message of the full member of the Russian Academy of Education V.V. Rubtsov "Development and formation of a model of a modern school based on the system of developmental education D.B. Elkonin—V.V. Davydov" at the meeting of the Presidium of the Russian Academy of Education (RAE) on April 24, 2013, received from members of the Presidium of academicians of the RAE V.A. Bolotov and N.N. Nechaev.

Review by V.A. Bolotov

The presented materials are a project to create a school model based on the principles of an activity—based approach, consistently implemented in the theory of learning activity and the system of developmental education by D.B. Elkonin—V.V. Davydov. The analysis of these materials indicates a high level of theoretical study of the stated problem, on the one hand, and a solid practical implementation of the project, on the other.

Thus, the high-quality implementation of the project is associated with at least two key issues of modern school education. First, how should the joint activities of students and teachers be organized, developing students' independence, initiative and responsibility of thinking and behavior, ability and desire to learn. And secondly, what is the subject matter of this activity, its structure and forms at all stages of education? How can these stages of education be linked together into a single, holistic process of human education, capable not only of mastering the means and methods of action accumulated in human culture, but also of transforming them into tools of their own action, into means of solving their own problems?

With such a formulation of key questions, to which both theoretical and practical answers should be obtained, the connection of the stated project goals with the requirements of the new Federal State Educational Standards of General Education seems significant, since one of the main educational results of the current Federal State Educational Standards is the development of meta-subject (activity) competencies among students. The formation of such competencies is possible only in conditions of specially organized joint activities of students and teachers, which, in turn, has been fully worked out in the system of developmental education in primary school and is now being worked out in secondary school. The justification of effective forms of joint activity of students and teachers, as well as students themselves, is the main problem of modern schools, the solution of which is focused on motivating children to study and on the development of such important development indicators as reflection and analysis of their own actions.

No less important is the goal outlined in the project of creating a system of teacher training focused on the tasks of developmental learning. This question is still open, and without its solution it is impossible to talk not only about a full—fledged school based on an activity-based approach (in this case, about a school corresponding to the tasks of a developmental learning system), but also more broadly about the effective implementation of a developmental learning system. Moreover, this issue is becoming crucial today, because if we focus on advanced activity practices (namely, they most of all meet the requirements of new standards today), then without training teachers, psychologists, managers who know how to organize joint learning activity, it is impossible to work either according to the system of developmental learning or according to the L.V. Zankov system, nor for any other activity systems.

In general, based on the analysis of the submitted materials, the following conclusions can be drawn.

1. The discussed project and research and development program on the topic "Development and formation of a model of a modern school based on the system of developmental education of D.B. Elkonin—V.V. Davydov" are in urgent demand by the modern education system — the introduction of educational practices based on an activity—based approach meets the requirements and conditions for the implementation of new educational standards.

2. The consistent implementation of the project in 2013-2017 will allow us to return to the well-known idea of the founders of the system of developmental education D.B. Elkonin—V.V. Davydov about "an integrated school model based on the principles of developmental learning." At the same time, due to research and development on the formation of a full school of developmental education (primary school —secondary school—high school), the nature of interaction between the institute's laboratories and the school itself should fundamentally change. The school, focusing on the training of new teachers, will work as a special internship platform for the development training system ("workshop school"). And the institute laboratories, providing the process of creating didactic materials for the system of developing education, should increasingly operate on the basis of the school itself, i.e. act already as a scientific and educational complex "school laboratory". In other words, both the school and the institute will receive a new impulse to develop their activities.

3. I also believe that the positive effect of the project implementation is due not only to the development of the 91-st school or the system of academic research in the field of education and development of children by means of learning activity. The model itself is of fundamental importance/ It is an example of activity pedagogy, created on the basis of the requirements of the developmental learning system. Such a model, with its scientific and methodological support, is a complete academic product ready for implementation into the Russian education system. And the Russian Academy of Education is quite ready to present such a product at the highest levels.

4. At the same time, the issue of the need to prepare preschool children for education under the D.B. Elkonin—V.V. Davydov developmental education program should be further worked out.

I support the project and mainly the research and development program on the topic "Development and formation of a model of a modern school based on the system of developmental education of D.B. Elkonin— V.V. Davydov", which were presented in the message by Academician of the Russian Academy of Sciences V.V. Rubtsov. Some comments were passed on to the developers, here I consider it extremely important to note the need for more detail on the issue of financing the project in 2013—2017.

Review by N.N. Nechaev

The presented materials reveal the main directions for the further development of such an innovative approach in the psychological theory of activity as developmental learning, the foundations of which are based on the concept of learning activity proposed by D.B. Elkonin and the theory of meaningful generalization as the basis for the formation of theoretical thinking of schoolchildren, developed in the fundamental research of V.V. Davydov.

The approach presented in the Reference materials is based on the internationally recognized idea of the leading role of learning in determining the direction of mental development of a person, formulated in the works of L.S. Vygotsky and has received its concretization in various theoretical and applied studies carried out within the framework of the activity approach, the basic principles of which were formulated in the works of A.N. Leontiev, S.L. Rubinstein, P.Ya. Galperin, and D.B. Elkonin.

The principles of the organization of learning activity justified in the materials of the Reference, which are the leading factor in the intellectual and personal development of students, have been successfully worked out for almost 50 years on the basis of the 91-st school in Moscow, which was not only an experimental site of the Psychological Institute of the Russian Academy of Education, but also a scientific and practical center for working out promising models for the development of secondary schools. That is why it is necessary to support proposals aimed at implementing the innovative program proposed in the Reference for the development of experimental work of the development team based on this school for the period 2013-2017.

I think it is important to note that within the framework of the approach formulated by the authors of the Reference, the possibility of training a new generation of teachers who are ready, on the one hand, for continuous self-education and self-improvement in the dynamically changing world of education, and on the other, for creative cooperation in a developing secondary education system is shown. Thus, the stated approach is not only of great practical importance for the development of the Elkonin–Davydov developmental education system itself, but puts psychology and didactics of developmental education among the most important areas of development of psychological and pedagogical research, which have an undoubted scientific priority of domestic science for world psychological and pedagogical science.

As the presented materials of already implemented studies show, they not only make a significant contribution to the development of the theory and practice of secondary general education as a condition for the progressive development of the entire system of continuing education in Russia, but create theoretical and practical prerequisites for the development of modern educational tools for improving teacher education.

Thus, it can be stated that the materials presented in the Reference "Development and formation of a model of a modern school based on the system of developmental education D.B.Elkonin–V.V.Davydova (2013–2017)" contain the substantiation of relevant and promising scientific and practice-oriented developments with great theoretical and practical significance and significant innovative potential for the formation of a new educational paradigm of secondary general education, as well as outline the prospects for the development of professional pedagogical education.

Интерпсихическое начало учебного действия моделирования

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Содержание обучения становится ключом к развитию учебной субъектности ребенка там, где учитель побуждает детей самостоятельно конструировать новое понятие с опорой на учебные модели. Методом case study мы проанализировали детско-взрослое взаимодействие в одной из ключевых точек возникновения детской самостоятельности в работе с моделями. Наше исследование проведено на материале обучения первоклассников грамоте по букварю Д.Б. Эльконина. В центре рассмотрения — этап преобразования исходной модели звуко-буквенных отношений при столкновении с фактами, противоречащими закономерности, описанной в этой модели. Показано, что при этом детские инициативы могут быть направлены взрослым целиком на понятийное содержание работы и представлены в двух модальностях: в мышлении о связи понятий уже усвоенных и новых, конструируемых здесь и сейчас, и в понимании мыслей одноклассников об этих связях. В то же время усилия педагога в живом учебном взаимодействии нацелены преимущественно на сплетение разрозненных нитей детских понятийных инициатив, т. е. на построение формы сотрудничества, адекватной конструируемому учебному содержанию.

Ключевые слова: содержание и форма учебного сотрудничества, субъектность ученика, моделирование.

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Interpsychological Origin of the Educational Action of Modeling

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The content of education becomes the key to the development of the learner's agency when the teacher encourages children to independently construct a new concept using educational models. Using the case study method, we analyzed child-adult interactions at one of the key points of the emergence of children's independence in working with educational models. For this study we analyzed the lessons, where the primer by D.B. Elkonin was used. The focus of our observations was on the stage of transformation of the original model of sound-letter relations when students are faced with facts that contradict the principle described in this model. It is shown that in this situation, the initiative of learners can be directed by the adult entirely to the conceptual content of their work and presented in two modalities: in thinking about the connections between already learned concepts and new ones, constructed here and now, and in understanding the thoughts of classmates about these connections. At the same time, the teacher's efforts in real educational interaction are directed primarily at interweaving the disparate threads of children's conceptual initiatives, and in this way, at building a form of cooperation that is adequate to the content of notions constructed by students.

Keywords: education developing learner's agency, content and form of educational cooperation, modeling.

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1. Становление учебного действия моделирования: постановка проблемы

«Мы нашли ключ к проблеме развивающего обучения в младшем школьном возрасте. Этот ключ — содержание обучения» [12 с. 258]. Д.Б. Эльконин сформулировал этот знаменитый ответ на вопрос об обучении, ведущем за собой развитие, после того как осуществил революционное изменение содержания обучения и в 1958—1959 гг. провел первый генетико-моделирующий эксперимент в школе № 91 г. Москвы. С этих экспериментов, проведенных на материале обучения первоклассников чтению, началось построение системы образования, сегодня известной как система Д.Б. Эльконина—В.В. Давыдова. Букварь Эльконина, изданный в 1961 г., стал первым учебником в этой системе.

Вот как Д.Б. Эльконин подытожил первый шаг разработки новой образовательной системы: «То, что благодаря построению моделей очень интенсифицируется овладение теми сторонами действитель-

ности, которые выражены и воссозданы в модели, заставляет нас задуматься: *не является ли моделирование ребенком определенных сторон деятельности и законов их строения, проводимое под руководством учителя, общим принципом их усвоения?»* [12 с. 403—404]. За следующие десятилетия исследований это осторожное предположение было многократно обосновано теоретически и экспериментально [1; 2; 9; 11].

Наши исследования дополняют этот корпус фундаментальных работ об учебном моделировании как основном средстве понятийного мышления в одном аспекте: мы изучаем *зарождение* действия моделирования. Для этого мы проанализировали ситуацию постановки самой первой учебной задачи, ответ на которую будет зафиксирован в первой учебной модели [7], и саму ситуацию построения первой учебной модели [4].

Новизна нашего исследования истоков учебно-го моделирования определяется еще и его методом: рождение действия мы изучаем *in vivo* — в живой си-

туации взаимодействия учителя и первоклассников на уроках. Нам удалось описать строение интерпсихического действия учеников и учителя в кульминационные моменты обучения, когда возможно зарождение детской мысли о потенциальных характеристиках конструируемого понятия и его неявных связях с другими понятиями той же понятийной системы. В частности, было показано, что в ситуации постановки и решения учебной задачи детские инициативные вопросы и догадки о скрытых валентностях нового потенциально системного понятия появляются с отменной регулярностью. Это происходит всякий раз, когда учитель не склонен давать готовые ответы на незадаваемые детьми вопросы, но умеет инициировать и поддерживать детский поиск способа действия, отсутствующий в репертуаре учеников. По характеру детских понятийных инициатив, возникающих при постановке и решении учебной задачи, можно судить о том, насколько широким является для ребенка класс задач, общий способ решения которых записан в модели [6; 7].

В этой статье будет рассмотрен путь первоклассников к следующей, третьей, вершине восхождения к действию моделирования: первое в жизни класса *преобразование исходной модели* при столкновении с новым классом задач. Вновь материалом работы детей будут задачи из букваря Д.Б. Эльконина [13]. Метод анализа также останется прежним: по видеозаписям уроков мы проводим реконструкцию интерпсихического действия, направленного на постановку и решение учебной задачи. Это типичный *case study*, основная цель которого — при рассмотрении единичного факта выявить общие свойства класса явлений, к которому принадлежит данный факт [17].

Необходимость преобразования модели возникает там, где исследователь (любого возраста), сталкивается с фактами, противоречащими закономерности, которая описана в исходной модели [2]. При этом становится возможным очертить *границу* между классом явлений уже известным, описанным в моде-

ли, и неизвестным, не объясняемым через модель. На материале уроков, где это происходит, можно определить, появились ли у первоклассников такие показатели будущего умения учиться самостоятельно, как способность отделить известное от неизвестного, чувствительность к понятийным противоречиям, готовность перейти от прежнего знания к новому [8; 16]. Критерием этой готовности являются учебные инициативы, которые появляются в классе при выполнении заданий учителя. Преобразование исходной модели, первое в жизни первоклассников, описано на основе видеозаписи двух уроков; имена детей изменены, их реплики аутентичны.

2. Переход от исходной учебной модели к новой: case study

В букваре Эльконина исходными являются модели, описывающие отношения согласных звуков, *парных* по мягкости и твердости, с буквами согласных и гласных (рис. 1). Закон русской графики, описанный в этих моделях, многократно подтверждается на уроках родного языка — при знакомстве с 14 буквами согласных, парных по мягкости—твердости. Регулярность этого закона нарушается для букв согласных, *непарных* по мягкости—твердости. Впервые дети имеют шанс обнаружить границу знания, зафиксированного в исходной модели, при знакомстве с буквами «Ч» и «Щ».

Шаг 1. Предыстория сегодняшнего открытия

Не секрет, что многие современные дети приходят в школу, уже умея читать и писать. Однако в первом классе отношения между звуками и буквами, освоенные практически, постигаются на теоретическом уровне впервые, а для некоторых детей становятся предметом самостоятельных размышлений и наблюдений. Закономерности, описанные в исходных моделях (рис. 1), помогают таким детям угадывать другие

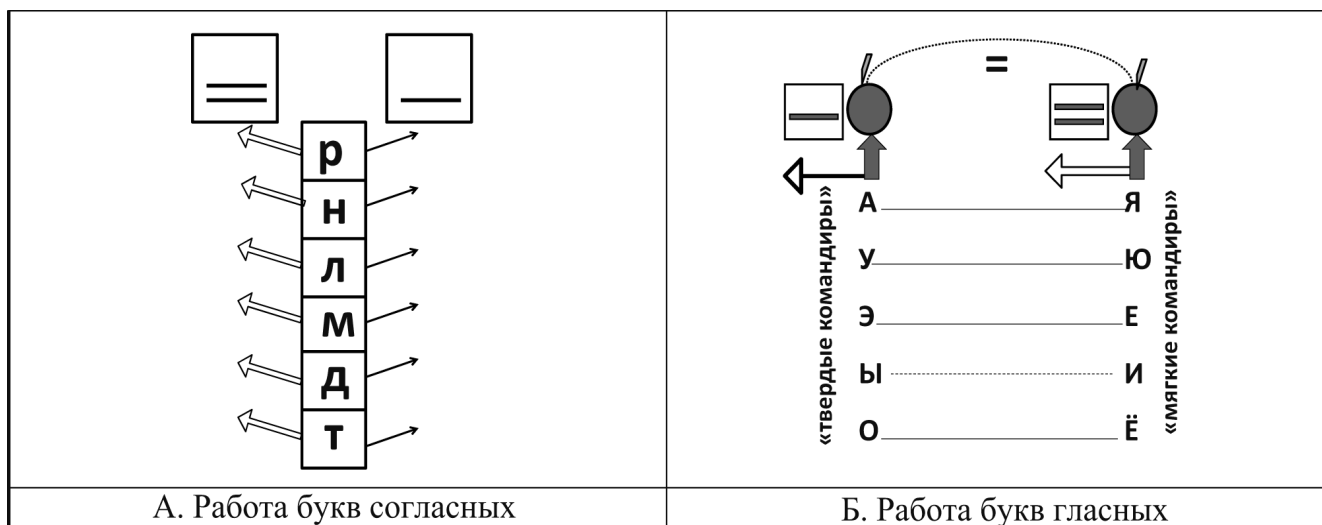


Рис. 1. Первые учебные модели в букваре Эльконина: круг — знак гласного звука; квадрат — знак согласного звука; квадрат с одной черточкой — знак твердого согласного звука; квадрат с двумя черточками — знак мягкого согласного звука

закономерности, еще не обсуждавшиеся на уроках. В этом классе догадки учеников о еще не открытых законах русской графики фиксируются письменно и вывешиваются на видном месте. Это своего рода научный журнал: авторские публикации самостоятельных размышлений детей о лингвистическом содержании обучения. Публикации детей, касающиеся сегодняшнего урока, учитель (далее — Д.М.) читает вслух, называя имена авторов:

- Л Е Н А : Буквы «Ч» и «Щ» тоже такие послушные, как другие согласные?¹
- Н И Н А : А буквы «Ч», «Ж», «Ц» не подчиняются /гласным командирам²/?
- Е Г О Р : Есть буквы, которые не подчиняются гласным командирам. Они всегда твердые или всегда мягкие. Например, буквы³ «Ч» и «Щ» — они всегда мягкие.

Д. М. : Что значит — буквы всегда мягкие?

А н я : Значит, какого бы командира ни поставить, они все равно будут читаться мягко.

Несколько голосов произносят звук [Ч'-Ч'-Ч']. *Несколько детей показывают знаки согласия и восхищения.*

Д. М. : Пойдите! А что значит «мягкие **буквы**»? Они сделаны из чего-то мягкого?

Х о р : Нееет!

А л е н а (с места): Они не подчиняются! /.../

Д и м а : Ну, у нас были буквы до «Ч» и «Щ»... И они работают на **двух** работах⁴: твердый согласный и мягкий согласный.

В первом классе учитель относится к детским понятиям высказываниям как родитель к первому лепету малыша: стремится понять и ответить. Сейчас учитель обращается к детским письменным высказываниям в тот момент, когда визионерские идеи отдельных детей, родившиеся на прошлых уроках, могут помочь их одноклассникам в решении сегодняшних задач. Это размышления об особенностях букв согласных, непарных по мягкости—твердости. Реплики Ани, Алены, Димы указывают на то, что мысли Лены, Нины и Егора поняты и продолжены. Важно также то, что инициатива поворота мыслей первоклассников об отношениях звуков и букв принадлежит не только взрослому, но и тем детям, чьи предварительные письменно зафиксированные размышления учитель только что прочел.

Шаг 2. Начало перестройки исходной модели

Сегодня первоклассники работают в группах по 4—6 человек. В последнее время учитель прививал своим воспитанникам привычку распределять обязанности при выполнении общей работы. При этом не навязывался какой-то один, «правильный», способ разделения функций в группе. Любые продук-

тивные способы, возникавшие в отдельных группах, учитель поддерживал и делал заметными для всех первоклассников, а непродуктивные конфликты старался устранить без огласки.

Учитель раздает каждой группе рабочий лист, на котором — заготовка для схемы «Работа букв согласных» (рис. 1а) с пустыми квадратиками для новых букв и слова с буквами «Ч» и «Щ» без орфограмм ЧА-ЩА, ЧУ-ЩУ.

Д. М. : Прочитайте слова и запишите в верхнем квадратике букву «Ч». Буква «Ч» какой звук обозначает? Произнесите его.

Х о р : [Ч'-Ч'-Ч'].

А л е н а : А твердо не получится! Вы попробуйте! Просто язык сломаете!

Междусобойчики в группах: дети пытаются по-пробовать то, о чем сказала Алена. Договариваются, как читать слова (хором или по очереди) и как записывать буквы.

В одной из групп: Давайте, я — палочку. *Рисует, передает лист соседу. Каждую из трех палочек буквы «Ч» рисует следующий ребенок.*

Д. М. : Посмотрите на схему. Все ли правильно?

Г о л о с а : Нет! Нееет!

Д. М. : Что не так?

Е г о р : «Ч» не работает на твердой работе.

В разных группах — разговор про две стрелочки схемы. В нескольких группах красным крестом зачеркнута стрелочка, указывающая на твердый согласный звук.

Д. М. : А сейчас... можно я приглашу к доске одну группу? Целую группу. Выходите, пожалуйста.

На доске — начало схемы (рис. 2а).

К а т я (у доски ведет руками по стрелкам схемы): Вот «Ч». Почему она обозначает сразу и твердый, и мягкий? Если она обозначает только мягкий?!

Д. М. : Что вы сделали в группах, чтобы это исправить?

Г о л о с а : Зачеркнули.

Д. М. : А на доске можно стереть.

Группа у доски исправляет схему (рис. 2б).

Дети в группах, где одна из стрелочек не была зачеркнута, загалдели, договариваясь, кто исправляет схему.

Учитель просит вписать в схему новую букву «Щ» и ходит между столами, наблюдая, что при этом происходит в разных группах. В одной из групп учитель случайно слышит высказывание ученика, которое может стать ключевым для того, чтобы учительский замысел преобразования исходной модели стал событием для учеников.

Д и м а : А мне кажется, что «Щ» может слушаться только мягких командиров.

¹ На языке этого класса «послушными» называются согласные буквы, которые «слушаются» приказы букв гласных. Так, буква «А» командует предыдущей согласной: «Читайся твердо» (МА, ДА), буква «Я» командует предыдущей согласной: «Читайся мягко» (МЯ, ДЯ).

² В скобках — подразумеваемая часть мысли ребенка, неискушенного в письменном высказывании.

³ Егор имеет в виду звуки, а не буквы.

⁴ В переводе с языка первоклассников: буквы согласных «выполняют две работы»: обозначают или мягкий, или твердый согласный звук.

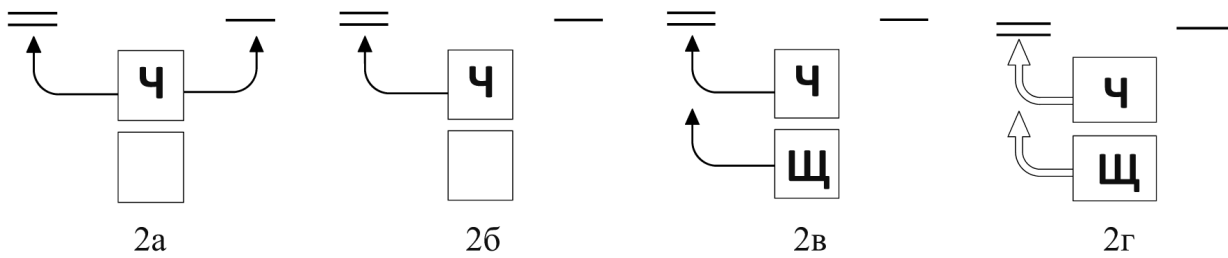


Рис. 2. Трансформация схемы на доске

Д.М.: Спасибо, Дима! А вот сейчас, кто меня слышит, хлопните раз⁵. (*Хлопки.*) В этой группе родилась очень интересная мысль. Я предлагаю Диме сообщить свою мысль не только своей группе и мне. Сообщи ее всем группам, чтобы мы попробовали обсудить. Дима, сохранишь ее? (*Дима кивает.*)

Но сначала надо закончить прерванную работу: вписать в схему букву «Щ». К доске приглашается новая группа. Передавая друг другу мел, указывая, кто за какой отрезок общей работы отвечает, дети *внятером* рисуют одну стрелочку (рис. 2в). Со стороны может показаться, что время урока тратится зря: секундное дело (взять мел и нарисовать стрелочку) занимает почти минуту. Однако для этого учителя равноценны две педагогические задачи — само преобразование схемы, которое сегодня происходит впервые в школьной жизни этого класса, и установки на сотрудничество, которые уже начали складываться. О том, что в классе появилось конструктивное взаимодействие между детьми, которое происходит практически без учительского руководства, говорит следующий эпизод.

Д.М.: На своих листах вы всё сделали. А теперь посмотрите на работу, которую сделала группа у доски. *Знаки согласия и восхищения. Алиса с места показывает «минус».*

Л е н а (*от доски*): Алис, почему нет?

А л и с а: Потому что у вас стрелочки не такие.

Л е н а: А какие?

А л и с а: У них должны быть две полосочки.

Развернутое объяснение не требуется: две полосочки означают мягкость согласного. Дети у доски исправляют свою работу (рис. 2г).

Шаг 3. Гипотеза, проверка которой потребует перестройки исходной модели

Д.М.: А теперь даже если прозвонит звонок, мысль Димы нужно услышать. И мы завтра начнем урок с обсуждения мысли Димы. Итак, мысль Димы!

Д и м а: Мне кажется, что «Щ»..., она слушается только мягких командиров. Допустим, в слове ЩУКА «Ю» командует «Щ». Она же мягкая!

Д.М.: Смотри, Дима, твои одноклассники ставят тебе большие плюсы (*Группа у доски сложила огромный «плюс» из нескольких рук.*) Правильно ли я понимаю, что «Ч» и «Щ» обозначают только мягкие звуки и они должны слушаться только мягких командиров.

Д и м а: Да

Д.М.: Вот с этого предположения мы начнем завтра наш урок.

Г о л о с а: Дима, смотри (*показывают гигантский плюс*). Спасибо, Дима!

Дима высказал логичное, на первый взгляд, предположение о том, что новые, особенные буквы «Ч» и «Щ» будут подчиняться тем же законам, что и другие 14 букв согласных, уже изученные в классе. Путая залог предположения и утверждения, Дима предлагает и метод проверки своей гипотезы: надо обратиться к конкретным словам. Этим класс займется завтра. И завтрашняя работа, благодаря Диминой инициативе, будет построена как проверка гипотезы, предложенной не учителем, а учеником. Учитель услышал высказывание Димы и сделал его значимым для класса, никак *не оценивая* правильность детской мысли. Такая «счастливая случайность» (продуктивная догадка ученика) возможна и достаточно регулярна там, где самостоятельные детские мысли о содержании работы на уроке (безотносительно их правильности) представлены как *ценность*.

Шаг 4. Перевод гипотезы на язык модели

На следующий день урок начинается с того, что дети в полуигровой форме эстафеты восстанавливают на доске схему, описывающую единственно известный им закон русской графики (рис. 1Б). Учитель называет имя ученика, названный ребенок выбегает к доске и вписывает в схему только одну деталь (букву или стрелку). При этом действие каждого следующего игрока должно учитывать предыдущие действия. Весь класс заморожено следит за тем, как один за другим дети выходят к доске и вписывают в схему свой элемент. Каждое движение оценивается всем классом, дети не только ставят «плюсы», но и благодарят игрока: «Молодец, Коля», «Да!»

Д.М.: А теперь мне хотелось бы вернуться к тем мыслям, которые были высказаны вчера. Кто помнит? (*Несколько рук.*) Сначала вспомним, чья была мысль.

Г о л о с а: Димина.

Д и м а *улыбается и кивает*: Да.

Д.М.: Димина.

Л е н а: Вы говорили, что мы ее обсудим!

Д.М.: Мы обязательно сейчас ее обсудим. /.../ Мысль Димы вчерашняя. Давай Дима, говори.

Д и м а: Мне кажется, что «Ч» может слушаться только мягких командиров.

⁵ Ритуал, с помощью которого этот учитель останавливает работу в группах и привлекает внимание всего класса.

Д. М. : Чудесно. Соответственно я ...

Д и м а : Я даже пробовал произнести «Щ» твердо. Получилось (*произносит странный звук*).

Д. М. : Конечно. Вы у себя в группах на листочках (*раздает каждой группе лист со схемой «Работа букв гласных» — рис. 1Б*) обведите те буквы, с которыми «Ч» и «Щ», по мысли Димы, будут работать.

Группы начинают выполнять задание, шум, вопросы к учителю.

Д. М. : В нескольких группах возникли вопросы: а каких командиров надо обводить. Сейчас я приглашу к доске тех, кто понял Димину мысль. Кто готов работать? (*Несколько рук.*) Лена готова...

Лена выходит к доске, обводит колонку в схеме — рис. 3а.

Д. М. : Все увидели?

Жесты согласия и восхищения.

Д. М. : Дима, Лена ТВОЮ мысль передала?

Д и м а : Да.

Д. М. : Спасибо большое. Мысль Димы, высказанная словами, вот она показана в схеме. А я на доске оставлю только мягких командиров. Ведь «Ч» и «Щ» обозначают только мягкие согласные звуки. Значит, они должны работать с мягкими командирами (рис. 3б). Сделайте, пожалуйста, это в группах.

Замысел и инициатива в переводе детской мысли на язык моделей принадлежит учителю. Однако, затеяв веселую подвижную игру вокруг исходной модели, учитель освежил детское чувство «собственности», свободного владения моделью, а значит, и возможности ее исправлять. Некоторые первоклассники продемонстрировали способность понимать оригинальные мысли других детей и выражать их на языке схем.

Шаг 5. Перестройка исходной модели

при проверке гипотезы: фиксация противоречия

Д. М. : Мы записали Димину предположение. Я сейчас вам дам слова, которые я проверила по трем словарям... (*Показывает три словаря один другого толще.*)

Каждая группа получает лист со словами ЧЕСТНО, ЩЕПКА, ЧИСЛА, ЩИТ, ЧУДО, ЩУКА, ЧАС, РОЩА. Читают по очереди, по совету учителя в схе-

ме отмечают те гласные, с которыми работают буквы «Ч» и «Щ».

Т о н я и Д и м а (*учителю*): Неправильно! Ошибка! После «Ч» и «Щ» стоят твердые командиры!

Д. М. : Отлично. Я сейчас покажу вам в словаре... Вот — ЩУКА...

Г о л о с а : Значит, не слушается?!

Д и м а : Нет, она не слушается.

Р о м а : Тогда там должно было бы быть с Ю.

Учитель показывает Роме слово ЩУКА в словаре.

Д. М. : Что не так?

Д а н я : Там «У» стоит. Но она не мягкий командир.

Д. М. : Что не так? Что вас настораживает? Пожалуйста, обсудите, удалось доказать то, что сказал Дима? (*Долгая пауза.*) А теперь, в каждой группе либо появились минусы, либо появились вопросы, а в каких-то группах появились мнения!

М а р к : «У» — твердый командир, поэтому минус.

В е р а : ЩУКА. ЩУ — не получается «У», потому что это твердый гласный. И мы поставили знаки «плюс» или «вопрос». Если «У» твердый гласный, то тогда «минус». А они не слушаются, как Дима сказал, твердых.

В классе слышно много взволнованных голосов, говорящих одновременно, почти никто никого не слушает, но все что-то сообщают про ЧА-ЩА и ЧУ-ЩУ. Реплики детей, различимые в общем шуме, свидетельствуют о том, что (1) дети эмоционально захвачены открывшимся противоречием между известным законом письма и новыми фактами, (2) пытаются охарактеризовать новое явление в целом и при этом не находят слов, переходят на внутреннюю речь вслух (образец — реплика Веры).

Шаг 6. Перестройка исходной модели

при проверке гипотезы

Учитель пробует навести порядок в детских мыслях, словах и схемах, и переходит к пошаговому руководству вниманием первоклассников и аккуратному исправлению неточной терминологии и недосказанных идей.

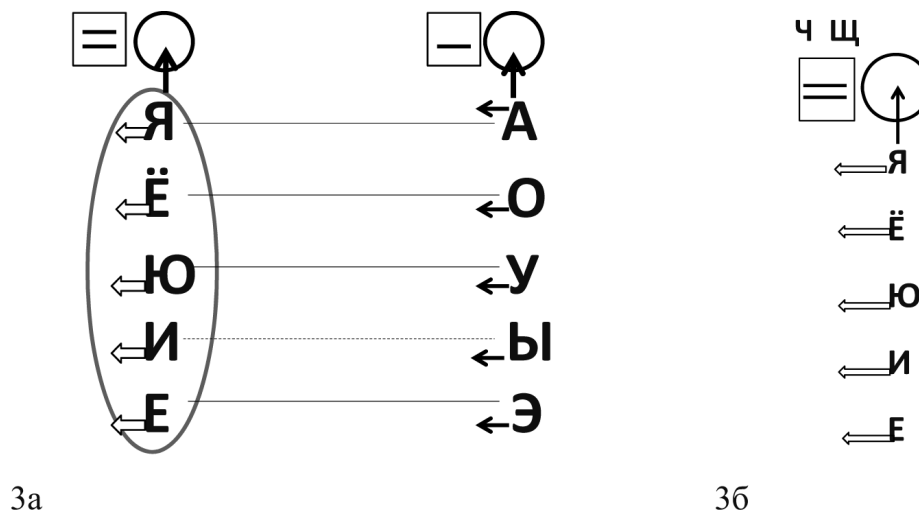


Рис. 3. Перевод гипотезы, высказанной словами, на язык схемы

Д. М.: Какое первое слово?
А л е ш а : ЧЕСТНО.
Д. М.: Хорошо. Слово ЧЕСТНО. С какой буквой работает буква «Ч»?
О л я : С мягкой.
Д. М.: С мягким командиром.
Н а д я : С «Е»!
Д. М.: С буквой «Е». /.../ То есть все получилось. Вот это подтвердили (*в схеме 3б ставит «плюс» около буквы Е*). Дальше.
Дети в группах делают то же самое у себя в схемах.
Д. М.: /.../ А дальше, какие слова были?
В а н я : ЧУДО.
В группах поднимается чудовищный шум. Учителю приходится восстанавливать порядок.
Д. М.: Кто меня слышит, поднимите правую руку. Кто меня слышит, поднимите левую руку вверх. Кто меня слышит, хлопните три раза. (*Руки поднимаются, звучат три хлопка.*) Слово ЧУДО. И еще рядом есть слово ЩУКА. Что в этих словах?
Е г о р : Там твердый командир!
Г о л о с а : ЧУ!!!
Д. М.: По предположению Димы, которое мы проверяем...
Е г о р : Должно быть «Ю».
Д. М.: Спасибо большое. По предположению должна быть буква «Ю». Но в данном слове с буквой «Ч» работает не буква «Ю», а буква...
Х о р : УУУ! *Учитель исправляет схему на доске (рис. 3б): зачеркивает букву «Ю», пишет рядом букву «У».*
Д. М.: Но при этом буква «Ч» произносится
Г о л о с а : Мягко.
С а ш а : Она сама командир.
В о в а : «У» говорит — читается твердо.
Д. М.: Тут должна быть «Ю», чтобы командовать — читается мягко. Но!.. Выходит на работу буква «У»...

Последние штрихи к перестроенной схеме вносятся при обсуждении слов ЧАС и РОЩА. Теперь схема на доске и на столах у детей выглядит так (рис. 4а).

Там, где требуется впервые создать удобный дизайн модели, в котором новое знание будет просвечивать сквозь знание предыдущее, учитель счел уместным пошаговое руководство работой класса. Это единственный этап работы, который почти лишен признаков детской инициативности.

Шаг 7. Метафорические объяснения нового явления

Кроме запланированной учителем перестройки исходной модели произошло еще одно событие: появились метафоры, объясняющие нарушение той закономерности в отношениях звуков и букв, которые были зафиксированы в исходной модели (рис. 1Б). Метафора позволяет понять целое раньше частей. Дети и взрослые равны в способности и склонности творить метафоры и образы, отражающие характеры букв и их отношения [14].

Д. М.: Сейчас Алена скажет.
А л е н а : Вот «У» или «А» говорит «Ч» читается твердо. А вот «Ч» им отвечает, что она не умеет. /.../ Или не хочет.
Д. М.: Или не хочет. Эти буквы, «Ч» и «Щ» — капризные.../.../
А л е н а : Они хотят, чтобы рядом стояли командиры твердые, а сами их не слушаются.
Д. М.: Они капризные, потому что они не работают с буквами «Я» и «Ю». Они отказались с ними работать.
Д и м а : Почему?!
Д. М.: Существуют слова ЧУДО, слово чудесное. Как же его записать, если буква «Ч» отказалась работать с буквой «Ю»?! /.../

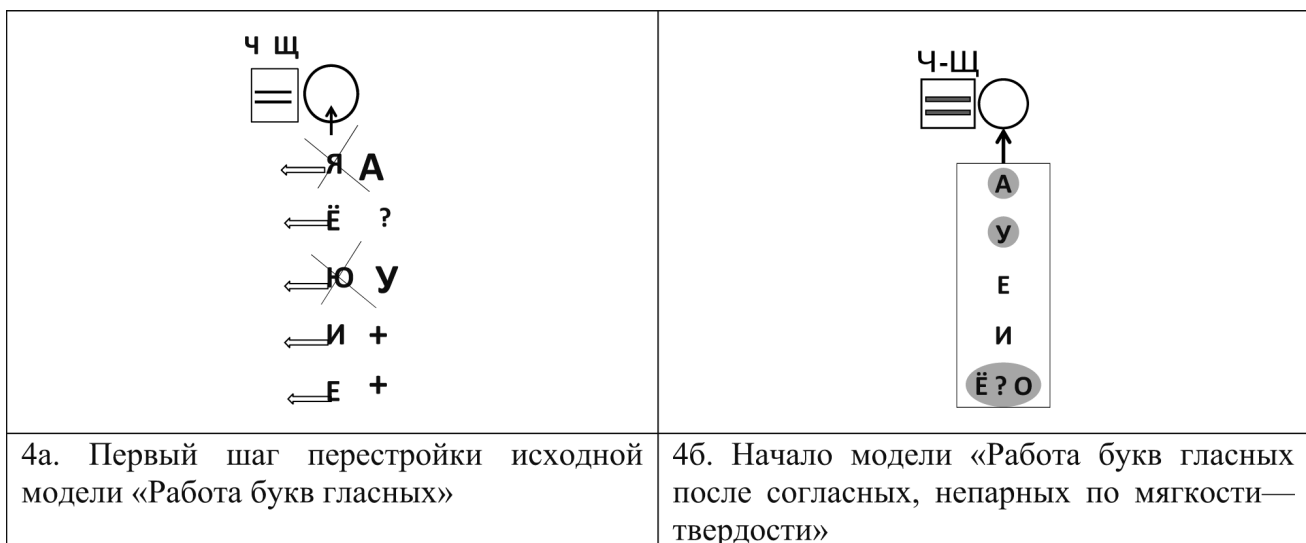


Рис. 4. Шаги перестройки модели «Работа букв гласных»⁶

⁶ Знак вопроса около буквы «Ё» означает: мы еще не знаем, работает ли эта буква с «Ч» и «Щ». Мы еще не встречали нужных слов. (Вскоре дети встретят новое противоречие: ЩЁТКИ — ТРЕЩОТКИ.)

Егор: Пришлось написать букву «У», но она слышится как «Ю».

Д.М.: Спасибо. Пришлось выйти на работу ее соседке, букве... (*Учитель показывает на схему — рис. 1Б*).

Хор: УУУУ.

Голос: Твердому?!

Д.М.: Твердому командиру. /.../ Несмотря на то, что «У» командует: «Читайся твердо», она выходит работать в слово ЩУКА. Она при этом командует? /.../

Дима: Она сама командует, буква «Щ».

Д.М.: У меня вопрос про букву «У». Как вы думаете, что делает буква «У»?

Дима: Она командует за ее напарницу.

Д.М.: Она выходит работать за ее напарницу.

Дима: Как бы оказывает ей помощь.

Д.М.: Оказывает ей помощь. /.../ И за эту работу буква получает медаль.

Дима: Это как на олимпиаде?

Алена: И «А» тоже получает медаль?

Д.М.: Молодец, Алена, и «А» тоже получает медаль. (*Учитель на доске выделяет в словах ЩУКА и ЧАС буквы «А» и «У» желтым кружком — рис. 5.*)

Дима: Но они очень устают.

Д.М.: Правильно, они очень устают так командовать, они очень устают от этой работы, потому что им приходится работать с буквами.... Какими?

Лена: Которые не хотят слушаться.

Шаг 8. Проверка понимания метафоры «буква — медалистка»

«Буква-медалистка» — метафора будущего понятия «орфограмма сильных позиций фонем». Эту метафору и соответствующий значок ввел учитель. Теперь задача учителя — определить, как дети поняли то знание, которое открылось сквозь метафору. Для этого учитель пользуется так называемой «ловушкой». Это педагогическое средство помогает узнать, видят ли дети границу применения нового знания.

Первая ловушка построена на противопоставлении слова, где буква «А» выполняет свою привычную работу (МАК) и слова, где буква «А» работает в непривычных условиях (ЧАС).

Д.М.: Сейчас я скажу мысль, а вы скажете, права ли я. Смотрите, раз эти буквы (указывает на запись на доске — рис. 5) выходят не на свою работу и получают медаль, то здесь они должны тоже получить медаль. (*Учитель пишет на доске слово МАК и обводит кружком букву «А» (рис. 6).*)

Несколько детей поднимают знак вопроса.

Д.М.: Да, Егор, какой вопрос?

ЩУКА

ЧАС

Рис. 5. Запись на доске

Егор: А мы награждаем только те гласные, которые выходят НЕ на свою работу или все?

Д.М.: Хорошо. А вот если буква или человек выполняют *свою* работу. Получает человек медаль, за то, что он выполняет *свою* работу?

Хор: Нет.

Д.М.: За что он получает медаль?

Алена: За то, что он сильно трудится.

Д.М.: За то, что он выполняет ВЫШЕ своей работы. Вот за это он получает медаль. А теперь скажите, здесь, в слове МАК?

Хор: Нет.

Д.М.: Лена, почему нет?

Лена: Потому что «М» слушается «А». А с «Ч» или «Щ» она выполнят очень трудную работу. А «М» очень простая буква, она слушается «А». А «Ч» и «Щ» отличаются от других букв. «А» и «У» получает медаль, потому что они очень трудятся и стараются, чтобы они их слушались.

Много плюсов.

Дима: Лена, это как раз моя мысль! Я тоже об этом думал.

Д.М.: Ты посмотри, и Миша об этом думал, и Лада об этом думала...

Дима (*обращается к Лене*): Потому что «М» может же легко слушаться и «А», и «Я».

Вова: Я тоже примерно об этом подумал.

Д.М.: Хорошо. Нужна здесь медаль?

Хор: Нет.

Д.М.: Нет, конечно. В слове МАК «А» работает на своей привычной работе, и все здесь четко. «А» командует: читайся твердо. И обозначает гласный звук [А].

Оля: Она устает, но не так сильно.

Д.М.: Но вот здесь (*указывает на слово ЧАЙ*) работа совсем — совсем непривычная. Возьмите, пожалуйста, желтый карандаш и наградите буквы, которые достойны награды. (*Дети работают в группах на общих листах, где написаны слова.*)

Вторая ловушка требует понять, что не все буквы гласных после «Ч» и «Щ» надо «наградить медалью». В сущности, здесь происходит перепонимание только что построенной модели (рис. 4а).

Д.М.: У меня к вам вопрос. Чтобы было справедливо, нужно ли наградить в слове ЩИТ букву «И»? Ведь она же работает с капризными буквами?

Голоса: Дааа! Ой, нет!

Д.М.: А теперь в группе договоритесь, нужно или нет! /.../ Договоритесь в группе, как вы будете высказывать свое мнение. Кто-то один говорит? По очереди говорите? Может, хором? (*Дети использовали все эти способы презентации работы группы.*)

ЧАС

МАК

Рис. 6. «Ловушка»

После шумного обсуждения учитель просит тишины, дети выслушивают мнения каждой группы и знаками выражают согласие или несогласие. Учитель практически не вмешивается, лишь назначает порядок выступлений и задает вопросы типа «Есть ли вопросы к этой группе?», «Ты так думаешь или вся группа так решила?». Все группы пришли к выводу, что букву «И» в слове ЩИТ награждать не надо. Но все выразили и обосновали эту мысль *по-своему*. Вот какие мнения были высказаны:

1. (*Показывает по схеме — рис. 4а.*) «Ч» и «Щ» — они слушаются «И». Значит «И» может ими спокойно командовать. В отличие от «А» и «У». Поэтому в слове ЩИТ «И» не надо награждать медалью!

2. Не надо награждать, потому что это мягкий согласный. А твердым (*имеется в виду — твердым командирам*) очень сложно, как «А» и «У».

3. В слове ЩИТ, моей группе кажется, что «И» просто обозначает звук, а «Щ» — она просто мягкая, и командир ей не поможет, она сама может командовать мягко.

4. «И» только звук обозначает, потому что «Щ», она и так только мягко читается. «И» даже не работает, а даже отдыхает, потому что она только звук обозначает, а не командует.

5. Ей не нужно медаль ставить, потому что, да, она мягкий командир, но ведь эти «Ч» и «Щ» и так хотят читаться мягко. Поэтому трудную работу никто не выполняет.

Убедившись в том, что часть детей уже заглянули в завтрашний день⁷, т. е. полноценно, системно поняли то новое, что открылось им сегодня, учитель переключает эмоциональный регистр работы. После бурного мозгового штурма дети погружаются в тихую индивидуальную работу: читают текст и раздают медали тем буквам, которые этого заслуживают. Завтра этому классу предстоит завершить перестройку модели (перейти от схемы на рис. 4а к схеме на рис. 4б). Конец сегодняшней работы показал:

- что никто из детей «не попался в ловушки», т. е. они действуют с новым понятием (орфограмма) в границах его применения;

- свои действия объясняют разнообразно и содержательно;

- высказывают догадки, которые помогут им завтра завершить перестройку модели и описать новый класс лингвистических задач во всей полноте.

3. Субъектность действия моделирования: обсуждение case study

Любой учитель приходит на урок со своим замыслом, задачей и планом ее решения. Замысел учителя, работающего по принципам деятельностной педагогики, всегда многослоен. Разумеется, заранее определяется предметная цель и вместе с тем обдумываются

условия для того, чтобы ученики стали реальными инициаторами движения к новому знанию, к новому понятию. Чего учитель в принципе не может продумать заранее, это вопрос о том, в каких точках урока и в какой форме проявится детская инициатива, направленная на конструирование нового знания. Поэтому урок в деятельностной педагогике практически никогда не может быть линейным: ровный, устойчивый, а главное попутный ветер детских инициатив, никуда не отклоняющихся от учительских планов — это событие исключительное, во всяком случае, в первом классе. Движение галсами — более точный образ работы учителя, стремящегося достичь предметной цели урока, воспитывая при этом детскую самостоятельность, способность и склонность маленького, еще неумелого ученика действовать с понятиями по своей инициативе и по собственному замыслу [3; 6; 14].

Фрагменты уроков, представленных выше, выстроены более линейно, чем это было в живом теле детско-взрослого взаимодействия. Мы спрямили лавировку учительских ответов на детские инициативы для того, чтобы «в чистом виде» выделить линию преобразования модели — опоры понятийного мышления. Из-за этого в нашем рассказе об уроке пропущены некоторые чрезвычайно многообещающие движения детской мысли, к которым учитель сможет вернуться на ближайших уроках.

Мы вглядывались в этот, казалось бы, экзотический урок, потому что в нем отчетливо проступают общие черты любого (всегда неповторимого) урока, в котором учебная субъектность детей несомненна, а ведущая роль взрослого не бросается в глаза. Дело в том, что предметную задачу урока учитель препарирует до встречи с детьми: заранее подбирает материал, работая с которым дети имеют шанс наткнуться на задачи нового класса, и заблаговременно намечает модельные средства решения нового класса задач. В живом взаимодействии учитель предлагает детям предметную задачу, а сам решает совсем другую задачу: организует учебное сообщество [15] таким образом, чтобы каждая искорка конструктивной детской мысли стала заметной другим детям и воспламенила ответные мысли. Неслучайно, детские инициативы направлены целиком на содержание урока и представлены в двух модальностях: *в мышлении* о связи понятий уже усвоенных и новых, конструируемых здесь и сейчас, и *в понимании* мыслей одноклассников об этих связях. Выражая услышанное *своими* словами, в своих образах, дети показывают учителю подлинность понимания. В то же время усилия педагога почти всецело направлены на сплетение пока разрозненных нитей детских инициатив в ткань *общего*⁸ способа действия с новым понятием.

Классическая Эльконинская формула развивающего обучения может быть конкретизирована. Содержание учебной деятельности становится

⁷ Особенно отчетливо это сформулировано в репликах 4–5.

⁸ Общего для класса задач и для учебного сообщества.

ключом к развитию ребенка как субъекта учебной деятельности там, где учитель заботится об «упаковке» этого содержания в адекватную **форму учебного взаимодействия** [5]. Значимость формы в педагогике не менее ощутима, чем в поэзии; индивидуальность педагогической формы в удачном уроке переживается так же остро, как неповторимость авторского голоса в стихотворении. Именно форма учебного взаимодействия находится в центре забот учителя о субъектном участии детей в учебной деятельности. Подчеркнем, что мы говорим не о тренингах коммуникации и кооперации, отделенных от содержания обучения, а именно о формах сотрудничества, в которых понятийное со-

держание обучения только и может стать средством детского мышления и действия.

Открытым остается вопрос об соотношении *интер-* и *интра*психической формы учебной деятельности. Мы полагаем, что интерпсихическое начало действия моделирования является не только обязательным условием интериоризации этого действия, казалось бы, бесполезным после того, как ученик обретает самостоятельность в моделировании. Жизнь и пожизненное развитие учебных общностей обеспечивает эмоциональное благополучие учащихся [19] и делает возможным переход от учебного моделирования к исследовательскому [10], от умения учиться к непрерывному самообразованию [18].

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Trial-productive Action of Younger Adolescents (on the Material of Coordination of Educational Subjects of Biology and Literature)

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The work is aimed at identifying the norm of development of test-and-productive action in younger adolescents. The study presents creative and test works analysis of 114 6th-year students taking the course “New Biology” in the frame of the D.B. Elkonin–V.V. Davydov system. The creative task they perform requires study subjects coordination; i.e. transformation of the natural science physiological processes eventivity into the eventivity of a verbal artistic work, framed by the laws of cultural forms, specific for literature. This type of task may be considered as a provocation of a learning trial, and its successful fulfilment as a trial-and-productive author action. We highlighted and described typical variants of performing this work, demonstrating the diversity of ways in which the scientific concept of breathing is integrated into the learning process. As the age development norm, the highest possible achievement, is a successfully realized “double” trial, when artistic success is combined with adequate use of biological concepts. A well-developed and sufficiently disciplined imagination allows a student to accept/set proper task and avoid falling into a semantic hole of underconstructed scientific concept, and to build an adequate artistic image that helps to hold onto shaky ground of conceptual supports.

Keywords: learning trial, productive action, subjects coordination, conceptual development (conceptual changes).

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Пробно-продуктивное действие младших подростков (на материале координации учебных предметов биологии и литературы)

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Работа направлена на выявление нормы развития пробно-продуктивного действия у младших подростков. Представлен анализ творческих и проверочных работ 114 учеников 6-х классов, изучающих курс «Новая биология» в системе Д.Б. Эльконина—В.В. Давыдова. Выполняемое ими творческое задание требует координации учебных предметов, т. е. преобразования естественно-научной событийности физиологических процессов в событийность словесного художественного произведения, подчиненную законам культурных форм, характерным для литературы как вида искусства. Показано, что такое задание может рассматриваться как провокация учебной пробы, а успешное его выполнение — как пробно-продуктивное авторское действие. Выделены и описаны типичные варианты выполнения этой работы, демонстрирующие разнообразие путей становления научного понятия дыхания в процессе обучения. Нормой возрастного развития — т. е. высшими возможными достижениями — в этой сфере можно считать успешно реализованную «двойную» пробу, в которой художественная удача сочетается с адекватностью использования биологических понятий. Развитое и в достаточной мере дисциплинированное воображение позволяет ученику принять/поставить собственную задачу и избежать попадания в смысловую дыру недостроенного научного понятия, выстроить адекватный художественный образ, помогающий ему удержать еще шаткие понятийные опоры.

Ключевые слова: учебная проба, продуктивное действие, координация учебных предметов, развитие понятий (концептуальные изменения).

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Introduction

When studying the issue of action formation in ontogenetic human development, B.D. Elkonin finds the idea that the cycle of productive action is an act of development [12]. The internal coherence of the cycle is the connection of its semantic and operational-technical aspects, about which D.B. Elkonin wrote [15]. Productive action in the artistic sphere is possible as early as in the primary school age in the form of creating author's works (the course of G.N. Kudina and Z.N. Novlyanskaya [4; 11]). The material on which the concepts of genre, plot, composition, and means of artistic expression are tested are the child's life experiences. Discussion of children's essays and their inclusion in the literary magazine of the class is publication, the second stage of productive ac-

tion. Similar activities are presented in the course of fine arts by Y.A. Poluyanov [5].

It is typical for the subjects of art and aesthetic cycle to have tasks in which author's action is not only possible, but essentially necessary, but such learning trials in the subjects of natural science cycle are still rather exotic, although they are important for mastering scientific concepts. The search for tasks that enable the implementation of learning trials becomes a separate task for the developers of training courses [9]. According to our hypothesis, an important place among them should be occupied by tasks involving the coordination of academic subjects [13]. A concept formed within one subject can become a material for transformation and comprehension in actions that follow the logic of another subject. Publication occurs when independent student work is

presented, discussed and used in the cognitive movement of the class.

In this paper, we will attempt to consider the performance of one of such tasks (“New Biology”, 6th form) by young adolescents as a trial-and-productive action, and tentatively outline the norm of age-specific development, understood, according to D.B. Elkonin, as the highest possible achievements in this area [14]. It is probable that the analysis of children’s works carried out at the stage of concept formation [8; 17] will also help in studying the transformation of everyday concepts into scientific ones [3; 18; 19].

One of the exercises of the “Animals” module is as follows: “Compose and write down your story of how organic substances and oxygen appeared and met in the internal environment of an amoeba (genre of your choice: lyric, epic, fairy tale, fable, folktale, journalistic report...)” [6]. By the time the task was completed, the pupils had passed half a year’s way of developing the scientific concept of respiration as a process of oxidation of organic substances in the internal environment of a living cell with the formation of water and carbon dioxide and the release of energy for other life processes [8; 17].

Fulfilling the task means transforming the natural scientific eventuality of physiological processes into a completely different eventuality. While the eventuality of biology is indifferent to any emotionality, and to any aesthetic and moral evaluability, the eventuality of a verbal artistic work is subordinated to the tasks of aesthetic and ethical influence on people and to the laws of cultural forms typical of literature as an art form. Transformation of this kind requires, firstly, allocation of certain **protagonists** (characters), secondly, creation of a field of their action, in which they would manifest themselves: they would pass through the ordeals of their inner qualities and make a moral choice. This field of action should be constructed as the **plot** of the work, the main reference points of which are the starting point, climax and denouement. In the given variant of the task, organic substances and oxygen are clearly claimed to be the characters. The events in which they will have to act are: 1) the penetration of the characters through the obstacles from the external to the internal environment, 2) their encounter in the internal environment, and 3) its consequences. These events can serve as milestones in the development of the plot, its starting point, climax, and denouement, provided that the pupil fulfilling the task has a practical understanding of the concepts of “character” and “plot”. It should be emphasized that the pupil practically understands them, not only knows their literary definition. Thus, both the chosen literary form and the biological concept can be considered as the subject of the trial.

For a biology teacher, this task has the meaning of involving pupils oriented to humanities disciplines in the study of biology, as well as the possibility of assessing the level of mastery of concepts and the possibility of introducing productive action into teaching. For a researcher, children’s essays can serve as a material for studying the phenomenon of learning trial and its varieties, as well as of the process of formation of productive action in school teaching and the process of transformation of everyday concepts into scientific ones.

Methods

The research methods are the forming experiment described earlier [8; 17], and comparative analysis of creative and test works of pupils of sixth forms of a Moscow school where “New Biology” is studied (114 works), supplemented by questionnaire survey of pupils to clarify the sphere of children’s interests. The study and comparison of a large number of individual variants, the selection of a group of works demonstrating the highest achievements in comparison with the lowest level variants [14] allows us to describe the ways of formation of the scientific biological concept of respiration, to consider children’s essays as an age-specific norm of trial-and-productive author’s action, and to characterise the task aimed at coordination of educational subjects as one of the possible variants of micro design of learning [19].

Results

This characterisation of the task presented above allows us to highlight a number of indicators of its successful completion. Firstly, it is the choice of the most suitable literary form. These are two epic genres – fairy tale and fantasy story. They allow creating any picture of life, where not only living beings, but also inanimate objects and phenomena, including substances and even their particles, can act.

A common literary device for turning the inanimate into the animate, “substance into being”, is the personification known to all children since primary school. Pupils of the 6th form should master this technique as a resource for arbitrary action.

Finally, the pupils have repeatedly encountered the plot basis of epic works in their reading experience and in their school learning¹, and are likely to have an idea of plot as a chain of cause-and-effect relationships, which, in their development, pass through the moments of the starting point, climax, and denouement.

Thus, the criteria for successful completion of the literary component can be considered as follows: 1) the

¹ The works analysed were created by pupils of sixth forms of four newly formed classes. Approximately one third of the pupils of these classes studied in primary school according to the system of D.B. Elkonin and V.V. Davydov, so it is likely that they have first-hand knowledge of the concepts of plot, literary genre, etc. We cannot state this with certainty about the other pupils.

successful choice of genre; 2) the use of personification in the creation of characters without distorting the biological essence; 3) the construction of the plot of a fairy tale or story that is adequate to the natural-scientific sequence of events.

The criteria for success of the biological component are the presence of the key conceptual characteristics: distinction of vegetative functions; distinction of external and internal environment, recognising the mechanisms of biological processes; giving meaning to respiration as a process that provides energy to all the other processes. Since scientific concepts are at the stage of formation, all these points may not be reflected or not clearly terminologically formalised even in a successful work. Nevertheless, the biological meaning of the “encounter” of the oxygen with the organic molecules, as a minimal necessary indicator of understanding, absolutely must be expressed.

Since the task requires coordination of the content of two academic subjects, it is reasonable to identify four groups of essays in which: a) both biological and literary tasks are solved; b) both tasks are not solved (or even not accepted); c) only/mostly biological task is solved; d) only/mostly literary task is solved. Below these groups are characterised.

A. Works in which both tasks were solved (38 pupils participated). This group includes works in which, on the one hand, the peculiarities of the respiration process are described at the highest possible level at this stage of learning and, on the other hand, the artistic task set by the pupil is solved. Naturally, the degree of artistry or clarity of the biological description varies. Here is an example of such work²:

“One day, an amoeba wanted to eat and captured an algae with its pseudopods into its digestive vacuole.

There it secreted enzymes and they broke the algae down into tiny organic substances. They were sucked by diffusion into the internal environment of the amoeba, and it opened its pseudopods and this vacuole disappeared. Long wandered these organic substances in the internal environment of the amoeba, and then they came across a company of oxygen molecules. By the way, these substances all looked the same, as well as oxygen molecules.

– Hi, we’re organics.

And what are you? – the first substances asked,

– Hi, we’re oxygen molecules. We got here by diffusion. And you are? – replied the molecules,

– And so did we, what a coincidence!

This group spent the whole day together. They became very good friends, they had fun together, it was really good and interesting.

Why was? Because not everything in life ends well.

When their merry day came to an end, they decided to hug each other goodbye.

But as soon as they touched, they immediately began to dissolve into each other, and rays – energy of heat and movement – appeared from them and small molecules – carbon dioxide and water – sprinkled out. So thanks to their embrace, the process of respiration took place”.

The survey allowed us to establish that the pupils who created works of group A differ from the rest in the fact that many of them name literature and/or biology as their favourite subject, i.e. they are more motivated to complete the task, and also almost half of the children in this group are or were involved in art clubs and studios (theater, music, drawing, journalism...), see Fig. 1.

B. Works in which both tasks were not solved (or were not even accepted) (27 pupils participated).

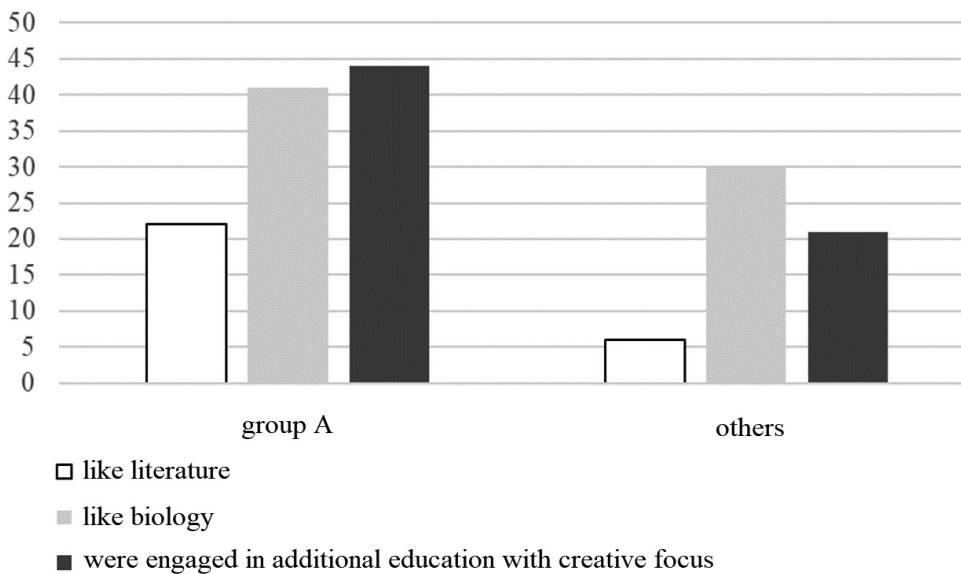


Fig. 1. Peculiarities of the pupils who created works of group A (both problems were solved in the works) in comparison with the others.

² The texts of the pupils' works are given without editing.

This is a heterogeneous group, which includes works with significant biological errors, extremely formal works, as well as works in which the stages of the digestion of an amoeba (what happens “before” oxygen meets organic substances) can be described in detail, but the moment of the “encounter” itself is missing. Here is a fragment of this kind of story (the middle is omitted): “I am a small single-celled creature. ... I was split into tiny particles, and they were sucked through a selectively permeable membrane into the internal environment of an amoeba. The parts that the amoeba did not digest were ejected by the contractile vacuole (mistake – authors’ note). These residues never travelled to the internal environment of the amoeba” (end of the story).

In this group there are formal works such as: “Once upon a time there were two friends oxygen and organic substances. Each of them wanted to go to Amoeba Land. But they had to get there in different ways. Oxygen decided to go there by water and organic substances by suction. That is how they met again”.

Lack of understanding is often replaced by external plot linking (the character went, came, fought).

In order to separate the “literary component”, which adds difficulties, from a basic “biological” task and to understand whether pupils can reproduce the definition of the respiration process formulated by the class at the current stage of concept formation, the creative task was supplemented with a simple test task (“Write down what respiration is”). The testing made it possible to detect pupils who a) do not understand the concept of respiration (there are only scattered ideas), b) do not distinguish between respiration and gas exchange/respiration and digestion, c) different characteristics of the process appear as successive, i.e. they do not perceive the release of energy as the biological meaning of respiration. None of the pupils in this group could formulate a definition of respiration, whereas in the other groups only a small number of pupils made various mistakes, among which there were no gross ones (16%, 19% and 25% of pupils, respectively).

C. Works in which only/primarily biological problem is solved (37 pupils participated). This group included works that are, essentially, an extended definition of respiration, sometimes up to 2–3 pages. There is a “light touch” of artistry in them, sometimes in the form of a traditional fairy-tale beginning “once upon a time” or a dialogue form, but it is obvious that the literary task is not set by the pupil: “Once upon a time there were PFC in a small creature. They lived there well and did not feel sad. But one day their little creature was caught by big “tentacles”-legs and their home ended up in a digestive vacuole...”. Such works can be considered successful from the point of view of the development of scientific concepts, despite the “underdevelopment” of the artistic component. The selection of terms, reliance on schemes,

linking them, turning incomplete thoughts into a developed, biologically intelligible written text play a crucial role in the development of subject thinking [7; 15]. Basically, pupils have created an original author’s **popular science** text.

D. Works in which only/primarily a literary task is solved (12 pupils participated).

Here are two fragments of works of this group³: “Every year a lucky family and an orphan, chosen by lot, are sacrificed to the most insidious and terrifying creature “Amoeba”. One day, the lot was drawn for the PFC family (“proteins, fats, carbohydrates” is the abbreviation adopted in class – authors’ note) and the orphan O2 (oxygen). Orphan O2 was immediately inside this insidious and frightening creature, and the PFC family had a chance to escape, but it only seemed so at first glance, because they fell into a trap from which only a few manage to escape...”

“... A collection of paintings, an artist’s flat and his materials and belongings are at stake. Anton Pavlovich (an organic substance) and Nikolai Alexandrovich (oxygen) raise the stakes. In the end, Pyotr Andreyevich (a microbe of some kind) won (he offered the largest amount), and Anton and Nikolai accepted defeat and began to co-operate, combining their friendship with it”.

Characterising this rather small group of works, it is interesting to note that the pupils when answering the survey questions did not list either biology or literature among their favourite subjects. With the exception of one child, they were not engaged in art-oriented clubs and studios. At the same time, the pupils who solved only the art task completed the test work almost as successfully as pupils from groups A and C, i.e. they were able to verbally reproduce the definition of the respiration process. Except for one, all the children’s works were original, there were no signs of copying.

The most interesting from the point of view of studying the formation of the concept are the fragments of works which describe two processes, the process of nutrition and the process of respiration (the “encounter” of oxygen and organic substances). The point is that the process of nutrition is easily visualised, it is an observable process. For example, pupils saw the capture of food by an amoeba, movement of the digestive vacuole, ejection of undigested residues in video fragments, they modelled the process with the help of a plastic bag, depicted it in the form of schematic drawings. It is quite easy to imagine the release of enzymes into the digestive vacuole, the splitting of large organic molecules into small ones and the subsequent absorption, because the action of chopping is similar to human actions, everyone has had a chance to split something into parts, to crush, to crumble something. The eventuality of this process can be easily converted into the narrative eventuality of a fiction text, because it can be easily interpreted as a process of cross-

³ The texts of the pupils’ works are given without corrections.

ing a border, which the character can cross voluntarily or forcibly. And the forced character of the process in a fiction story is more adequate to biological reality.

Contrary to these stages, the “encounter” of small molecules of organic substances with an oxygen molecule is something incomprehensible, which pupils can evaluate only from the initial substances and reaction products, reconstructing the biological meaning of this process (the release of mysterious energy) from the analogy with the combustion process. Therefore, in the majority of works, the moment of the “encounter” is reduced: the stages of nutrition are described in a thorough and colourful way, while the most important thing in the whole story, the “encounter”, is given extremely briefly. It is obviously an uncomfortable place and one for which there is no clear visualisation of what is happening. However, it is interesting that in none of the children’s works is there a question or other record of the fact that cellular respiration is a process generally unimaginable and therefore not well understood. The results of children’s experiments on the study of respiration are recorded in the form of a diagram with arrows and chemical formulae. This diagram serves as a basis for thinking.

In a work of fiction, the imagination must make what is unimaginable and incomprehensible comprehensible and imaginable. In the works of group A and in some of the works of groups C and D, one can find various attempts to fill the conceptual gap using some kind of life analogy. Here are examples (key points are highlighted – author):

“And then a **marvellous miracle** happened, a **marvellous wonder**: proteins, fats and carbohydrates **united** with oxygen and water, carbon dioxide and energy were produced”.

“– Oh, **disaster!** We’ve just learnt that inside the amoeba, there was oxygen waiting for the particles of organic substances. This is the end! The end of particle life!!! But! The beginning of the process of respiration...”

“They started **spinning fast** together, and when they stopped, there was no more O₂ or PFC, but there was E of work, E of heat, and also H₂O and carbon dioxide”.

“This is a live report from Amoeba Stadium where the top two teams Oxygen and Organics met. The first half is underway. An Oxygen player gets round the opponent... **Goal! The ball went into the net so fast it blew a lot of energy out of the net!** Let’s stop for a commercial break”.

“And the only thing we encountered inside was oxygen, and it turned out it also went straight through the monster. That was all he could tell us. Next he **mutated** into something called carbon dioxide...”

In the above examples, it is possible to find the presentation of “grasped” biological content, images adequate to it, and ideas from the pupil’s life experience, coexisting.

Sometimes a child, creating images of characters with the help of personification, gets carried away by consistent anthropomorphism. He likens the substance-character to a human being and forgets about the limits of this likening. Then the imagination takes the child away from the biological content, significantly distorting it. Not only does the image lose its correspondence to the original concept, but also, paradoxically, its artistic persuasiveness, the “truth” of the image itself, gets lost. For example, an image of a happy family is not quite adequate to this content, parents and children in a child’s work live together, while oxygen and organic substances are consumed in the process of respiration and cease to exist in their original form: “...Suddenly music started playing, and Oxygen invited me to dance. We danced, I cried with happiness and breathed quickly. But even though I had lost my energy, I was still insanely happy! The end”, smiled PFC.

– Mum! Was it really like that? – asked the little H₂O girl excitedly.

– If mum says so, it was, – Oxygen smiled and patted her daughters on the heads...”

In this work, the plot clearly distorts the natural-scientific eventuality. Instead of a radical transformation of the characters, their disappearance as a result of interaction, the story creates a picture of their continued existence in their former state. In another work, the resolution of the love story suggests that the author, on the contrary, keeps the conceptual structure:

“– And now what is going to happen to us? – asked the Organic Molecule.

– We will be recycled in the process of respiration; we will combine and become new substances!

The Organic Molecule was no longer listening. It understood one thing: now they will be together – and it smiled happily...”

Some authors not only adequately transform the event series, but also treat the forced disappearance of their characters as a tragic event. For example:

“...it was too late. PFC was already beyond saving. O₂ was already on the death path... After a while, E⁴ of motion, E of heat, CO₂ and H₂O came into the light. No one remembered O₂ and PFC, because they had been “recycled”. Since then, this cycle has been perpetual, with milliards of molecules dying every second, and the cycle cannot be prevented”.

Discussion

The path of formation of scientific concepts is thorny: researchers often describe it as a path of overcoming persistent misconceptions, significant resistance of children’s concepts when trying to “replace” them with scientific, adult concepts [3; 8; 17; 18; 19].

⁴ Letter E is the symbol of energy used by the class.

Just as stalactites and stalagmites in a cave represent the frozen history of fluid solutions, the diversity of children's creative solutions allows us to see the history of the formation of concepts as flexible and mobile pillars of thinking and action. The selected groups of works can be seen as a certain cross-section of progress in understanding, moreover, in two intersecting planes: the plane of development of scientific biological concepts about the processes of respiration, nutrition, gas exchange, excretion, on the one hand, and the plane of development of understanding of literary forms and techniques, on the other.

From the point of view of the development of biological concepts, the wide range of variants of task completion demonstrates the stages of transformation of everyday ideas about vegetative functions into scientific concepts: from mixed and incoherent ideas to a clear distinction between respiration and other biological processes, with understanding of the meaning of respiration as a process that provides energy for all others. However, fixing these two poles, we cannot place the many variants of mastering the concept in a gradual scale, since in each work it is possible to see different moments of clear understanding and "gluing", incomprehension. In one work, for instance, a pupil demonstrates clear understanding of the digestive process, but loses understanding of respiration at the moment of describing the "encounter" of oxygen with organic molecules (while in a short test work the pupil easily and completely recites the definition of respiration). In another one, the biological picture of what is happening is broken in the description of gas exchange ("pseudopods withdrew the gas and the amoeba went to sleep"), etc.

The offered task gives pupils an opportunity for productive action [12], as it requires conscious choice of artistic form and creation of a new original text with its subsequent publication – presentation for judgement to a possible reader (teacher, classmates). When creating such text, a student should not lose the essence of biological content, retain the framework of scientific concepts and at the same time follow the requirements of the chosen genre, use the means of artistic expression. Thus, the conceptual coordination of academic subjects gives rise to the possibility of a double test: a test of comprehension of biological processes and a test of mastery of the artistic form of word art. It is worth noting that it is the works in which the artistic component is clearly expressed (groups A and D) that provide the richest food for analysing the emerging concept.

As opposed to educational situations, where children's trial actions arise only in spite of the teacher's intention in a situation of uncertainty [2], tasks on coordination of educational subjects are tasks-frameworks, generating learning trials in agreement with the teacher's project. When solving tasks of this type, the independence of action without a model and algorithm can also be manifested.

When viewed from the side of artistic development, the biological concept in this task acts as a material and a frame that limits, but does not predetermine, the choice and setting of one's own artistic tasks: the pupil independently chooses a specific literary genre, independently creates the images of the characters, and independently constructs the events and development of the plot. The relationship between the mode of action and the material on which it unfolds is contradictory: the material does not "fit" easily into the framework of the chosen genre, the eventuality of biological processes is not easy to transform into the conflictual eventuality of an epic plot. Pupils who have mastered the scientific concept to a greater extent, are able to retain its logic, making such transformation. Those who have mastered the concept of breathing to a lesser extent violate the logic of the concept, and the construction of a fantastic picture of life begins to obey the logic of everyday ideas. Thus, the development of the artistic idea becomes a testing ground for the biological concept – how much it is formed, whether it can be held as a material in the search for characters and the unfolding of the plot. Each particular children's work represents either a rejected test (group B), a failed (partially successful) test (groups C and D) or a fully fulfilled learning test (group A).

According to L.M.Dolgova, trial actions "open the space for students to search for their own (individual) means of understanding situations, to form individual educational experience" [2, p.192]. Agreeing with this point of view, it can be noticed that "material resistance" in this work gives the student an opportunity to feel, not always consciously, the properties of the concept of respiration built in the joint activity of the class before it becomes a means of solving other problems rather than an object of construction in other educational tests.

A.A.Brudny writes: "...the actual world, taken as a whole, always requires completion of two constituent parts for the understanding of it, and therefore the evidential and narrative worlds are additional (in Bohr's sense) to it. In the one, logical following prevails... In the other, events occur and actions are committed, and their coherence is determined by ... a different constitutive force – the semantic one. The experiment shows that the texts of the narrative world have much greater translational potential, they are better remembered and retold than much more compact, consistent and coherent texts of the world of evidence-based judgements" [1, p.19]. It is likely that the construction of an extended narrative text by a pupil gives him/her an opportunity to comprehend the scientific concept which is being constructed, to put it into the contexts of his/her own images, tasks, intentions, to understand and remember its peculiarities. This work will certainly facilitate the final appropriation of the scientific concept in the course of its instrumental use [8; 9].

The construction of an artistic image initially contains the opposition between the scientific and the fictional, defined by the very frame of the task. This pre-

vents the formation of synthetic misconceptions that uncritically combine aspects of previous and new knowledge [18; 20], keeping the frame of critical thinking. Pupil autonomy in this case relies on the work done by the class together, under the guidance of the teacher, therefore, in most cases, this step in mastering a scientific concept does not carry the risks of overestimating the ability of the pupil to assimilate new knowledge only on the basis of independent thinking and previous experience, which many researchers write about [16; 18].

As for the trial-productive artistic action, the completion of such tasks can be considered a new stage in its development in comparison with primary school, since the search for an image solution in such work begins to be limited not only by understanding the features of the artistic form, but also by the biological content.

To complete the trial action, its second tact is necessary: its publication [12]. The very fact of presenting the work for the judgement of the reader (teacher, other pupils) makes the author see it from a different perspective. In addition, the extended discussion of the works created by pupils allows revealing the completeness of mastering the concepts of both disciplines, to reveal the imperfections of the formed concepts. From our point of view, the work on creating own texts by pupils, both fiction (groups A and D) and informational (group B), can also serve as one of the effective ways to increase the completeness of understanding [10] of educational and popular science texts about vital processes in the organism.

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Conclusions

1. The task of coordinating the content of biology and literature by young adolescents mastering these academic subjects can be considered as a provocation of a learning trial, and its successful completion as a trial-productive action. The norm of age development in this sphere can be considered a successfully realised “double” trial, in which artistic success is combined with the adequacy of the use of a biological concept.

2. This kind of task gives an opportunity to detect and correct the imperfections of the forming scientific concept, on the one hand, and the concept of literary art form, on the other hand, i.e. it can be used for the purpose of diagnostics of the process of mastering the concepts. Successful completion can be an evidence of understanding of biological processes, as well as the fact that literary concepts are mastered to the level of their use as means of creating a verbal artwork.

3. The opposition and contradiction of the artistic form and biological conceptual content (essay material) counteracts the “gluing” of emerging scientific concepts with the original everyday ideas. A well-developed and sufficiently⁵ disciplined artistic imagination allows the pupil to avoid falling into the semantic gap of an incompletely constructed scientific concept, to build an adequate image that helps to retain the still shaky conceptual pillars.

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⁵ Due to prior learning.

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D.B. Elkonin on the Development of a Child's Skills: The Position of the Concept of Arbitrary Activity Reproduction

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In 2024, the attention of Russian scientific community is focused on the most important date, the 120th anniversary of the birth of Daniil Borisovich Elkonin, the author of the psychological theory of children's play, co-author of the theory of educational activity. The article analyzes the views of D.B. Elkonin on the development of children's skills from the standpoint of the author's concept of reproduction of an activity. Arbitrary activity reproduction is a purposeful reconstructive-reproductive process, relatively independent from memorization, characterized by individual originality, manifested in the quantity and quality of recall of previously memorized information for the purpose of future activity based on a certain level of its understanding and comprehension. We consider mnemonic abilities as tools for memorizing, reproducing, forgetting, recognizing and preserving any material. It is shown that the concept of arbitrary activity reproduction of educational material implement an activity-based approach to the development of skills. The research results prove the importance of developing children's cognitive skills and abilities through the pupil's mastery of educational activities – associative-indicative, analytical-synthetic, control-evaluative.

Keywords: D.B. Elkonin, theory of children's play, theory of educational activity, the concept of arbitrary activity reproduction, capabilities, genesis of skills and abilities, memory, updating, recollection, educational action.

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Д.Б. Эльконин о развитии способностей ребенка: взгляд с позиций концепции произвольного воспроизведения

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В 2024 году внимание научного сообщества приковано к важнейшей дате – 120-летию со дня рождения Даниила Борисовича Эльконина – автора психологической теории детской игры, соавтора теории учебной деятельности. В статье проанализированы представления Д.Б. Эльконина о развитии способностей детей с позиций авторской концепции воспроизведения. Произвольное воспроизведение – это относительно самостоятельный от запоминания целенаправленный реконструктивно-репродуктивный процесс, отличающийся индивидуальным своеобразием, проявляющимся в количестве и качестве припоминания ранее запомненной информации в целях предстоящей деятельности на основе определенного уровня ее понимания и осмысления. Мнемические способности мы

рассматриваем в качестве инструментов запоминания, воспроизведения, забывания, узнавания и сохранения любого материала. Показано, что концепция произвольного воспроизведения учебного материала, как и теории Д.Б. Эльконина, реализуют деятельностный подход к развитию способностей. Результаты исследований доказывают значимость развития познавательных способностей детей путем овладения учеником учебными действиями — ассоциативно-ориентировочными, аналитико-синтетическими, контрольно-оценочными.

Ключевые слова: Д.Б. Эльконин, теория детской игры, теория учебной деятельности, концепция произвольного воспроизведения, способности, генезис способностей, память, актуализация, припоминание, учебное действие.

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Introduction

The category of skills has been studied in the works of many educators and psychologists who put forward different points of view on the process of their development. In Russian psychology, the problem of developing skills was considered in the works by S.L. Rubinstein, B.M. Teplov, A.N. Leontiev, V.A. Krutetsky, V.N. Druzhinin and others. Great teachers of the past also showed interest in the category of skills in the context of considering the goals and objectives of education, mental education of the individual (I.G. Pestalozzi, K.D. Ushinsky, L.N. Tolstoy, V.A. Sukhomlinsky, etc.). When discussing the genesis of skills in the scientific literature, it is proposed to separate the actual and potential skills, and consider the identified skills as more relevant. The dialectics of the correlation between skills and activity manifested itself evidently in the systemogenetic theory of V.D. Shadrikov [10], the theory of mnemonic skills, the concept of memory functioning and mnemonic skills of L.V. Cheremoshkina [7]: skills exist before activity, but develop only in the process of activity. Activity, as a factor in the development of personality skills, reveals a lack of a tool base during its development, generating contradictions that promote the development of personality skills. With a decrease in the number of studies of the problem of skills recorded over the past 30 years in Russian psychology [3], it is of interest to turn to the legacy of thinkers who studied this issue. The analysis of the problem of developing children's skills in the views of the author of the psychological theory of children's play, co-author of the theory of educational activity Daniil Borisovich Elkonin contributes to rethinking the role of gaming and educational activities in their genesis.

The purpose of the article is to analyze D.B. Elkonin's views on the development of a child's skills from the standpoint of the author's concept of arbitrary re-

production of activities, implementing an activity-based approach to the formation of educational actions that ensure the actualization of educational material.

The phenomenology of mnemonic skills is represented by memorization, preservation, reproduction, forgetting and recognition of information. The concept of arbitrary reproduction was developed based on the results of a long-term longitudinal experiment (2008–2022) devoted to the study of the dynamics of qualitative specificity and the volume of recall of educational texts by actors aged 12–20 years. The experiment was conducted on the basis of schools in Orekhovo-Zuevo, Moscow region and was carried out in two series: the first series includes 8 stages, the second — 7 stages. The final stages of the first series are implemented on the basis of State University of Humanities and Technology (GGTU).

The method of studying activity reproduction, followed by the imposition of individual trajectories of indicators of volume and qualitative specificity of recall, was supplemented by methods of studying subjective and subjective-personal factors of actualization effectiveness (the level of intelligence development, the effectiveness and level of development of mnemonic skills, the level of development of educational motivation, the level of understanding of the material), an associative experiment. Arbitrary reproduction is a purposeful mnemically-intellectual process of recall, implemented by multi-level mechanisms characterized by individual originality, manifested in the qualitative specificity and volume of actualization of previously remembered for the purposes of upcoming activities. Recall activity depends on the objective, subjective and subjective-personal patterns [8; 9].

Research methods. The material was obtained on the basis of an analysis of the fundamental works by D.B. Elkonin, theoretical and methodological studies considering D.B. Elkonin's contribution to the development of psychological science.

Play activity as a factor in the development of a child's skills

D.B. Elkonin, as a scientist who has passed a long scientific path of understanding the patterns of child development, considered the exceptional role of play activity in the formation of a child's cognitive skills. Through the game, the child is connected with the environment, but the decomposition of the game, as the leading activity of children, into the sum of cognitive skills, including perception, memory, attention, thinking, imagination, according to D.B. Elkonin, is unacceptable. He noted: "When decomposed into separate elements, the qualitative originality of the game as a special activity of the child is completely lost" [14, p. 221]. Even if you find a tool that will allow you to determine the weight of each ability in the activity, the nature of the game will not be revealed. Illustrating the provisions of L.S. Vygotsky on the need for psychology to switch to an analysis that divides into units, D.B. Elkonin suggests considering the role and actions in its implementation as such a unit in the analysis of the game [16]. The role is realized through appropriate, organically related actions.

According to D.B. Elkonin, the formation of a child's cognitive skills and speech, his orientation in the human sense occurs in the process of subject-manipulative and playful activities. Later, in the school period, the processes of education and upbringing determine the development of children's cognitive skills [17].

The contribution of D.B. Elkonin, as the creator of the periodization of child development, game theory, and methods of teaching children to read, is incommensurable for both psychological and pedagogical theory and practice. Considering various types of children's activities, the scientist emphasized its role in the mental development of the child. Activity, as a source of personal development, has a social character ("a child in society" [14, p. 9]). In addition, "... the appropriation of the achievements of human culture by a child is always of an active nature – the child is not passive in this process, does not adapt to the conditions of his life, but acts as an active subject of their transformation, reproducing and creating human skills in himself" [14, p. 9]. Sharing the position of A.N. Leontiev, D.B. Elkonin emphasizes that "... the child carries out such activities that are adequate (but not identical) to the activities embodied by people in these skills" [14, p. 9]. The fundamental thesis about the role of activity in the development of personal skills, first expressed by I.G. Pestalozzi, finds significant confirmation in the works by D.B. Elkonin.

D.B. Elkonin, as a representative of the scientific school of L.S. Vygotsky, whose ideas were further developed in his writings, characterizing the process of mental development of a child, noted that arbitrariness of ac-

tions begins to form at preschool age in play activities, and at primary school age verbal and logical thinking actively develops in educational activities. Moreover, at some ages, the child develops the motivational side of activity, and in others, subsequent, the operational side. The result of educational activity, as D.B. Elkonin notes, it is the change in the pupil, the acquisition of new knowledge by him.

The method of experimental genesis of mental skills in the theory of D.B. Elkonin

To form a new level of a particular ability, D.B. Elkonin uses a formative experiment or a genetic modeling research method in experimental schools [14, p. 15]. Touching upon the problem of the correlation of theory and method, which, according to V.A. Mazilov, is fundamental in the correlation of psychological theories and the integration of scientific psychological knowledge [1], it should be noted that D.B. Elkonin's research used the method of experimental genesis of mental skills based on the theory of interiorization. Relying on this method allowed us to obtain new results on the problem of the genesis of skills in child psychology (A.N. Leontiev, V.V. Davydov, A.K. Markova), where the experimental genetic method, according to D.B. Elkonin, is the most promising. D.I. Feldstein notes that in the works by D.B. Elkonin "... organically combines the development of fundamental psychological problems and their experimental study" [6, p. 14]. D.B. Elkonin writes about the dominance of the "cross-section" strategy in the research of his time, which "... allows only to state the achieved level and the external connection between the individual stages of development" [14, p. 79], and sees the future behind the strategy of active formation. Comprehensive research organized in experimental schools under the leadership of D.B. Elkonin allowed him to collect valuable material and develop a psychological theory of educational activity on its basis.

It should be noted that, describing the components of the structure of educational activity: educational task, educational actions, control action, assessment action, motivation [15; 17], D.B. Elkonin pays special attention to the educational task, having solved which the child masters the general ways of obtaining a result, which allows him, if necessary, to reproduce them independently and quickly.

V.D. Shadrikov defines D.B. Elkonin's approach to separating the topic of the lesson and the purpose of the lesson as a way of action that needs to be learned, and notes: "Due to the importance of the purpose of the activity, it is necessary to separate it into a separate component of the structure of educational activities. <...> It

is in this nodal link of activity that teachers experience great difficulties” [10, p. 84]. In our study of the problem of developing the skills of learners in the classroom in the context of the implementation of Federal State Educational standards, most teachers, when identifying specific professional difficulties that they experience in the educational process, note precisely the problem of setting lesson goals [2].

Educational activities in the theory of D.B. Elkonin and the concept of arbitrary reproduction of activities

As you know, the educational task (according to D.B. Elkonin) provides the assimilation of a general way to solve a whole class of concrete practical problems. It is necessary to teach the pupil certain actions that will help solve the educational task. B.D. Elkonin, characterizing the educational task, notes: “UZ involves a transition from direct trial and error in achieving a result to a special construction (together with the teacher and other children) of the supports of a possible action (its indicative basis)” [12, p. 30].

D.B. Elkonin notes that at the beginning of mastering an educational action, a pupil observes a sample of performing an action, so that he develops an image—an idea of the implementation of this action. Further mastering of an action is based on its reproduction: “Without reproduction, no mastering of an action is possible” [14, p. 217]. In our study devoted to the study of patterns of arbitrary reproduction, based on the mechanisms that make up the structure of recall, we identify actions that need to be mastered by the teacher and teach these actions to the pupil. The actions of the teacher in organizing the reproduction process include: *associative-orientation, analytical-synthetic, control and evaluation actions*.

Associative orientation actions are actions for launching and deploying arbitrary reproduction. The management of associative-orientation activity involves: setting actions for actualization depending on the educational task, stimulating the goal-setting of intellectual activity through clarifying the parameters of recall, encouraging associative activity with the help of leading questions and examples, discussed historical facts, etc. The teacher needs not only to evoke associations in pupils to reproduce the material, but also to perform orientation actions in the pupil’s associations.

Analytical and synthetic actions are intellectual actions aimed at organizing the recalled educational material, its transformation. The management of intellectual activity is carried out with the help of tasks for predicting the results of its reproduction, for visualizing the ma-

terial stored in memory. Tasks for the transformation of the material, i.e. grouping, allocation of a reference point, drawing up a mnemonic plan, classification, completion, recoding, establishing analogies, schematization, structuring, are of primary importance. The pupil must be taught to use the operational mechanisms of mnemonic skills when reproducing material.

Control and evaluation actions are actions involving the analysis of the relationships between recovered and forgotten material, analysis of the causes of errors in activity reproduction, planning of recall, thinking over different results of recall and determining their impact on the preservation of meaning. The management of control and evaluation mechanisms of recall accuracy is largely due to the teacher’s awareness of the nature of those mnemonic techniques that were used by schoolchildren to memorize this verbal material.

The listed methods of managing the process of learning knowledge will help to organize the process of remembering, arming the teacher with actions of installation, goal-setting, motivation, transformation, control, which determine the development of cognitive skills of the pupil. Currently, the teacher’s mastery of the methods of managing the process of learning knowledge is becoming particularly relevant, noted by D.B. Elkonin: “Now the primary school sets itself the task not so much of arming children with elementary practical skills of reading and writing, counting and solving the simplest arithmetic problems, as of forming the ability to assimilate a system of scientific knowledge” [14, p. 221].

N.V. Repkina, who develops the theory of D.B. Elkonin—V.V. Davydov, rightly notes the role of the learning system in the formation of a pupil as an actor of educational activity. Her research focuses on the connection of memory with the processes of actor’s self-regulation, primarily with goal setting. The task of understanding the educational material, unlike the task of assimilation, the pupil can set himself only by himself. Therefore, the ability to set goals is the main characteristic of the actor in educational activity. N.V. Repkina established the stages of determining the content of the purpose of the action by the pupil: reflexive assessment of the problem situation, updating knowledge, reflexive control [4]. According to the results of our experiment, it was found that the understanding of educational material is ensured by moving from distinction and description to the identification of essential and non-essential features, highlighting the connections of new material with individual experience and, consequently, comprehension of meaning and meaning. Such advancement is possible only in the presence of regulatory memory mechanisms [2].

D.B. Elkonin emphasized the role of the child’s control over his own educational activities in the holistic educational activity. It is educational activity, as the

scientist notes, that determines the formation of the foundations of theoretical thinking, the ability to self-esteem, and the ability to arbitrarily regulate one's actions. "Only by changing the content of education, only by giving it a theoretical character, assuming its assimilation by children in the process of solving educational tasks, it is possible to ensure the proper mental development of junior schoolchildren, the formation of their theoretical thinking ..." [14, p. 16].

It seems to us that the developed regulation of cognitive skills, assuming the presence of orientation, decision-making, planning, controlling, evaluative, corrective, anticipatory actions interacting with motives, emotions, volitional qualities [7], determines the success of solving educational tasks. This position was confirmed in the results of our study: schoolchildren with a high level of development of mnemonic skills, which is characterized by high efficiency of memorization due to functional and operational mechanisms, the presence of regulatory mechanisms of mnemonic skills, differ both in higher indicators of the volume of reproduction of educational material and the qualitative specifics of its arbitrary reproduction. Offering educational texts for memorization and subsequent reproduction, we recorded both the volume of the remembered and its qualitative specifics – the transformations that the material undergoes during immediate and delayed actualization. In addition, we couldn't help but be interested in conveying the meaning of the educational text, as well as the level of its understanding. It is proved that the regulation of mnemonic activity contributes to fewer distortions of the educational text and a greater number of additions of educational material with new content. For schoolchildren with formed regulatory mechanisms of mnemonic skills, conclusions and conclusions on educational material are more often characteristic than for schoolchildren with no actions of control, planning, evaluation, anticipation of the results of arbitrary activity reproduction [8].

The potential of speech development of schoolchildren through the development of the skill "focus on an imaginary reader" in the legacy of D.B. Elkonin

Of particular importance for modern education in the era of digitalization are D.B. Elkonin's views on the development of the so-called ability to "... focus on an imaginary reader, on an imaginary communication situation" [14, p. 17]. An experimental study by Daniil Borisovich allowed him to refute the point of view that written speech differs from oral speech only in technique. He proved the differences between oral and written speech in structure, as well as in the level of motivation and arbitrariness in their functioning. The role of free writing,

showing the possibilities of free speech, contributing to the development of thinking, ways of expressing a pupil's thoughts, actualizes the problem of the quality of modern primary general education, its content and teaching methods. The potential for the development of schoolchildren's speech, justified in the works by D.B. Elkonin, must be taken into account in the practice of modern schools. Thus, the results of our study of the patterns of arbitrary activity reproduction reveal the problems of didactics and teaching methods: schoolchildren lack an indicative basis for remembering, which prevents the deployment of multi-level mechanisms of arbitrary reproduction that make up its structure. To form an indicative basis for actualization, the formation of recall tools is of paramount importance – a set of associative-indicative, analytical-synthetic and control-evaluation actions, which we mentioned above. Since no knowledge can be acquired without appropriate tools, the development of operational mechanisms of pupils' mnemonic skills is one of the primary tasks [9].

The problem of the formation of scientific concepts in the theory of D.B. Elkonin

Reflecting on the problem of the formation of scientific concepts and their system in schoolchildren, D.B. Elkonin rightly emphasizes the limitations of receptive-reproductive learning technology, which consists in the fact that the teacher informs the pupil, shows an example of performing exercises, solving typical tasks, and the pupil reproduces this algorithm according to a sample. Information-receptive and reproductive methods are generally accepted and all attempts to improve the learning process based on these methods are characterized by low efficiency. We emphasize that they can only provide reproductive recall of educational material and the pupil's solution of typical tasks, but not the formation of a holistic picture of the scientific world, including the formation of a system of scientific concepts, conceptual thinking.

Activity reproduction is the recollection of the material in the form in which it was presented to the actor of educational activity for memorization. It should be noted that some educational material, for example, rules, theorems, laws, requires reproductive recovery. Moreover, such reproduction should be based on a deep level of understanding of the reproduced material. Most of the educational material determines its reconstructive recall as a result of the restoration of the image-representation, which is subject to a large number of transformations. In the vast majority of cases, the recollection of educational texts of historical and biological content in our study is a reconstructive actualization, the quality and volume of

which is determined by both objective and psychological factors proper. Conceptual thinking presupposes such a level of realization of reconstructive activity, in which we fix the result of remembering, obtained based on an educational task, manifested in concretization, conclusions, conclusions, additions that develop the original, with a deep level of understanding and preservation of meaning. Reducing the amount of material to be studied, according to D.B. Elkonin, is an ineffective way to achieve its assimilation. Let's agree that the volume of recollection is far from the most important indicator of the effectiveness of arbitrary reproduction, in which its qualitative component comes to the fore, depth of understanding and not loss of meaning, willingness to apply what is remembered in practice. As an effective system of promotion in the formation of scientific concepts, Daniil Borisovich, based on the views of A.N. Leontieva suggests moving from "... solving practical problems of changing an object to highlighting its hidden properties and generalizing them, to generalized knowledge (concept) about it" [14, p. 104]. Real practical actions with objects in the process, which goes through a number of stages in cooperation with the teacher, who acts as a carrier of the concepts being formed and their system, ensure the assimilation of scientific concepts. An alternative to the information and reproductive method, as noted by D.B. Elkonin, is the method of active transformation of the acquired educational material by children. Elkonin continues: "Teaching is not just learning something, it is working with one's own action, with what will be called experience" [11, p. 89].

E.V. Subbotsky, analyzing the limits of the applicability of the cultural-historical method, emphasizes that school curricula for teaching the concepts of D.B. Elkonin and V.V. Davydov arose as a result of the development of "psychological tools" such as "speech, logical thinking, scientific concepts, social norms or culturally developed perception schemes" [5, p. 133], mediating

the work of living subjectivity. Mnemonic skills, in our understanding, are tools or instruments of memorization, activity reproduction, forgetting, recognition and preservation of material, which are stereotyped mental processes characterized by qualitative and quantitative originality, which characterize a person simultaneously as an individual, an actor of activity and a personality [9]. The formation of scientific concepts is determined by the effectiveness and level of development of the educational activity actor's mnemonic skills.

Conclusions

Thus, the analysis of D.B. Elkonin's views on the development of a child's skills from the standpoint of the concept of arbitrary activity reproduction allows us to conclude that the methodological foundations of both approaches implementing an activity-based approach to the formation of educational actions are close. D.B. Elkonin's legacy is filled with a desire to study the patterns of development of skills, taking into account their role in educational activities, which proves the value of the scientist's views for modern psychological science and education and their viability. The fundamental principles of the theory of D.B. Elkonin — the principle of development, the principle of activity, the principle of changing the forms of community of children and adults [13] — determine the scientist's views on the process of developing a child's skills. An activity-based approach to recall, which implements mnemonic skills, consideration of the mnemonic-intellectual process through the prism of purposeful cognitive activity of the actor, which is dynamic and changeable, along with a systematic approach allowed us to conceptualize the main provisions of the psychology of arbitrary activity reproduction and propose educational actions for launching, deploying and controlling the actualization of educational material.

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Productive Action in Online Learning of Data and Media Literacy

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The article examines the adolescents' potential for productive action at various stages of the data research cycle. The hypothesis was that the technically intricate phases of data research cycle, which require mathematical and computational skills can be performed by students at a reproductive level following the patterns, whereas the stages requiring data understanding and research design, can be executed creatively and productively. The hypothesis was tested during the online bootcamp aiming to enhance media and data literacy among 8–11 grade students. 53 students aged 14 to 18 from 26 Russian cities took part in the research. Throughout the course students examined textual socio-humanitarian data in geographically distributed teams. Their learning outcomes were compared to those obtained earlier from similar bootcamps on technical and engineering data. Contrary to widespread belief, the main challenge the school students face while learning the basics of data science and machine learning is not the complexities of programming or Math statistics. When dealing with the socio-humanitarian object of research, students successfully coped with computational tasks, but they encountered challenges producing the research design and interpreting results. The study shows that the development of the students' competencies in the basics of scientific research methodology should be considered as a necessary and critical component of educational programs that involve data inquiry. The findings of this study were used for the development of a competency model of data literacy.

Keywords: productive action, agency development, digital humanities, media literacy, data literacy, data science, science education, online learning.

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Продуктивное действие в онлайн-обучении дата- и медиаграмотности

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В статье анализируются возможности продуктивного действия школьников в процессе исследования медийных данных. Гипотеза исследования состояла в том, что в цикле работы с данными его технически сложные фазы, требующие специальных знаний математики и программирования, могут быть пройдены учащимися на репродуктивном уровне, т. е. действием по образцу, а фазы постановки целей и концептуальной проработки исследования могут быть осуществлены творчески и продуктивно. Описывается кейс совместной работы школьников в онлайн-формате над исследованием текстовых данных социогуманитарного содержания, их работа сравнивалась с наблюдениями, полученными на аналогичных интенсивах

по работе с инженерно-техническими датасетами. Результаты исследования говорят о том, что, вопреки распространенному мнению, главный вызов при освоении основ работы с данными и машинного обучения школьниками связан вовсе не со сложностями программирования и матстатистики, но с продуктивным действием на фазах концептуальной проработки исследовательского проекта и интерпретации результатов. Исследование показывает, что развитие компетенций старшеклассников в применении основ методологии научного исследования следует рассматривать как необходимый и критически важный компонент при разработке образовательных программ, связанных с исследованием данных. Результаты исследования использованы при создании кластерной компетентностной модели дата-грамотности.

Ключевые слова: продуктивное действие, субъективация, дата-грамотность, медиаграмотность, научное образование, онлайн-обучение, цифровая гуманитаристика, Data Science.

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Introduction

While the theoretical foundations of media literacy and associated academic and public initiatives have existed for roughly half a century, data literacy is a more recent concept. Since the 1970s, media pedagogy within the enlightenment and critical theory traditions has prioritised cultivating a critically thinking audience resistant to manipulative media influences and misleading representations. However, alongside the critical recipient, the active role of the critical media producer is gaining increasing importance. The digital age has democratised media production, with digital tools empowering anyone for public self-expression [19]. This presents both novel opportunities and challenges for society, politics, and the education sector [20].

Furthermore, the past three decades of information technology development have seen data in various formats become the cornerstone of all digital media. In the context of pervasive datafication [22], the ability to adopt a reflexive and ethical approach towards everyday data circulation is crucial [9]. This fosters the development of individuals capable of making informed decisions, ethical choices, and independently forming opinions [25]. Consequently, data literacy stands as a vital component within the modern competency framework, alongside media, information, and scientific literacy [13]. Data literacy encompasses the computational skills necessary for quantitative data analysis [5], the ability to comprehend and critically evaluate information derived from data [28], and the skill to communicate data analysis results to others [16].

Fotopoulou [15] sees similarities between media and data literacy, arguing that both reading media and data are social and cultural practices influenced by their recipients' social context. Both media discourse and published data [8] can reflect the agendas of their authors

or curators [11], as exemplified by healthcare data or electoral statistics. Critical theory underpins the work of many data literacy researchers [29]. In education, this approach emphasises the importance of ethical data use [6] and the dissemination of “critical data literacy” [23] across diverse social groups. Examples include schoolchildren [7], journalists [18], non-profit organisations, and civil activists [15] who employ “citizen data science” practices. These critical practices are demonstrably gaining increased relevance as the discourse of “data-driven management” [26] becomes pervasive within corporate, educational, and government institutions, often used to legitimise managerial and political decisions.

A rapidly evolving domain at the intersection of media and data is text analysis through natural language processing methods. This was a central theme in the educational bootcamps “Data Campus. Media” conducted by the author between 2021 and 2023.

Engaging students in analytical practices fosters their agency, which occurs when they transition from reproductive to productive activity. This shift is achieved through cultivating an active “producer” role, moving away from traditional educational approaches that focus on training students to reproduce predetermined “correct” results [17]. This stance aligns perfectly with the paradigm of open education [2] with the pivotal task-activity approach as developed in the learning theory of V.V. Davydov [1] and the developmental psychology of D.B. Elkonin [3]. The notion of *Productive Action* developed by Boris Elkonin in line with the above-mentioned theories and Vygotsky's cultural-historical approach describes the phenomenological and existential structure of the “act of development”. A productive action, according to B. Elkonin, is “a coherence of two events: the event of overcoming the inertia of past experience and the event of others' affirmation of a new space of possibilities.” Thus, pro-

ductive action has two stages: first, the creation of a “product”; and second, its inclusion in the life world of others through presentation and generation of a new “semantic field” that enables both author and audience to think and act in new ways. The first stage of productive action involves the event of overcoming the pre-determined (by experience, skills, others) way of thinking and acting and often a negation of something previously accepted by the actor (a stereotypical belief, an algorithm of action, a tradition, etc.). An important characteristic of productive action is that the problem to be solved is formulated by the actor himself and does not presuppose a “ready-made” task with a correct answer. The second stage of productive action is the public presentation of the created product and the trial of its significance and relevance for others. Their recognition of the product (which may or may not happen) is the evidence that the product is capable of generating new meanings and ways of action. The “publication” of the author’s work is a risky existential act, since the author’s very Self is at the stake here, Boris Elkonin emphasizes. Yet, “only here does the personality enters the World, attests itself and therefore only here does the Personality becomes a real fact of Being” [4, p. 121].

In theory, in an open learning environment students positioned as “data producers” are able to deal with data without direct instructions on what to do with it, showcasing their analytical and computational competencies. They are able to suggest a hypothesis or a vision of a product, set tasks, craft a data and/or media product and present their outcomes, embodying “productive action” [4]. This approach necessitates developing competencies across data research phases, including goal definition, exploratory analysis, data processing, model evaluation [10] and presenting the results of work to others [21].

A common professional concern regarding Data Science education for K-12 students centres around the perceived necessity of advanced mathematical knowledge (statistics, programming, probability theory, algebra) for truly productive analytical work with data. These topics often fall outside the scope of the school curriculum. However, we argue that such requirements are not absolute, but depend on what we consider to be a productive result.

For K-12 students engaged in a trial of Data Science, we define productivity not in terms of achieving technical perfection in data mining, which necessitates deep and diverse mathematical knowledge. Instead, we align with Boris Elkonin’s concept of Productive Action [4]. Here, we consider that utilizing data — a new medium — and its associated analysis tools empowers students to transcend their usual information processing methods and create a novel space of actional possibilities [4, p. 118]. For instance, within this framework, a student

could initially grasp the concept of correlation as a practical tool with defined application rules for solving analytical problems. The underlying mathematical aspects can then be addressed at a deeper level in subsequent mathematics education.

The research hypothesis was as follows: (1) for truly productive activity at the stages of data preparation, modelling and evaluation, students need special knowledge of mathematical statistics, probability theory and linear algebra, however these tasks can be solved at the reproductive level (action according to the pattern); (2) the stages of goal understanding, initial data exploration and conceptual development of the research can be fully implemented in a productive way on the basis of existing knowledge and thinking skills.

Methods

The research method is a case study of the online bootcamp “Data Campus. Media”, organized in the task-activity approach with the following principles of pedagogical design [2]:

- 1) the educational event involves problem-based learning;
- 2) the event is characterized by situational uncertainty, when neither students nor teachers have a standard “correct” solution of the problem;
- 3) the multiplicity of possible options for students’ self-determination and their educational paths, ensuing from the multiplicity of contexts in which their social life is happening;
- 4) encouragement of students’ autonomous goal-setting and its support including special pedagogical techniques.

The duration of the program was 70 academic hours. Its main topics were “Media Metaphors”, “Introduction to Media Studies”, “Introduction to Natural Language Processing and Data Research Methodology” and “Python Programming for Natural Language Processing”. The learning formats were lectures, master classes, team projects and presentations of the students’ analytical developments. When registering for the program, the level of proficiency in Python programming language was tested for subsequent balancing of the project teams according to this parameter. In addition, students filled out an interest survey, the results of which were taken into account when forming the project teams. 53 students of grades 8-11 from 26 Russian settlements aged 14 to 18 years took part in the study. All activities including collaborative code development were organized via cloud services. The participants worked on their projects in geographically distributed teams, communicating via video and text chats using desktop and mobile

devices. All datasets, course materials, testing and other materials were available in the cloud learning management system.

Students were offered the following datasets:

1) Metadata of literary texts: 5477 annotations of literary works, including their title, age category, genre, and authors.

2) News feed of an information agency: 360,000 regional news messages dated from 2009 to 2019.

3) Diary entries: several hundred thousand diary texts (predominantly from the 20th century).

4) Film metadata: 250 titles with annotations, ratings, year, country, director, screenwriter, and actors.

5) Song lyrics: 82,452 texts from the Spotify database, along with their artists, genre, release date, and over 20 musical characteristics.

The students had to set a research task for themselves, following the instruction: “Each team must formulate a reasoned hypothesis. This could involve identifying connections in the data, patterns, trends, or anything else. The provided data may be modified or supplemented with any kind of additional data. Validate or refute your hypothesis using text data processing tools and interpret the results of your research.” Throughout the project, students were provided with mentorship and consultative support from experts.

To assess team productivity and to monitor the project progress, the following milestones were established:

1) A team was formed, online teamwork tools were set up, and a project microsite was created.

2) Data was tokenized and cleaned.

3) Hypotheses were formulated, and a research plan was established.

4) Lemmatization and modelling were conducted.

5) Analysis and visualization were completed.

6) Results were interpreted.

7) Code cleaned, the results were submitted for expert evaluation.

The assessment of the projects was based on expert evaluations by teachers of Media Studies and Data Science according to the following criteria: 1) clarity of research goals and tasks, understanding of applied concepts, hypothesis formulation and operationalization; 2) quality of interpretation of the results; 3) quality of data preparation and analysis; 4) quality of modelling.

Results

The program resulted in student projects on digital humanities, as shown in Table 1.

Teamwork facilitated students’ progression from reproductive to productive action with data within the open educational environment. Supported by teachers and experts, many participants, equipped with a dataset, were able to independently formulate a research question, adopt the position of “data producers,” and create an output. However, this study also revealed competence deficiencies in some participants, particularly related to analytical and creative engagement with interdisciplinary issues.

The hypothesis that the technical aspects of the project (data preparation, modelling, and evaluation phases) could be performed at a reproductive level was largely confirmed. While students with insufficient programming knowledge faced challenges in computationally-intensive parts of the research cycle, teamwork mitigated these difficulties through the presence of “programmers” within groups and expert support.

The second hypothesis – that students without specialised training are capable of productive action at

Table 1

Student data projects and their evaluation

Team project topic	Num. of people	Python knowledge	Milestones	Concept	Data work
Genre diversity, lexical complexity of books, and publishing statistics across different age segments	9	7,3	100	5,0	4,3
Representation of Russian regions in the federal news agenda from 2009 to 2019, and thematic modelling of regional news	7	10,0	86	5,0	5,0
Sentiment analysis and thematic cyclicity in popular music from the 1950s to the present	10	7,8	77	5,0	4,0
Diary sentiment changes during military periods of Russian history in the 19th and 20th centuries	5	10,6	82	4,5	4,0
Prediction of movie ratings	8	8,5	87	4,0	3,3
Categorization of movies based on annotations	5	8,0	51	2,5	1,6
Lexical features of pop music genres	9	8,4	23	2,5	1,9

Note: 1 – team project topic; 2 – number of team members; 3 – team’s average knowledge of Python programming language (max. 13); 4 – team performance on milestones; 5 – evaluation of project conceptualisation (understanding and formulation of goals, objectives, concepts, interpretation of results); 6 – evaluation of data work (quality of data processing, analysis, modelling).

the conceptual development stage — received partial confirmation. Team productivity was demonstrably influenced by factors such as dataset size, the ability to construct multi-variable hypotheses, analyse interdisciplinary problems, and activate and apply relevant school curriculum knowledge. In this regard, several teams encountered difficulties, ranging from initial project development — including goal setting, preliminary data analysis, and hypothesis operationalisation — to later stages of interpretation and presentation. Nonetheless, with appropriate expert intervention, most teams successfully navigated these challenges. Notably, two projects (those utilising news and literary texts) achieved a level of performance exceeding expectations for K-12 students.

Consider, for example, a project investigating the representation of Russian regions within the federal news agenda. The dataset comprised approximately 300,000 texts from a federal news agency, spanning the period 2009-2019. The research team consisted of seven students from various Russian cities, with only four actively contributing to the project. The team leader, a 14-year-old student from Surgut, guided the project's direction. The team defined its goals, selected an appropriate topic modelling algorithm, and obtained a set number of interpretable themes (ranging from official activities to protest rallies). They subsequently analysed the temporal dynamics of these themes and their geographical distribution. Additionally, regional topics were plotted on an interactive map, highlighting the most prominent themes for each region, effectively creating a geoinformatic product.

The interpretation of these qualitative results prompted the students to pose critical questions regarding the representation of their own regions in the news. Framed within Boris Elkonin's concept of productive action [4], the product generated by the team and presented at a later stage created a novel "semantic field" for both the researchers and their audience. This new perspective challenged previously held assumptions and facilitated critical questioning of the media's portrayal of their regions. The students began asking themselves questions about the predominance of state officials and law enforcement agencies in the news and the underrepresentation of cultural and public organizations; about why so disproportionate attention is paid to emergencies and criminal incidents in the provinces? Does the participants' subjective perception of their territory coincide with its data-based media model, and what is the reason for possible discrepancies — the quality of data processing or the media bias? Thus, the result of the second stage of the productive action became the subjects' change of their interpretive framework, ultimately their local ontological model that answers the question "How the world really works?"

Discussion

Our research suggests that the most significant challenge students face when engaging with data research practices lies not primarily in the technical aspects, but rather in the conceptual dimension. In light of these findings, it seems crucial to shift the emphasis within educational discourse on data literacy and data science education. The current focus on including various components in curricula should be reframed to acknowledge the critical role of students' scientific competencies. While some advocate for increased programming and IT integration into statistics and data handling instruction [24], others emphasise the need for curricula to focus on civic responsibility and data ethics [27]. While both these components are undoubtedly important, our observations in educational practice highlight the fundamental significance of scientific competence. Essential for meaningful data research, this competence encompasses skills such as differentiating between the known and the unknown, identifying and comprehending research-relevant concepts, applying logical reasoning, analysing and contrasting observations, integrating knowledge from diverse disciplines, formulating and testing valid hypotheses. This cluster of competencies is indispensable for "understanding data." We concur with researchers such as W. Finzer [14], A. Cuoco [12] and others, who insist that students need to be accustomed to viewing the world through the lens of data. From our perspective, the ability to question and solve problems using data is unattainable without a foundational understanding of the scientific method and scientific thinking. It is these competencies, rather than technical data handling skills, that we believe hold paramount importance.

Turning to technical skills, our study found that activities related to applying data processing methods (coding variables, data type correction, lemmatization etc.) presented fewer difficulties, particularly for teams with members possessing strong programming skills. This can likely be attributed to the largely reproductive nature of the technical work. Code snippets and examples readily available online and in supplied study materials facilitated software code implementation.

For example, configuring and tuning a machine learning model, even for students unfamiliar with its underlying mathematical principles, can be considered a reproductive skill. As observed, a proficient programmer can readily copy and minimally modify code snippets for their specific task, a common practice among contemporary programmers. Subsequently, they can achieve acceptable results through trial-and-error parameter adjustments on the model, without necessarily delving into the mathematical underpinnings. This clearly dem-

onstrates good reproductive skills, rather than true productive action.

Our experience in implementing similar educational programs in both STEM and humanities suggests that students encounter less difficulty with productive action when tackling engineering or technical problems (e.g. binary image classification). Conversely, greater challenges emerge when modelling sociocultural phenomena (e.g., “human capital” or “poverty”) or analysing textual data. In the former case, defining project goals and tasks, comprehending the data’s categorical structure, and identifying additional data needs are less problematic for students. However, the latter scenario may present difficulties as early as exploratory analysis. Students might struggle to “grasp” the object, formulate a conceptual definition, identify its essential characteristics and their interdisciplinary correlations, develop hypotheses, and select appropriate data.

At the same time, research focused on socio-humanitarian and socio-economic objects aligns well with the leading activity and social situation of development in adolescents and young people (namely, active social participation, self-determination regarding values, interests and careers, ethics and citizenship) [3]. By engaging students in data research on such topics, we can foster a deeper understanding of the relationships between their constructed models of social reality, themselves, and society as a whole. Additionally, the inherent interdisciplinary nature of socio-humanitarian themes encourages the development of students’ complex knowledge and skillsets applicable across various spheres of their future academic and professional endeavours.

Comparing student attitudes towards socio-humanitarian and engineering-technical tasks and datasets, we argue that data literacy education should prioritize datasets that enable modelling of sociocultural objects embodying meanings, values, and practices shaped by social interactions and cultural and economic contexts. Within an open educational environment, interacting with such data necessitates reflection on both the socio-political implications of knowledge production and dissemination through data, and on students’ own relationship to these processes. This fosters the ability to critically evaluate these processes, formulate personally significant data research topics and projects, and present them to a public audience.

The organisation of open media and data literacy education should consider the social aspects of scientific practice. This allows for a more complex modelling of the educational program aimed at the concurrent development of technical, disciplinary, and conceptual skills. These three components mirror the research practice model proposed by A. Pickering [30]. Our study suggests that the most deficient aspect of scientific practice and knowledge produc-

tion amongst K-12 students lies not in the “disciplinary” (mastering data analysis methods) or “technical” aspects (overcoming the challenges of unfamiliar data and learning programming tools), but in the “conceptual” aspect. This aspect concerns the scientific concepts, ideas, theories, and models that researchers use creatively to interpret data. It aligns with the student’s subjectivity (“human agency” in Pickering’s terms), which refers to the ability to make independent decisions about the design and course of their research. This deficiency is not solely attributable to a student’s previous educational background, but is demonstrably influenced by contextual and sociocultural factors. Consequently, this area presents a critical point of application for pedagogical efforts and techniques aimed at fostering student agency and developing agency, enabling them to be proactive and independent in setting and achieving goals.

Conclusion

Our hypothesis that students could perform the technical aspects of the project at a reproductive level without in-depth mathematical and statistical knowledge was confirmed. However, the hypothesis that students without specialised training could achieve productive action at the conceptual development stage received only partial support. While two projects unexpectedly exhibited high levels of productive action across both stages, most participants encountered difficulties in identifying and comprehending research-relevant concepts, distinguishing the known from the unknown, applying logical reasoning, and formulating hypotheses.

These observations lead us to conclude that the primary obstacle to truly productive analytical work with data for K-12 students is not a lack of specific mathematical statistics and programming knowledge, but rather a deficiency in core scientific research methodology competencies. This includes the ability to utilise theoretical concepts as instruments for epistemic practice. This predicament is also linked to student subjectivity, defined here as the ability to make independent decisions about the content of their research practice. We posit that this aspect should be the primary focus of both the pedagogical design of educational programs and their associated psychological and pedagogical support.

Furthermore, our findings suggest that socio-humanitarian content within analytical tasks appears to be more universally applicable for early adolescence compared to engineering and technical content. This alignment stems from both the socio-cognitive characteristics of this age group and the potential to establish a valuable interdisciplinary foundation for future professionals across a broad range of in-demand careers.

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Round Table “From the Psychology of Play to the Psychology of Learning: the Scientific School of D.B. Elkonin and B.D. Elkonin”

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Review of the round table on the topic “From the psychology of play to the psychology of teaching: the scientific school of D.B. and B.D. Elkonin”, dedicated to the 120th anniversary of the birth of D.B. Elkonin, which took place on February 29, 2024 at the Moscow State Psychological and Pedagogical University. Pedagogical University. The state of the Elkonin scientific school is reflected both from a historical point of view and from the point of view of new approaches developed within its framework recently, and related research perspectives. The participants agreed that the scientific school of D.B. Elkonin–B.D. Elkonin sets a fundamental trend in the development of cultural and historical psychology in the first third of the XXI century.

Keywords: D.B. Elkonin, B.D. Elkonin, scientific school of D.B. and B.D. Elkonin, cultural and historical psychology, teaching, game, educational activity, agency, initiative, subjectivity, productive action, search initiation, metasubject learning outcomes, “Tree of cultural and historical psychology”, periodization of mental development, journal of Cultural and Historical Psychology.

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Круглый стол «От психологии игры к психологии учения: научная школа Д.Б. и Б.Д. Элькониных»

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Представлен обзор круглого стола на тему «От психологии игры к психологии учения: научная школа Д.Б. и Б.Д. Элькониных», посвященного 120-летию со дня рождения Д.Б. Эльконины, который состоялся 29 февраля 2024 г. в Московском государственном психолого-педагогическом. Состояние научной школы Элькониных отражено как с исторической точки зрения, так и с позиций новых подходов, разработанных в ее рамках в последнее время и связанных с ними исследовательских перспектив. Участники пришли к общему мнению о том, что научная школа Д.Б. Эльконины–Б.Д. Эльконины задает фундаментальный тренд развития культурно-исторической психологии в первой трети 21 столетия.

Ключевые слова: Д.Б. Эльконин, Б.Д. Эльконин, научная школа Д.Б. и Б.Д. Эльконовых, культурно-историческая психология, учение, игра, учебная деятельность, агентность, инициативность, субъектность, продуктивное действие, инициация поиска, метапредметные результаты обучения, «прочувствование», «Дерево культурно-исторической психологии», периодизация психического развития, журнал «Культурно-историческая психология».

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On February 29th, 2024, the Moscow State University of Psychology & Education hosted a round table on the topic: “From the Psychology of Play to the Psychology of Learning: The Scientific School of D.B. and B.D. Elkonin”. It was dedicated to the 120th anniversary of D.B. Elkonin’s birth, which was celebrated on this day, and opened a series of events dedicated to the 100th anniversary of cultural-historical psychology (CHP), which are held throughout this year.

According to V.T. Kudryavtsev, the coincidence of the 100th anniversary of CHP with the anniversary of D.B. Elkonin is significant: it is thanks to scientists of his rank and circle that CHP not only entered the history of world science, but a century later it is being developed productively and diversely all over the world by new generations of researchers. D.B. Elkonin, within the framework of the “big” scientific school of Vygotsky-Leontiev-Luria, set brilliant examples of the implementation of the cultural-historical approach to the analysis of play and learning activities. This work was continued and significantly “advanced” by his son B.D. Elkonin, which allows us to speak of a unified school of D.B. and B.D. Elkonin in developmental and educational psychology.

K.N. Polivanova revealed the nature of the child’s agency in conjunction with related phenomena like initiative, autonomy, independence, and subjectivity, which merge in the phenomenon of agency. Agency is the ability to transform given social subject structures, overcoming “institutional” limitations, as well as impulsive “self-restrictions” in a situation of rigid socialization. The key to understanding this transformation (overcoming) is related to the concept of trial action in the works of B.D. Elkonin. Surplus trials, paradoxically, give selectivity, order to the child’s own actions, as opposed to an externally imposed order. K.N. Polivanova demonstrated this on the example of the historical transformation of exercises in the game with the exact same objects. In this case, the game is an event for the child to the extent that it contains the possibility of “crossing the boundary of semantic fields”. That’s what J.M. Lotman wrote about, and, after B.D. Elkonin and L.I. Elkoninova spoke about. Traditional society strives to organize children’s unpredictability, while modern society allows and supports that “order”, the mechanism of which are unpredictable children’s, including play, initiatives.

L.I. Elkoninova turned to the topic of the “non-classical”, according to D.B. Elkonin’s terminology, study of the genesis of play in CHP. The analysis of play using the “classical” cross-sectional method has a significant limitation. It does not allow to capture the duality of development, which is fundamental for the “non-classical” approach: when the phenomena of the child’s mental development in play are considered as phenomena of the development of play itself. Only then is it possible to conclude whether we are talking about the child’s development or only about the child’s functional pleasure, which is not always associated with a leap in development. This is determined by the nature of inclusion of a developmental psychologist in the child’s play activity in different qualities – as a researcher, diagnostician, “shaper” and therapist.

The report by Z.N. Novlyanskaya and E.V. Chudinova, which provoked a lively discussion, was devoted to the problem of productive action, which was developed by B.D. Elkonin. The coordination of the content of different academic subjects (biology and literature) can become a condition for initiating the productive action of young adolescents in the form of authoring action. The creation by students of an artistic work on the material of a scientific (biological) concept, which is in the process of formation, requires the transformation of the natural scientific eventuality of physiological processes, its subordination to the laws of cultural forms, characteristic of literature as a form of art. Provided that the “second tact of productive action” is realized, the “publication” of such a work (in B.D. Elkonin’s terms), it can become a step of development for the pupil. For teachers, the material of children’s works is diagnostic, allowing for the assessment of both the level of the formation of scientific concepts in children and the degree of their practical mastery of the concepts of “literary character” and “plot”. For a psychologist-researcher, the obtained material is of value, demonstrating the variety of ways of transforming everyday concepts into scientific ones.

B.D. Elkonin introduced new concepts in order to revitalize the conceptual matrix of the cultural-historical theory, this was the basis of P.G. Nezhnov and E.A. Bugrimenko’s report. Through his author’s thesaurus he sought to reconstruct the original meaning of the key principles of cultural-historical theory in order to set the conditions for a step forward. This thesaurus is filled

with many metaphors and trial terms to realize the intent of reconstruction. Ontogenesis was consistently held by both D.B. Elkonin and B.D. Elkonin in an extended context of the historical development. B.D. Elkonin's theory of mediated, trial and productive action is an example of this. At the same time, according to B.D. Elkonin, ideal forms of culture, in order to turn from "introduced" to "their own", should be mastered at the level of bodily "feeling" (a cross-cutting term of his works in recent years). It is at this level that the "quality of the developmental step" is determined. This circumstance caused B.D. Elkonin's interest in the ideas of psychoneurologist B.A. Arkhipov, the author of the system of diagnostics and correction, which is based on the ideas of the neuropedagogical space, joint educational environment, and the formation of self-governed activity associated with the "feeling" of corporeality. B.D. Elkonin not only made an attempt to superimpose on his own schemes of development the ideas of B.A. Arkhipov, with whom he started the cycle of works, but also introduced the terms "sorhythmia", "pause", "self-feeling"¹, "somatognosis" and others.

I.M. Ulanovskaya spoke about the "Psychological and Pedagogical Conditions of the Formation and Development of the Metacognitive Competencies of Schoolchildren" collective monograph, prepared for publication by the staff of the Laboratory of Psychology of Junior Schoolchildren of the Psychological Institute of the Russian Academy of Education, which was headed by B.D. Elkonin. The book is dedicated to his memory. The uniqueness of the study is that the authors (G.A. Tsukerman, E.V. Chudinova, O.L. Obukhova, A.Z. Zak, E.V. Vysotskaya, I.M. Ulanovskaya, A.D. Lobanova, M.A. Yanishevskaya) analyzed the process of forming the foundations of schoolchildren's learning activity (LA) and its development during all years of school life: from the initial forms of first-graders' inclusion in LA built within the D.B. Elkonin—V.V. Davydov system to the developed forms of LA in school. The variety of developmental effects of LA, including the meta-educational results of learning, the methods and techniques of diagnostics of which are proposed by the authors, is connected with the students' mastering the palette of the means of organizing LA in its collective and individual forms.

G.A. Tsukerman analyzed the phenomenon of "searching for a way to initiate the search", this is how B.D. Elkonin defined the essence of mediation, in which he saw the central, form- and meaning-making link in the process of cultural mediation of activity. As applied to the LA of younger schoolchildren, this essence should be revealed at

two levels: in the project of a learning event and in the real meeting of the adult realizing this project with children. The project ways of initiating the search are quite well known: they include the CONTENT of learning, learning tasks, learning models, and the form of child-adult interaction (in particular, control and evaluation interaction), and the polarization of the learning space, and many others. Following D.B. Elkonin, B.D. Elkonin considered the key to understanding the event of the meeting between teacher and pupils to be cumulative action, in which the ground is formed for the cultivation of the orientation to the actions of the other. The contradictory nature of this phenomenon has yet to be revealed.

V.K. Zaretsky shared his memories of D.B. Elkonin's lectures and meetings with B.D. Elkonin.

He also spoke about the history of the birth of the idea of the "Tree of cultural-historical psychology" project and its realization. The idea appeared in 2016, when Boris Elkonin, discussing the state of the CHP, said that this tradition has already counted five generations, if we count L.S. Vygotsky as the first generation, and his closest associates and followers (A.N. Leontiev, A.R. Luria, D.B. Elkonin, B.W. Zeigarnik, A.V. Zaporozhets, P.Y. Galperin, etc.) as the second. V.K. Zaretsky noted that he and B.D. Elkonin had the opportunity to learn both from the representatives of the second generation and their students (V.V. Davydov, V.P. Zinchenko, etc.). Our students, he continued, belong to the fourth and fifth generations. But the ideas of L.S. Vygotsky himself are still interpreted differently, developing along different lines. Therefore, the idea came about to describe the state of CHP psychology as it is seen through the eyes of the representatives of the different CHP directions themselves. Thus began the realization of the project, within the framework of which a number of interviews with Russian psychologists, who identify themselves with cultural-historical psychology, have already been conducted and published. The last of the published materials was an interview with B.D. Elkonin himself (see the "Counseling Psychology and Psychotherapy" journal, 2023, No. 3).

N.N. Nechaev stressed the need to develop the ideas of D.B. Elkonin's article: "To the Problem of the Periodization of Mental Development in Childhood" ("Voprosy Psichologii", 1971, No. 4). The article has become textbook, its provisions are presented in textbooks. Unfortunately, no attention is paid to the fact that the author himself regarded his periodization scheme only as a hypothesis, which requires serious clarification. This is evidenced by his published diary entries. Thus, in a note dated 11.12.1983 he said that his periodization ba-

¹ B.D. Elkonin in a number of key positions relied on the provisions of N.A. Bernstein, who is the author of the formula: "Movement reacts as a living being". A.V. Zaporozhets, analyzing the genesis of arbitrary movement, noted: in order to become controllable, movement must first become *perceptible* (Zaporozhets A.V. Development of arbitrary movements. M., 1960). Both B.D. Elkonin and B.A. Arkhipov were interested in the process of "spontaneous" action (movement).

sically captured the dynamics of development, but the *internal mechanism of these dynamics* was not revealed. In some cases, the “adult-child” relation is mediated by the “object”. In others, the “child-object” relationship is mediated by the “child-adult” relationship. In any type of activity all three elements of the system are present and necessary, only in different types of activity a different system of mediation is observed” (*Elkonin D.B. Sel. psychol. works. M., 1989, p. 519*). In essence, this makes us reconsider the nature of the developmental mechanism as it was described by D.B. Elkonin in the above-mentioned article. The contradiction between the level of development of motivation and the level of development of operational possibilities for the realization of the leading activity is the source not of the development of activity as a whole, but of the functional-genesis of individual modes of subject activity. And this is only one example of the significance of the materials of D.B. Elkonin’s scientific diaries, among which only a small part has been published, and the remaining part is awaiting publication. This legacy should become the heritage of our science.

A.D. Maidansky supported N.N. Nechaev’s proposal to publish D.B. Elkonin’s scientific diaries in full. To date, only a few dozen pages of his diary entries have been published. And as we know from L.S. Vygotsky’s notebooks and A.N. Leontiev’s notebooks, there we can find a lot of valuable material for the development of their scientific programs and CHP as a whole.

“The chief among chiefs”, this is how *A.A. Shvedovskaya* characterized B.D. Elkonin as the editor-in-chief of the “Cultural-Historical Psychology” journal. In 2025,

the journal will celebrate its 20th anniversary. The first issue of the journal opened with the article: “Readiness to Think” by V.P. Zinchenko, one of its founders and its first editor-in-chief; the article was devoted to analyzing the Elkonin-Davydov system of developmental learning. For nine years, from 2005 to 2014, V.P. Zinchenko headed the publication. After his passing, B.D. Elkonin carried the banner of the journal’s leadership from 2014 to 2023. During this time, the journal has risen to the top of the first quartile in international databases of scientific knowledge, which, undoubtedly, testifies to the breadth and strength of interest in CHP in the world, as well as in the journal as the platform representing it. *A.A. Shvedovskaya* recalled the words of B.D. Elkonin about the role and place of the journal in the development of the cultural-historical approach. In June 2019, in an interview with the PsyJournals.ru Psychological Publications Portal, she said: “The idea of the journal is to represent the history and modernity of cultural-historical psychology. And the modernity of cultural-historical psychology is not a cliché. What is the intrigue of modern CHP, how is Vygotskianism moving? These are the questions the journal tries to answer.”

The main conclusion that can be drawn from the discussion is the following. The unified scientific school of D.B. and B.D. Elkonin, which links the cultural-historical psychology of the 21st century with its origins, has now been formed and determines the “modernity” of CHP, that’s what Boris D. Elkonin spoke about.

The video of the roundtable meeting is available on the MSUPE YouTube channel via the link: <https://www.youtube.com/watch?v=yOtRfz9YxKQ>.

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ВНЕ ТЕМАТИКИ
EXTRA SECTION

ТЕОРИЯ И МЕТОДОЛОГИЯ
THEORY AND METHODOLOGY

Lev S. Vygotsky (1896–1934)¹

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This paper is written in a series of Prospect's texts on most important educators. Therefore, the focus in this paper is on Vygotsky's conception of education (learning). In case of Vygotsky, concept of the education is tightly linked to his general theory of mental development. Namely, his concept on development of higher mental function as sociogenesis of these functions imply formative role of socio-cultural factors, i.e. learning in a true sense. Consequently, Vygotsky's main ideas on education are derived from his theory of higher mental function. In more specific approach Vygotsky sees the education (learning) and the school learning as one form of development, "an artificial development" (especially an acquisition of the system of scientific concepts). Such ideas of Vygotsky have major value at present for critical analyses of real process of school learning and its improvement.

Keywords: Vygotsky's concept on higher mental functions, correlations between mental development and learning, psychological-cultural tools, education as "an artificial development".

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Лев С. Выготский (1896–1934)

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Эта статья написана в рамках серии текстов Сборника о наиболее значимых педагогах. В центре внимания этой статьи — концепция воспитания (обучения) Выготского. В случае Выготского концепция образования тесно связана с его теорией психического развития. А именно концепцией развития высших психических функций как социогенез этих функций, подразумевающий формирующую роль социокультурных факторов, то есть обучения в подлинном смысле слова. Следовательно, основные идеи Выготского об образовании вытекают из его теории высших психических функций. В более конкретном подходе Выготский рассматривает воспитание (обучение) и школьное обучение как одну из форм развития, «искусственного развития» как усвоения систем научных понятий. Эти идеи Выготского имеют в настоящее время большое значение для критического анализа реального процесса школьного образования и его совершенствования.

Ключевые слова: Концепция высших психических функций Выготского, связь умственного развития и обучения, психолого-культурный инструментарий, образование как «искусственное развитие».

¹ Cet article est une version remaniée d'un travail paru dans: Perspectives: revue trimestrielle d'éducation comparée. Paris, UNESCO. Bureau international d'éducation, vol. XXIV, n° 3/4, 1994 (91/92). p. 793–820.

The scientific work of Lev S. Vygotsky has had a remarkable destiny. Vygotsky, one of the greatest psychologists of the twentieth century, never received any formal training in psychology. His death at the age of 37 put an end to his research after only ten years or so, and he did not see the publication of his most important works. And yet this “Mozart of psychology” (as the philosopher S. Toulmin called him) constructed one of the most promising theories in psychology. More than fifty years after his death, now that his major works have been published, Vygotsky has become an avant-garde writer. According to one of his best exponents, “There is no doubt that, in many respects, Vygotsky is far ahead of our own time” [24, p. 120]. Such a phenomenon, so rare in the history of science, may perhaps be explained by two closely connected factors: first, the scope and originality of his scientific writings over a relatively short period offer clear proof of his genius. Second, he was working at a time of dramatic historical change, namely the October Revolution in Russia. At the heart of the psychological system constructed by Vygotsky we find an ontogenetic theory of mental development that is also in many aspects a historical theory of individual development. In other words, it is a genetic concept of a genetic phenomenon. No doubt there is an epistemological lesson to be drawn from this: it would seem that historical periods of revolutionary change sharpen the sensitivity of human thought and predispose it in favour of everything that concerns genesis, transformation, dynamic evolution and the future.

The life and work of Vygotsky

Lev S. Vygotsky was born at Orsha, a small town in Belarus, on 17 November 1896. After attending the gymnasium at Gomel, he began his university studies in law, philosophy and history at Moscow in 1912. His school and university education provided him with an excellent training in the humanities—language and linguistics, aesthetics and literature, philosophy and history. At the early age of 20 he wrote a voluminous study on *Hamlet*. He displayed a lively interest in poetry, drama, language and questions of signs and meaning, the theory of literature, the cinema, and the issues of history and philosophy, long before he began his research in psychology. It is important to note that the first book by Vygotsky, which was to point him once and for all towards psychology, was *The Psychology of Art*, published in 1925.

An interesting parallel can be drawn with Jean Piaget. They were born in the same year, and neither received any formal training in psychology; like Piaget, Vygotsky became an author of a remarkable theory of mental development. From adolescence and during his long life, Piaget was attracted by biology, and this difference in inspiration may account for the difference between two

important paradigms in developmental psychology: Piaget placed the emphasis on structural aspects and on the essentially universal laws (of biological origin) of development, whereas Vygotsky stressed the contribution of culture, social interaction and the historical dimension of mental development.

After university Vygotsky returned to Gomel, where he engaged in a wide variety of intellectual activities. He taught psychology, began to take an interest in the problems of children with disabilities and continued his study of the theory of literature and the psychology of art. After his first professional successes in psychology (papers submitted to national congresses), in 1924 he settled in Moscow and began work at the Institute of Psychology. It was there when Vygotsky, surrounded by fellow workers as passionately interested as him in a thorough reconstruction of psychology, created in one prodigious decade (1924–34) his historical-cultural theory of psychological phenomena.

The essential writings and professional activities of Vygotsky, long neglected, have only recently been gradually rediscovered and reconstituted. The interested reader can now find them in the following works: Levitin [14]; Luria [17]; Mecacci [19]; Rivire [24]; Schneuwly and Bronckart [28]; Valsiner [33] and, of course, in the six-volume collection of works by Vygotsky [38].

In the course of those few years of research Vygotsky wrote some 200 works, a number of which have been lost. The principal source remains his *Collected Works*, published in Russian between 1982 and 1984; despite its title, however, this does not contain all his writings that have been preserved, and several of his previously published books and articles have not yet been reissued.

The most complete bibliography of the works of Vygotsky, together with a list of translations and studies on him, can be found in the sixth volume of the *Collected Works* and in Schneuwly and Bronckart [28]. It should be noted in passing that certain presentations of Vygotsky, particularly some of them in English, have been rather unfortunate and, in particular, have occasioned many misunderstandings. This is especially true in the case of the highly distorted presentation in English of Vygotsky’s most important work *Thought and Language* [36], published in 1962. It is to be hoped that the editions of the *Collected Works* [38] currently being prepared in several languages (English, Italian, Spanish, Serbo-Croat, etc.) will help foreign scholars to gain a more accurate understanding of Vygotsky’s real thinking. The bibliographical data in the original version of the *Collected Works*, together with the commentaries to be found in each volume, will, moreover, make it easier to reconstruct the origin and growth of his ideas. Such a reconstruction will, among other things, make for a sounder interpretation of his thinking, particularly those ideas that were formulated in various ways in works written at different times.

that the child's capacity to acquire language is strongly determined by heredity.

Vygotsky's research reveals that, even so, heredity is not a sufficient condition and that a contribution from the social environment in the form of a quite specific type of teaching process is also needed. According to Vygotsky, this teaching process is simply the process of constructing something in common during activities involving the child and the adult, in social interaction. During this preverbal collaboration, the adult introduces language, which, building on preverbal communication, serves in the beginning as a tool for communication and social interaction. In his book on the subject Vygotsky describes the subtleties of the process by means of which a language, as an instrument of social relations, is transformed into an instrument of internal psychic organization for the child (apparition of private language, internal language and verbal thought).

For our purpose, which is to explore the implications for education of the theory of development, there are several important conclusions to be drawn here. In the first place we are confronted with an original answer to the question of the correlations between development and the teaching process: even for a function determined largely by heredity (such as language acquisition), the contribution of the social environment (the teaching process) is nevertheless constructive and is therefore more than a mere trigger mechanism, as it is for instinct, or a mere stimulant that simply speeds up the development of forms of behavior that would have emerged anyway. The contribution of the teaching process derives from the fact that it provides the individual with a powerful tool, namely language. During the acquisition process this tool becomes an integral part of the psychic structure of the individual (with the development of internal language). But there is something in addition: the new acquisitions (such as language), which are of a social origin, start to interact with other mental functions such as thought. This encounter engenders new functions such as verbal thought. Here we meet a Vygotsky hypothesis that has not yet been sufficiently assimilated and exploited in research, even in present-day psychology: the crucial factor in development is not the progress of each function considered separately, but the changing relationship between different functions, such as logical memory, verbal thought, and so forth. In other words, development consists in the formation of composite functions, systems of functions, systemic functions and functional systems.

Vygotsky's analysis of the correlations between development and learning in the case of language acquisition leads us to define the first model of development: in a natural process of development, learning is a means that reinforces this natural process by making available to it culture-generated tools that extend the natural possibilities of the individual and restructure his mental functions.

The role of adults as representatives of the culture in children's language acquisition process and in their assimilation of a part of the culture "the mother tongue" leads to the description of a new type of interaction

besides social interaction that is of decisive importance to Vygotsky's theory, namely interaction with the products of culture. Needless to say, it is impossible to separate or to distinguish clearly between these two types of interaction, which often take the form of socio-cultural interaction.

To elucidate these ideas of Vygotsky, we shall draw upon Meyerson [20], whose central idea is as follows; "everything that is human tends to become objectified and to be projected in works" [ibid, p. 69]. The task of psychology is "to seek out the mental content in the facts of civilization described" [ibid, p. 14], or "to discern the nature of the mental operations that are involved" [ibid, p. 138].

In analyzing the role of culture in individual development, Vygotsky advanced similar ideas. Among all the acquisitions of culture, he focused his attention on the ones that would subsequently control mental processes and human behavior, that is, the various instruments and techniques (even technologies) that people assimilate and turn towards themselves in order to influence their own mental functions. There thus emerges a gigantic system of "artificial and external stimuli" by means of which people gain control over their own inner state. In Vygotsky, we encounter once again, but from a different angle, the phenomenon of interpsychism: from a psychological point of view, part of the individual is anchored in other individuals and another part in his or her works and culture, which, according to Marx, is the individual's "non-organic body". Marx's expression is highly appropriate: culture forms an integral part of the individual but it is, nevertheless, outside him. Hence the development of a person cannot be reduced solely to the changes taking place within the individual; it is also an allomorphic development capable of taking two different forms—the production of external aids as such and the creation of external tools that can be used to produce internal (psychological) changes. Thus, besides the instruments that human beings have invented throughout the course of their history and use to exercise control over objects (external reality), there exists another series of tools that, directed towards themselves, they can use to control, master and develop their own capacities.

These tools include "to mention just a few "spoken and written language (and, in McLuhan's phrase, the whole "Gutenberg galaxy"), rituals, models of behavior depicted in works of art, systems of scientific concepts, techniques that assist the memory or thinking, tools that improve motility or human perception, etc. All these cultural tools are "extensions of man" [18], that is, extensions and amplifiers of human capacities.

To a cultural anthropologist, such a statement may appear commonplace, but in psychology, where concepts are traditionally colored by subjectivity, it is very rare for such cultural factors to be taken into account. Even cultural anthropologists, however, often confine themselves to a single aspect, the objectification of human capacities in the products of culture.

For McLuhan, and even more so for Vygotsky at a much earlier date, what is important are the psychological consequences, the impact of the existence of such tools on the development of the individual, namely, the

interaction between the individual and these tools. In his analysis of those consequences, Vygotsky starts from the famous aphorism of Francis Bacon, which crops up several times in his works: *Nec manus, nisi intellectus, sibi permissus, multum valent: instrumentis et auxiliibus res perficitur* [The human hand and intelligence, without the necessary tools and aids, are relatively powerless; on the other hand, their strength is reinforced by the tools and aids provided by culture].

In the first place culture creates an ever-growing stock of powerful external aids (tools, apparatus, technologies) that back up psychological processes. From knots in a handkerchief or notches on a stick for the purpose of remembering certain events, up to powerful computerized data banks or modern information technologies, the progress in “psychological technology” never ceases. Alongside the individual and natural memory or intelligence, there exists an external and artificial memory and intelligence. How effective would Europeans of today be if deprived of these technologies and left to themselves, “with naked hand and intelligence”? Could psychology produce valid conceptualizations of higher mental processes without these external aids? The fact is, the very existence of these aids changes the nature of the process, which still takes place within the individual; to be convinced of this, one has only to observe the changes in the performance of straightforward arithmetical operations by people who have become accustomed to using pocket calculators. The real tasks for research are the analyses of the restructuring of inner processes when such aids are present and of the interaction between the external and internal aspects of those processes.

In addition to external aids, however, in cultural works exist psychological tools that are capable of being internalized. These include all semiotic systems, all those skills and intellectual procedures and techniques of the media, intellectual operations and structures, and the models of intellectual activities to be found every time the acquisition of culture occurs. Vygotsky, like McLuhan, did not conclude his analysis at the superficial level of such acquisition. He wanted to grasp its hidden and deeper meanings. The direction of his exploration is expressed in McLuhan’s famous maxim: “The medium is the message.” In other words, it is the medium that carries the profound meanings. This approach can be made more understandable by taking the example of a tool, such as written language (both authors considered this example). An individual, the same also applies to a cultural group, for that matter “who has mastered written language is not just one who also possesses a technical skill”.

Written language and book-based culture have a profound impact on the ways in which perception, memory and thought function. This is because written language contains within itself a model for the analysis of reality (treatment in discrete units, linearity and temporality in the organization of thoughts, loss of the sense of totality, etc.) and psychological techniques including, in particular, an enhanced power of memory that alters the relationship between memory and thought. Hence individuals, in gaining access to the written language, appropriate for their own use the psychological techniques available

in their culture, techniques that become “internal techniques” (Vygotsky borrows this term from Claparede). Thus, a cultural tool takes root in individuals and becomes personal to them. When we consider present-day changes in technology, a question of considerable importance is raised: What are the consequences of the employment of modern intellectual (in my view, a more appropriate term than “information—) technologies, such as computers or computerized data banks, for individual cognitive processes? Vygotsky’s admirable research on the appropriation of cultural tools to serve as internal techniques deals with the formation of concepts: comparative studies on experimental concepts, spontaneous concepts and scientific concepts. The outcome of this research is presented in his book, *Thought and Language* [36].

At the heart of this research lies the acquisition of systems of scientific concepts, the most important acquisition during the period when a child is a school age. Vygotsky regards the system of scientific concepts as a cultural tool that is yet another vehicle for profound messages, and its assimilation by children induces profound changes in their mode of thought.

The essential property of scientific concepts is their structure, the fact that they are organized in hierarchical systems (other possible systems would include “networks”, “groups”, “genealogical trees”, etc.). When children interiorize a hierarchical structure they extend considerably the possibilities of their thinking process because such a structure enables them to carry out a series of intellectual operations (different types of definition, logical quantification operations, etc.). The advantages of this structure become obvious when compared with “practical” structures, for example, categories such as “furniture”, “clothes” and so forth. If, for example, we attempt to give a logical definition of the term “furniture”, we quickly discover the limitations of practical categories or categories based on experience which lack the formal structure of scientific concepts. The advantages all individuals draw from the assimilation of such powerful intellectual tools are obvious.

The assimilation of systems of scientific concepts is made possible by systematic education of the type received at school. Organized systematic education is essential for this, unlike oral language acquisition in which teaching has a constructive role but requires no more than the presence of adults with a command of the language to act as partners in shared activities.

This brings us to the second model of development. Vygotsky calls this “artificial development”: “education may be defined as the artificial development of the child ... Education is not limited simply to influencing developmental processes; it restructures in a fundamental manner all behavioral functions” [38, p. 107].

The essential point is that education becomes development: whereas, in the first model of development, it was merely the means of reinforcing the natural process; in the second model, it is a relatively independent source of development. Using Vygotsky’s theory, it is possible to identify several models of development “a point he explained himself on several occasions “by focusing on the period of development concerned, on the

nature of the cultural tools, on the extent to which functions are determined by heredity, etc.

If allowance were made for the enormous range of cultural tools and techniques a person might or might not be given the opportunity to assimilate in particular cultures or periods of history, it would be fairly easy to conceptualize intercultural or historical differences in the cognitive development of groups and of individuals. With such a concept of the development of human intelligence it seems paradoxical to speak of “culture-free tests of intelligence” (which Bruner calls “intelligence-free tests-”) or to maintain that the only possible scientific definition of intelligence is one that reduces it to indicators such as reaction time, evoked potential, etc., as Eysenck [6] does.

His analysis of this second model of development, the model of “artificial development”, exemplified in the process by which systems of concepts are assimilated, leads Vygotsky to his discovery of the metacognitive dimension of development. The fact is that the assimilation of knowledge systems based on such a degree of generalization, the interdependence of concepts within a network which smooths the transition from one concept to another and simplifies the execution of intellectual operations, and the existence of external models (in books or demonstrated by the teacher) for the conduct of these operations, all facilitate the individual’s realization (in Russian, *osoznanie*) and command (*ovladienie*) of their own cognitive processes.

This process of deliberate self-regulation can be helped by the type of learning process (verbal learning, explanation of intellectual methods of approach, description of the concept-building process, concept-building in common, monitoring of the learning process by the adult expert, etc.).

In these conditions, the individual boy or girl would be able to achieve a fairly clear understanding of his or her own knowledge-acquisition processes and to exert deliberate control “the very essence of metacognitive processes “over them. Here it should be made clear that the writings of Vygotsky constitute the most important theoretical and historical source for the conceptualization and empirical study of metacognitive processes. Vygotsky’s scientific achievement in this field is evident: instead of regarding metacognitive process as no more than practical techniques for self-mastery (like mnemonics, for example) or as an isolated question (like most questions of metamemory), Vygotsky offers a theoretical framework. For him, the problems of metacognitive processes are integrated into a general theory concerning the development of higher mental functions. In his theory, these processes are seen as a stage that is necessary, in certain specified conditions, for development. In return, they play an important role in the restructuring of cognition in general. This role provides the clearest illustration of Vygotsky’s concept of development as the process whereby the relationships between particular mental functions are transformed. In this context, for example, even the term “metamemory” [7] is inappropriate, since Vygotsky is not concerned here with the working of memorization techniques in the activity of memoriza-

tion, but with the working in such activities of thought processes that have become conscious and deliberate. In other words, he is speaking about a new relationship between two distinct functions.

Even today, Vygotsky’s theory is the only one that offers, at least in principle, the possibility of conceptualizing scientifically metacognitive processes, the only one that makes it possible to link up this dimension of cognitive development with cognitive development in general and to understand the source of a person’s capacity to control his or her own inner processes (as a result of the transition, outlined by Vygotsky and mentioned above, from external inter-individual control to personal intrapsychic control).

We shall conclude this part of our study by sketching in some possible ways in which Vygotsky’s theory of mental development could be used in educational research and practice. In our view the most important ones are:

First, no other psychological theory of development attaches so much importance to education. In Vygotsky’s theory, education contains nothing that is external to development. As J. P. Bronckart rightly states (in [28] author’s emphasis): “*The school becomes the natural arena of psychology* because it is the scene of learning processes and of the genesis of psychic functions”. That is why the theory could be effectively employed to improve our understanding of education-related phenomena “especially their role in development “to design educational research projects and to test practical applications.

Second, as a direct or indirect consequence of Vygotsky’s theory, a whole series of new empirical research problems of capital importance for education have been incorporated into present-day psychology.

Research on the sociability of the infant (see sources already mentioned), a rapidly expanding area of research, has improved our understanding of early childhood, and there have already been some practical applications in the education of young children.

The correlation between social interactions and cognitive development is one of Vygotsky’s typical themes and is very much in fashion in present-day psychology; it stands at the interface between social psychology and cognitive psychology and has obvious practical applications in education (for example, [22], [4], [3], [26], [40] [42]).

Current research on semiotic mediation, on the role of semiotic systems in mental development, and on the development of language are manifestly strongly influenced by the ideas of Vygotsky ([10], [41] and others).

Third, Vygotsky’s theory is historically and scientifically the only significant source in present-day psychology of research on metacognitive processes. It would be impossible to overestimate the importance of these processes in education and development. Even though highly productive theoretical and empirical research could be conceived within the framework of Vygotsky’s theory, the absence of such research is the sole explanation for the continued neglect of these processes in education. They are now both on the agenda of psychology and pedagogy.

Fourth, it would be easy to develop an analytical grid and set of instruments for research and diagnosis on the

basis of Vygotsky's concept of "artificial development", namely, the sociocultural development of cognitive functions. To start with, it would be enough simply to build up a list of the external aids, the tools and the "internal techniques" at the disposal of individuals and social and cultural groups in order to determine parameters in the light of which comparisons could be made. It is obvious that such instruments, developed within a theoretical framework of this nature, would eliminate the dangers of racist and chauvinistic interpretations.

Fifth, besides the two models already mentioned in this article, a whole series of learning patterns have been conceptualized on the basis of Vygotsky's or similar ideas. These include cooperative learning, guided learning, learning based on the socio-cognitive conflict, knowledge construction in common, etc. [2], [3], [4], [22], [26], [29]).

Finally, the recent emergence of modern audio-visual media and information technologies, their applications in teaching and their short- and long-term place in the lives of children, raise new and serious problems. What instrument could be more relevant and more useful for research into the impact of these new cultural tools than a theory like Vygotsky's, which sets their role in psychological, historical and ontogenetic development precisely at the center of its concerns? This theory offers an ideal conceptual framework for such research, but there remains the hard task of putting it on an operational footing and conducting empirical research.

When we attempt a critical appraisal of Vygotsky's ideas, the first observation that springs to mind is that his theory has remained in many respects a mere sketch, insufficiently developed and operational. In many cases, for instance, his theoretical arguments are not illustrated or supplemented by appropriate methodology. These omissions cannot be blamed on Vygotsky, whose ideas were often simply restated rather than built upon by his disciples. Nor can Vygotsky be blamed for the fact that present-day psychology has wasted effort and resources in conducting research based on much less fruitful paradigms than his.

There has been frequent criticism of the distinction drawn by Vygotsky between two channels of mental development (which he actually regards as intertwined), that is to say, natural (spontaneous and biological) development and artificial (social and cultural) development. We are in agreement with Lidars on the necessity of retaining this scientifically productive contrast in preference to the facile claim that all human development is cultural.

In our opinion the true starting-point for any critical appraisal of Vygotsky's theory should be the absence of criticism of social and cultural institutions (and "tools"). Vygotsky, fascinated by the constructive contributions made by society and culture, never really managed to work out a critical analysis, in the modern sense, of those institutions.

The fact is that the perturbation of social relations (in the social group, the immediate environment or the family) may be capable of proving seriously pathogenetic, precisely through the action of the mechanisms discov-

ered by Vygotsky. Similarly, the cultural "tools", again through the action of Vygotskian mechanisms, cannot be agents solely of mind formation; they also contribute to general development "for example, the formation of narrow-minded, dogmatic or sterile attitudes "precisely because the individuals concerned have experienced interactions with the cultural carriers of such profound tools and messages.

The critical analysis of institutions, including schools, and of social and cultural agents could clarify the conditions in which socio-cultural "tools and instruments" become the deformative factors of development.

Vygotsky's ideas on teaching

In the first part of this profile we looked into the consequences for education of Vygotsky's theory of development. We shall now briefly review his more explicit ideas on education. It must be said, however, that we regard the analysis conducted in the previous section to be of greater importance for this subject.

Vygotsky was himself a very active and, it is said, very gifted teacher. As a member of various bodies in charge of national education, he had a hand in dealing with the practical problems facing the Soviet education system at the time, including the transition from a holistic to a discipline-centred approach in primary schools, and throughout his life he was interested in the education of children with disabilities.

We shall make a few comments here on the educational problems raised by the relationship between development and the learning process, on the "proximal zone of development" concept and on specific aspects of formal education.

Vygotsky regarded the question of the relationship between development and the learning process as primarily a theoretical one. Since his theory regards education as being closely connected with development, however, and development as taking place in the actual socio-cultural environment, his analyses are focused directly on education of the type provided in schools.

We have already seen that one of his models of development (Model II—artificial development) depends, in fact, upon formal education, the core of which is the acquisition of systems of scientific concepts.

For Vygotsky, therefore, education cannot be reduced to the acquisition of a body of information; it is one of the sources of development and is even defined as the artificial development of the child. Hence, the essence of education is to ensure the child's development by the provision of tools, internal techniques and intellectual operations. On many occasions Vygotsky even speaks of the acquisition (learning) of different types of activity. If we applied his approach to botanical classification, for example, we could say that for Vygotsky the essential thing is not a knowledge of taxonomic categories but a mastery of the classification procedure (definition and application of taxonomic criteria, the classification of ambiguous or borderline cases, determination of new members of a class and, most important of all, learn-

ing to execute the logical operations that interlink various classes, etc.).

All this goes to show that Vygotsky attached the greatest importance to the content of educational curricula but placed the emphasis on the structural and instrumental aspects of that content, the significance of which was mentioned in our analysis of the implications of McLuhan's phrase "the medium is the message". In this connection, it must be said that Vygotsky did not take these fruitful ideas far enough. In this approach it is quite possible to regard the school itself as a "message", that is, a fundamental factor of education because, as an institution and quite apart from the content of its teaching, it implies a certain structuring of time and space and is based on a system of social relations (between pupils and teachers, between the pupils themselves, between the school and its surroundings, and so on). Indeed, the impact of formal education depends to a considerable extent on these aspects of the "educational medium".

Secondly, we have already seen that Vygotsky did not take his criticism of formal education very far despite its pertinence to his system of thought: the school does not always teach systems of knowledge but in many cases overburdens its pupils with isolated and meaningless facts; school curricula do not incorporate tools and intellectual techniques; all too often, schools do not provide a setting for social interactions conducive to knowledge construction, etc. Lastly, Elkonin [5] rightly reproaches Vygotsky for not paying enough attention to teaching methods.

Vygotsky's concept of "the proximal zone of development" has first of all theoretical impacts. In the socio-cultural concept of development children cannot be regarded as cut off from their social and cultural environment like young Robinson Crusoes. Their ties with other people form part of their very nature. It is thus impossible to analyze their development, aptitudes or education without taking social ties into consideration. The concept of the proximal zone of development illustrates this view precisely. This zone is defined as the difference (expressed in units of time) between the performance of the same child working with and assisted by an adult. For example, two children pass tests for 8-year-olds on a psychometric scale; with standardized assistance, the first attains the 9-year level and second the 12-year level; in this case the proximal zone is one year for the first child and four years for the second. In this concept of the proximal zone, the view of the child as a social being engenders a methodological approach with far-reaching implications, since the child's development is regarded as a dynamic and dialectical process. Applied to peda-

gogy, the concept of the proximal zone offers a way out of the eternal dilemma of education: should we wait until children have attained a particular level of development before beginning formal education or should we expose them to a certain education so that they may attain a particular level of development?

Following the dialectic of the relationship between the learning and development processes examined earlier, Vygotsky adds that development is more productive if children are exposed to new learning precisely in their proximal zone of development. In this zone and with adult assistance children would be able to assimilate more easily what they would be incapable of assimilating if left to themselves.

The actual forms taken by adult assistance in the proximal zone vary enormously: the demonstration of methods to be imitated, examples, maieutic questions, monitoring by the adult and, most important of all, shared activities (*sovместnaja deatel'nost*) as a constructive factor of development.

The heuristic value of the proximal zone concept has not been sufficiently exploited. The nature of the concept translates into operational terms the theoretical concept of the child as a social being. But its applications need to be taken further and, in fact, a new approach to the theoretical and practical construction of diagnostic tools based on that concept is currently being developed. It involves studying the dynamics of the development process (rather than present performance) and the capacities of normal or handicapped children, in order to draw maximum benefit from the assistance and learning opportunities offered.

A second direction that could be explored in the application of this concept is education in the family and at school. There is evidence that many parents spontaneously direct their teaching efforts precisely towards the proximal zone [9]. Bearing in mind Vygotsky's oft-repeated view that the education of a child should ideally be aimed at the proximal zone in which that child experiences his/her encounters with the culture, assisted by an adult acting initially as a partner in shared constructions and later as the organizer of the learning process, formal education could be regarded as a powerful support for natural development (Model I) or as a relatively independent source (Model II). The references to formal education that we find in Vygotsky should be taken not as descriptions of actual educational situations, however, but rather as an outline for the renewal of education. Vygotsky's theory, formulated over fifty years ago, has such heuristic potential that it could very well become one of the instruments for this renewal of present-day formal education.

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Development and Learning in the Context of Social Interactions: L. Vygotsky vs J. Piaget

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The article is devoted to the problem of contemporary didactics, touching upon the issue of the structure, transmission and acquisition of knowledge. The focus is on understanding the correlation between the content of knowledge and the way it is translated (transmitted) from one person to another, from an adult to a child. We analyze the initial, joint-distributed form of activity that is specific for efficient teaching of children.

Keywords: development, learning, social interactions, socio-cognitive conflict, emotional and semantic conflict, community (“obschnost”), understanding, mutual understanding, reflection, way of interaction, thinking, perezhivanie.

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Развитие и обучение в контексте социальных взаимодействий: Л. Выготский vs Ж. Пиаже

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Статья посвящена проблеме современной дидактики, затрагивающей вопрос строения, передачи и приобретения знания. Основное внимание направлено на то, чтобы понять, в каком соотношении находятся содержание знания и способ его трансляции (передачи) от одного к другому, от взрослого к ребенку. Обсуждается исходная, совместно-распределенная форма деятельности, специфической для эффективного обучения детей.

Ключевые слова: развитие, обучение, социальные взаимодействия, социокогнитивный конфликт, эмоционально-смысловой конфликт, общность, понимание, взаимопонимание, рефлексия, способ взаимодействия, мышление, переживание.

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Our discussion is devoted to the problem of modern didactics, which addresses the issue of the structure, transmission and acquisition of knowledge in essence. The main focus of the discussion is to understand the relationship between the content of

knowledge and the form of its translation (transmission) from one to another, in our case, from adult to child. Until this question becomes the subject of special consideration, we will create models and samples of “didactic units” without touching the essence of

the problem of development in learning, reduce the essence of the problem to the transfer or even “transplantation” of knowledge from adult to child, substituting the processes of development with the accumulation of this or that learning material.

Analyzing the correlation between the content of knowledge and the form of its mastering, it is worthwhile to once again turn to the theoretical views of L.S. Vygotsky and J. Piaget, whose studies allow us not only to approach the problem of development in learning, but also to reveal the essence of this problem to a great extent. As it is known, both J. Piaget and L.S. Vygotsky noted the close connection between child development and the forms of interaction between adults and children, the cooperation of the children themselves, and substantiated the influence of social interactions and socialization on the development of children’s thinking.

The approaches of the two outstanding scientists are fundamentally different from each other. The researchers lived and acted in different sociocultural contexts, and posed and solved the problem of the development of thinking on different scientific bases. They created two fundamentally different methods of the research of thinking, substantiated different, in essence, concepts of learning, and fundamentally differently defined the school as a social institution of child development. A comparative analysis of J. Piaget’s and L.S. Vygotsky’s approaches to the problem of research

of development in the context of social interactions allows us to better understand their role in children’s development in learning, and, as a result, to come closer to the issues of modern didactics, which will determine the essence of a new school, a school that “must teach to think” (E.V. Ilyenkov).

J. Piaget and L.S. Vygotsky in Modern Studies

The methods of J. Piaget and L. Vygotsky, aimed at studying the processes of child development, nowadays not only do not lose their relevance, but also attract, more and more, the attention of modern researchers. Thus, the analysis of the dynamics of citation by foreign researchers of the works of L.S. Vygotsky and J. Piaget from 1996 to 2015, according to Google Scholar¹, shows a steady tendency towards the increase in citations devoted to the problem of learning and development (Fig. 1–2).

Moreover, the high level of citations of such works by J. Piaget as “The Moral Judgment of the Child” and “The Psychology of Intelligence”, and L.S. Vygotsky’s “The History of the Development of Higher Mental Functions” and “Thinking and Speech” indicate that the substantiation of the forms of the origin of children’s thinking (operational structures of intellect for Piaget or scientific concepts for L.S. Vygotsky) is still a central problem of developmental psychology today (Fig. 3–4).

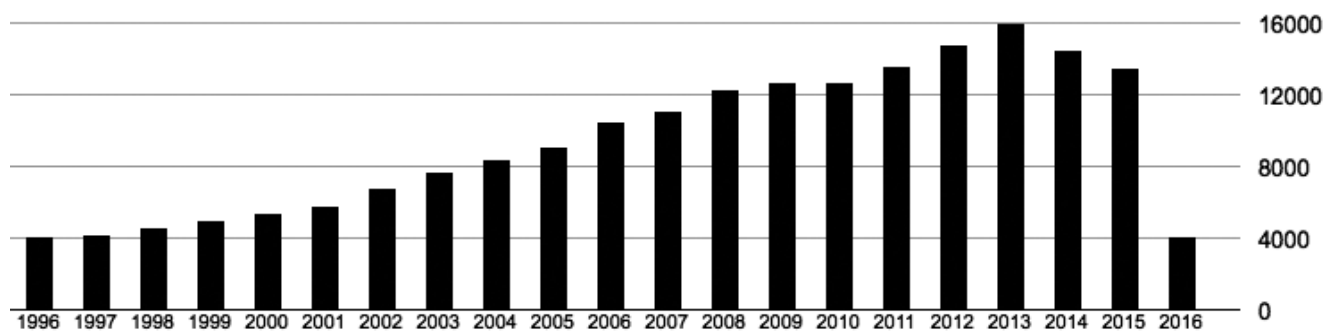


Fig. 1. Steady Increase in Citations of J. Piaget’s Works, Reflecting the Interest of Modern Researchers in the Problem of the Development of Thinking

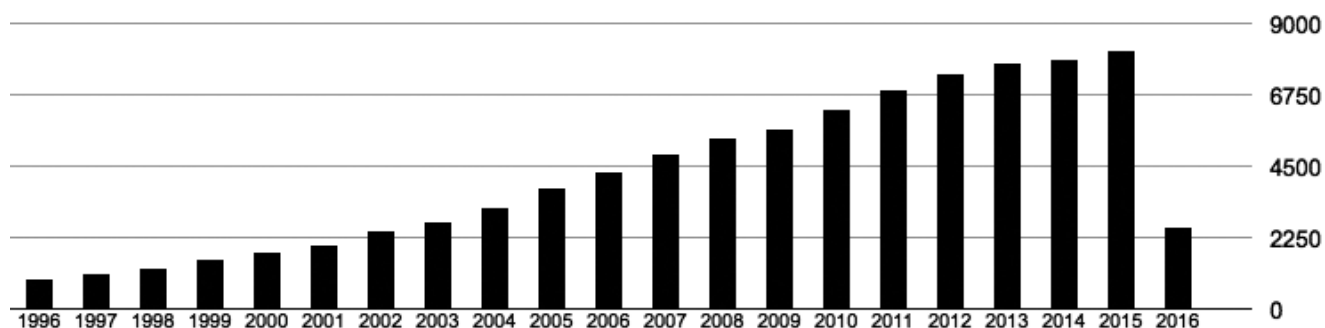


Fig. 1. Steady Increase in Citations of L.S. Vygotsky’s Works, Reflecting the Interest of Modern Researchers in the Problem of the Development of Thinking and Learning

¹ Data from the Google Scholar version is cited in the report by A.H. Perret-Clermont, which was read at the anniversary conference dedicated to the 120th anniversary of the birth of L.S. Vygotsky [13].



Fig. 3. The Most Cited Works of J. Piaget

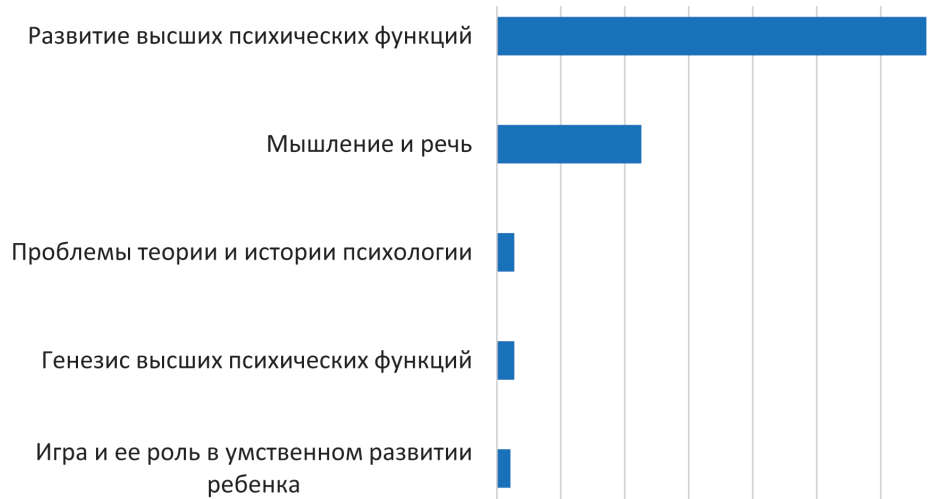


Fig. 4. The Most Cited Works of L.S. Vygotsky

The Key Provisions of the Theory of J. Piaget²

The formation of intelligence for the scientific school of J. Piaget is the core line in the child's mental development, on which all other mental processes depend. According to J. Piaget, the qualitative originality of the development of intelligence at each age, the jumps and transitions from one age stage to another are determined by the *lifetime formation of* intellectual activity structures specific to each age.

The basic idea of development in Piaget's theory is that intellectual operations are realized in the form of holistic structures. These structures are formed due to the equilibrium to which the overall development of intelligence tends towards. The Geneva school of genetic psychology, created by J. Piaget and his followers, studies the mental development of the child, and in fact, the origin of intelligence. A special study of children's understanding of natural phenomena, a descrip-

tion of what the features of children's logic are, and, as a result, the justification of the mechanisms of cognitive activity in general can be considered its main task. The fundamental answers that we find in Piaget's works regarding the development of operational structures of children's thinking constitute the core of the Geneva school of science.

The key provisions of Piaget's theory can be summarized as follows. Piaget's theory can be generally expressed with the help of four axioms [16].

1. Intelligence is built on the basis of action.
2. Action is the source of development.
3. Thought is a compressed form of action.
4. Cognition at all genetic levels is a product of real actions performed by the subject with objects.

Justifying these positions, Piaget proceeds from the fact that the object(s) exists independently of the subject. In order to cognize objects, the subject must act with them: connect, divide, move, change, combine, i.e. transform them. Development is realized on the basis of

² A detailed analysis of the main provisions of J. Piaget's theory was carried out by L.F. Obukhova [see, for example: 10; 11 and others].

real actions performed by the subject with the objects of the external world. At the same time, the description of the subject-object interaction cannot be fully reflected by the formula: “S→R” (unidirectional arrow). The formula fixing the reciprocity of the “S↔R” relation (reversible arrow) corresponds more fully, from Piaget’s point of view, to the essence of subject-object interactions.

The reversible nature and content of subject-object interactions reflect Piaget’s ideas of transformation and construction. Thus, the idea of *transformation* captures the fact that the boundary between subject and object is not established from the very beginning, and, in every action, the subject and object are mixed. The *idea of construction* assumes that objective knowledge is always subject to certain structures of action. And the structures of action are not given either in the objects, since they depend on actions, or in the subject, since the subject must learn to coordinate its actions.

The most general thing that is preserved in action at a certain level of development is characterized by the *schema of action*, which, according to Piaget, is the structure at a certain level of mental development, and in the narrow sense – the sensorimotor element of the concept. Based on the concept of the scheme of action, Piaget introduces a fundamental distinction between the form and content of cognition. In his theory, the content of children’s cognition is what is acquired through experience and observation; the form of cognition is the “general scheme” of the subject’s cognitive activity, which includes the subject’s interactions with objects. It is not the object as such that plays the main role in the process of cognition: the subject himself chooses the object depending on the level of development of mental structures. And the cognition of reality depends on how developed the mental structures are.

J. Piaget describes three main forms of experience that determine the development of intellectual structures [17].

– *Experience-exercise*, which is important for skill formation.

– *Physical experience*, thanks to which the child, acting with objects, begins to distinguish the physical properties of objects (shape, weight, volume, area, etc.).

– *Logico-mathematical experience, which the child derives from the actions with objects*. It is characterized by an orientation not only to the achievement of a pragmatic result, but also to the method of action itself, which is a necessary condition for the development of intelligence. It is the logical-mathematical experience that is decisive for the development of intelligence, that characterizes a higher level of mental development.

The Law of Mental Development in the Theory of J. Piaget

The main achievement of J. Piaget is the discovery of egocentrism of children’s thinking. According to Piaget, *egocentrism* is the main feature of thinking, a hidden mental position that reflects the originality of children’s

logic, children’s speech, children’s ideas about the world. In numerous studies of the scientific school of J. Piaget, egocentrism is defined as a kind of systematic and unconscious illusion of cognition, a form of initial centration of the mind that characterizes mental activity in its origins. Egocentrism points to the fact that the external world does not directly impact the subject’s mind, and our knowledge of the world is not a copy or representation of external events.

The basic law of mental development in the theory of J. Piaget’s theory is the law of *decentration*, the law of transition from general egocentricity to intellectual decentration, which is expressed in the child’s transition from egocentrism to an objective position in the cognition of things, other people and himself. Moreover, the key position defining the essence of the formulated law is that, according to J. Piaget, the basis of the transition from the egocentric to the objective position is the process of socialization, i.e. the transition from individual and subjective to social. Piaget believes that thought is formed on the basis of action, but the source of integral logical structures (the development of individual intelligence) should be sought in the socialization of an individual [15–16].

Socialization, in Piaget’s theory, is a process of adaptation to the social environment, which consists in the fact that the child, having reached a certain level of intellectual development, becomes capable of cooperating with other people by dividing and coordinating his or her point of view and the points of view of other people.

At the same time, *social life*, as it is understood by J. Piaget, begins to play a progressive role in the development of the mind only at those stages when cooperative relations, disputes and discussions between children of the same age are formed. Such a turning point in development comes around 7-8 years of age. Until this age, the leading role in the child’s development is played by his relations with adults, which, as J. Piaget emphasizes, are built mainly on the basis of one-sided respect and the authority of the adult.

According to Piaget, “...in the pre-operational stages, the structures characteristic of incipient thinking precludes the formation of cooperative social relations that could entail the constitution of logic. Moving within the space between deforming egocentrism and a passive acceptance of intellectual coercion, the child is not yet an object of intellectual socialization capable of profoundly altering the mechanism of this process.

Therefore, it is at the level of the formation of concrete operations that the problem of the correlation between the influence of social exchange and individual structures on the development of thinking becomes severe” (highlighted by me. – V.R.) [25, p. 173,].

Revealing the content of the socialization process, Piaget points to the fact that, in the process of interactions with adults and peers, children at the age of 7–8 years have a *socio-cognitive conflict*, when the point of view of others becomes significant and must be taken into account when performing their own actions. The other’s point of view is correlated with one’s own position, it is taken into account and included in the process

of building an action, is fixed in the emerging schema of action, and becomes a condition for the development of emerging groupings (Fig. 5).

At the same time, in Piaget's theory, the isomorphism of operational structures and structures of cooperation is considered as a consequence of a more general law of grouping development. For each grouping internal to an individual is, according to Piaget, a system of operations carried out jointly, i.e., in the proper sense of cooperation. This form of equilibrium is not the result of single intellectual thinking, nor is it a social product. According to Piaget, internal operationalization and external cooperation are only two additional aspects of the same totality and the equilibrium of one depends on the equilibrium of the other.

Intellectual Development in the Context of Social Interactions in Piaget's Theory

The analysis allows us to formulate the principles of intellectual development in J. Piaget's theory, while emphasizing the special role of social interactions in this process. Thus, according to J. Piaget:

- 1) The basis of human intellectual development (development of thinking) is a qualitative change in the forms of experience based on the performance of one's own actions;
- 2) The means of performing individual actions in the conditions of $S \leftrightarrow O$ interactions are forming constructs ("knowledge" about the object and action structures subordinated to them);
- 3) Invariants of action (reflected experience) are formalized into action schemas (an action scheme is a structure at a certain level of mental development, a mental system or an integrity, the principles of the activity of

which differ from the principles of the activity of the parts);

4) Cooperation (collaboration) allows for the correct transfer of a concept, starting from the level of specific operations. The condition for such a transfer is socio-cognitive conflict – a new type of relations between subjects, replacing the relations of prestige and authority that characterize the pre-operational level of intelligence development;

5) Socialization of individual intellect (transition from individual and subjective to social) – the main direction of intellectual development. Socialization is impossible without cooperation and collaboration, without the inclusion of individuals in the actions of different communities.

Conventionally, the scheme of the socialization of individual intelligence, as it is presented in Piaget's theory, is shown in Fig. 6.

It is noteworthy that recent studies carried out within the framework of Piaget's scientific school problematize the Swiss scientist's point of view on the isomorphism of operational structures and cooperation structures. Thus, recently, in the works of researchers of this scientific school, the question has become more and more distinct whether social interaction arises from some form of assistance that would precede cooperation, and influence the development of thinking, and whether it ("co-action") is the source of both social and cognitive development, the determining condition of which it could be?

Recognizing this position would mean that the social environment acts on the child's development from birth. Moreover, the data from recent years allows researchers to say with increasing responsibility that the social factor plays a leading role in the emergence of the child's ability to act consciously, to distinguish communicative actions as special forms of social interactions.

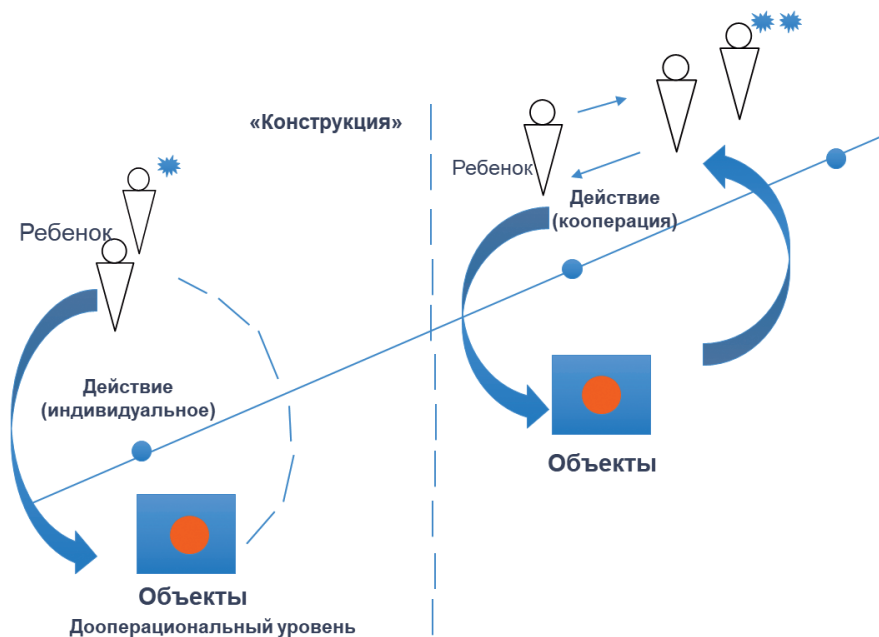


Fig. 5. Socio-Cognitive Conflict as a Mechanism for the Development of Individual Intelligence Under Conditions of Cooperation (in J. Piaget's Theory)

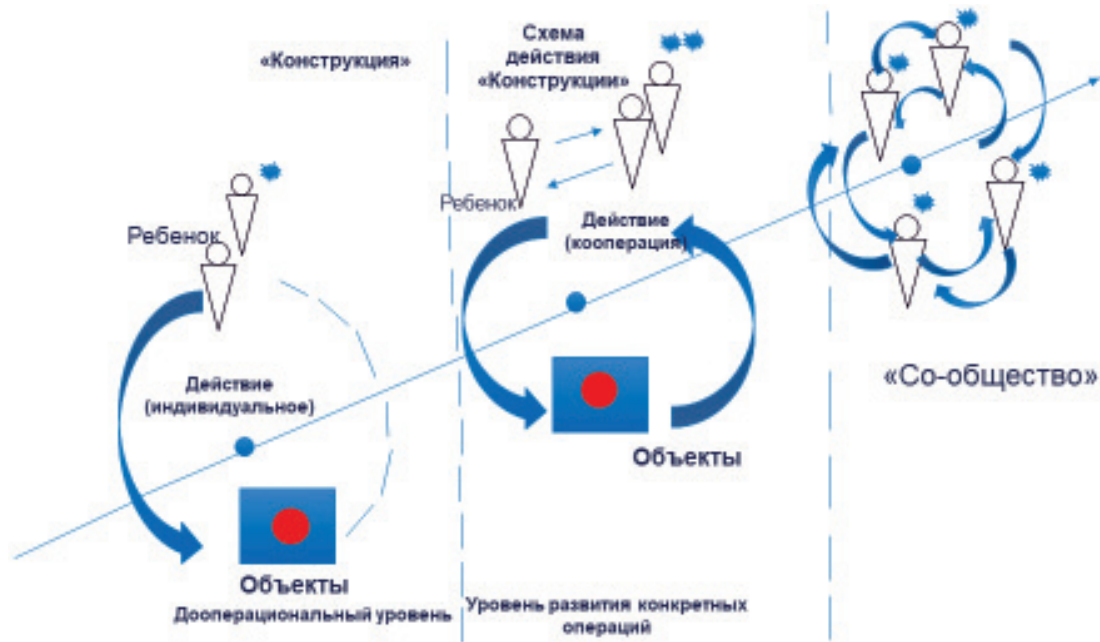


Fig. 6. Socialization of Individual Intelligence (in Piaget's Theory)

Thus, data from a number of studies of communicative interactions at an early age indicates that "...just as the child's visual familiarity with the details of the environment arises within innate orienting movements, the smile manifests itself as a specific element of its innate communicative activity. Mothers are sensitive to the totality of a child's communicative actions, not to a single smile: but even when a child cannot make a smile recognizable, his mother is able to see his sociability" [29, c. 452]. These types of statements can be seen more and more often in the works of the followers of the scientific school of J. Piaget [27; 29–30].

**The Role of Social Interactions
 in the Development of Children's Thinking
 in the Scientific School of L.S. Vygotsky.
 The Law of the Development of Higher Mental
 Functions**

It is obvious, however, that the issue of the biplanarity (isomorphism) of intellectual structures and cooperation structures will remain open unless the approach towards the problem of development is fundamentally revised. The foundations of such an approach are laid in the scientific school of L.S. Vygotsky.

As is known, the scientist considered social interactions and social relations as the initial basis (source) of development. "Behind all the higher functions and their relations," wrote L.S. Vygotsky, "there are genetically social relations, real relations, homo duplex (a dual person – *Latin*). Hence the principle and method of personification in the study of cultural development, that is, the division of functions between people, the personification of functions. *For example, voluntary attention: one masters, the other possesses. Dividing again in two what is merged in one, the experimental deployment of the higher*

process (voluntary attention) into a small drama" (highlighted by me. – V.R.) [5, p. 1023].

This conclusion was made by L.S. Vygotsky on the basis of the results of widely known experiments on the mastery of attention with children (Fig. 7). An adult placed two cups covered with lids in front of a child. In one of them the adult placed (hid) a nut. The lids were painted in different colors (dark gray or light gray). The darker-colored lid covered the cup where the nut was located at the moment. Depending on the location of the nut, the ratio of colors on the lids changed. The adult's intention was to draw the child's attention to the correspondence between the location of the object (nut) and the corresponding sign (light gray/dark gray). The adult's attention, represented through the correlation of object and sign structures, had to be mastered by the child himself. This was achieved through the mediation of object and sign structures on the basis of unfolding interactions and relationships between the adult and the child.

L.S. Vygotsky formulated the process of mastering a function as a social situation initially distributed between participants as a well-known law of development of higher mental functions, according to which "...any function in the cultural development of the child appears twice, in two planes, first social, then psychological, first between people as an interpsychic category, then within the child as an intrapsychic category" [2, p. 145].

The idea of mastering the function as initially divided between an adult and a child was most thoroughly realized on the basis of the method of double stimulation, developed by L.S. Vygotsky and L.S. Sakharov, which is the prototype of the genetic modeling approach to the study of development created by L.S. Vygotsky. The specific method made it possible to study, in experimental conditions, the process of concept formation as a process of the acquisition of meaning by a meaningless

word, the transformation of the word into a symbol, into a representative of an object or a group of similar objects [see: 3–4, etc.].

For L.S. Vygotsky it was important to show that the formation of a concept or the acquisition of meaning by a word is the result of a complex active joint activity of an adult and a child (operating a word or a sign), in which all the main intellectual functions participate in a peculiar combination. Individual consciousness is, at the same time, the product of the interiorization of this activity.

“The transition [from intersychic to intrapsychic functions, i.e., from the forms of the child’s social collective activity to his individual functions. — V.R.] is a general law ... for the development of all higher mental functions, which arise initially as forms of cooperative activity and are only later transferred by the child into the sphere of his psychological forms of activity.

“Not gradual socialization brought into the child from the outside, but gradual individualization, arising on

the basis of the child’s inner sociality, is the main tract of child development” (highlighted by me. — V.R.) [1, pp. 343–344].

Learning and Development in the Context of Social Interactions: Problems Posed by L.S. Vygotsky

The stages of the emergence of individual consciousness from the forms of collective and social activity, pointed out by L.S. Vygotsky, are accurately described by V.V. Davydov (Fig. 8). The individualization of consciousness, in V.V. Davydov’s interpretation, is a culturally significant result of mastering initially collective and social forms of activity. In this case, signs and symbols act as necessary cultural means of organizing individual human consciousness.

Analyzing L.S. Vygotsky’s approach to the role of social interactions in human development, V.V. Davydov

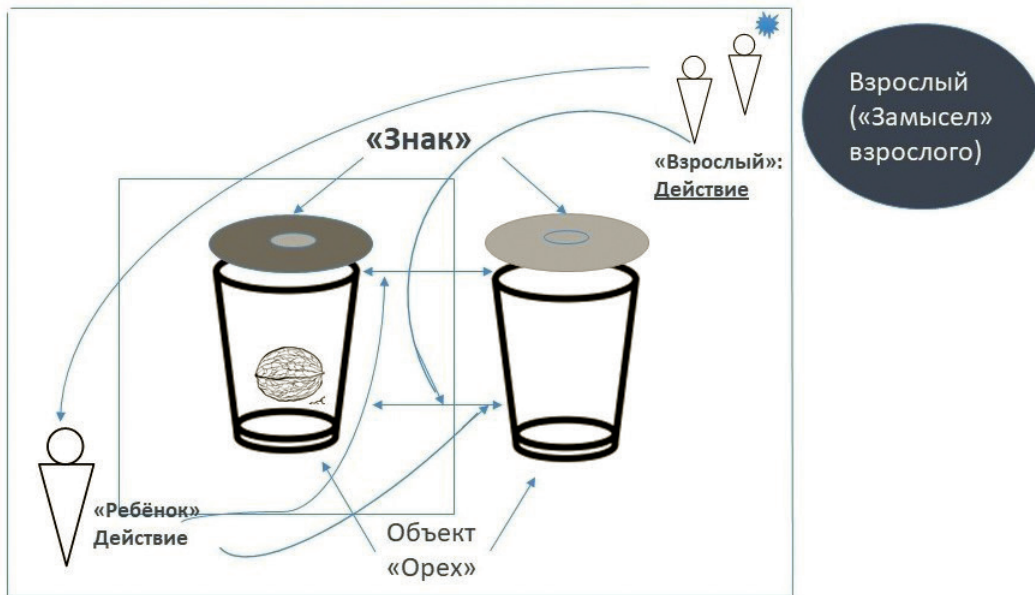


Fig. 7. Scheme of Acquiring Attention in the Situation of the “Child-Adult” Interaction in L.S. Vygotsky’s Experiments



Fig. 8. Stages of Emergence of Individual Consciousness from the Forms of Collective and Social Activity (according to V.V. Davydov)

outlined six main problems that are posed in the scientific school of L.S. Vygotsky and the development of which will allow for a deeper understanding of the nature of the development of higher mental functions [8].

Thus, according to V. V. Davydov:

1) The basis of human mental development is a *qualitative change in the social situation* or, in A.A. Leontiev's terms, a *change in human activity*;

2) The universal moments of human mental development are his education and upbringing, because, according to L.S. Vygotsky, "learning is valuable when it goes ahead of development";

3) The initial form of activity is its unfolded fulfillment by a person in an external, social or collective plan;

4) New psychological formations arising in a person are derived from the interiorization of the initial form of his activity;

5) Various sign and symbolic systems play an essential role in the process of interiorization;

6) Intellect and emotions, which are in internal unity, play an important role in human activity and consciousness.

Socio-Genetic Method of Research of Development in Learning

Provisions that form the basis of the cultural-historical scientific school of L.S. Vygotsky and that are outlined by V.V. Davydov, allow us to take a new look at the study of the mechanisms of the development of thinking, to connect these mechanisms with qualitative changes in the social situation caused by the development of forms of collective and cooperative activity. When designing this type of situations, it is important to take into account the following.

1. It is impossible to limit ourselves to the study of social interactions and the process of mastering concepts as parallel processes.

2. The method of the experimental research of the process of concept formation should be *socio-genetic* (compare with the "*genetic modeling method*" of L.S. Vygotsky). The basis of this method is the principle of the intermediation of subject structures and structures of joint activity: the subject content of the object, which determines the content of the concepts being mastered, is mediated by the ways of interaction of the participants of the social situation.

3. Organization of interactions between adults and children, the children themselves is a necessary condition for performing joint actions, since it is the interactions and relationships of the participants themselves that determine their understanding of the connection between various actions with the object, the properties of its structure and the corresponding concepts.

4. The way of joint actions, corresponding to the system of concepts being mastered, characterizes the main didactic unit that determines the requirements for the organization of the social situation.

5. It is necessary to specifically investigate and design social situations based on mediating the subject content

of the object by the ways of the interaction of its participants, to analyze the child-adult communities and joint forms of activity arising in these conditions, considering them as the initial forms of the origin and development of emotional and semantic, and sign and semantic structures that determine the processes of mastering the system of concepts.

Note that the socio-genetic method is based on V.V. Davydov's theory [7]. It meets the requirements formulated by us, according to which the relationships and interactions of the participants in a social situation determine the conditions for the development of child-adult communities and the corresponding forms of joint activity [21; 28]. Numerous studies carried out in accordance with this method are presented in the system of methods, thanks to which new data was obtained on the influence of social interactions between adults and children, the children themselves on the development of children's thinking, the influence of relationships on the success of learning was proved [see: 6; 19; 20; 24, etc.]. It has been established, in particular, that the emerging child-adult communities characterize:

– distribution of initial actions and operations (determined by a group of transformations that ensure that participants search for a common way of constructing the object under study);

– exchange of ways of action (determined by the need to include individual actions in new ways of interaction);

– communication, without which the distribution, the exchange of actions and the understanding by participants of the limitations of their actions are impossible, and thanks to which the participants plan adequately to the conditions of the task of the activity and search for joint ways of action;

– mutual understanding, which is conditioned by the necessity to include the individual ways of action of participants in joint activity (allows to establish the ratio of possibilities of one's own action and the actions of other participants of activity);

– reflection, on the basis of which the participant's attitude to his/her own action (limitations and opportunities) is established, the boundaries of the transformation of this action are determined, and the search for new forms of interaction and cooperation is initiated (modeled).

Moreover, the results of recent studies, obtained by applying the developed method, confirmed the fact that the relationship between *communication*, *mutual understanding* and *ways of interaction* can be considered as an integral indicator of children's inclusion in a joint way of problem solving and, accordingly, as a meaningful characteristic of the emerging community, which defines a new framework of opportunities for the development of children's higher mental functions [22; 28]. The table reflects the peculiarities of the four types of child-adult communities identified in the process of analyzing the results of the study.

The analysis of the data we have presented allows us to conclude that the main difference between the community, which means that children are included in

the process of joint problem solving, and other possible forms of uniting the participants lies in their orientation towards the method of interaction itself. The features of such an orientation are manifested in the children's targeted search for a joint solution: in assessing the limitations of *their own* and *other* actions, in mutually talking through and by the symbolic representation (designation) of the scenarios of possible interactions that can be effective for problem solving, and in the subsequent modeling (playing) of such interactions.

The obtained data once again confirms the position that social interactions determine the mechanism of the separation of functions, on the one hand, and the way of mastering them, on the other. This means that the social interactions and social relationships of the participants, which initially serve as necessary conditions for the social realization of the thinking and communication processes, later begin to fulfill the role of the cognitive function of the self-regulation and mental representation of this or that information. These interactions activate as yet undeveloped cognitive functions, enabling children to act at a higher cognitive level.

Fig. 9 shows the scheme of social interactions between an adult and a child, which contribute to the emergence of a special emotional and semantic conflict between the participants, determining the change of the social situation due to the emergence of new motives and goals of activity. This type of interaction indicates

the fundamentally different conditions of the origin of thought than the socio-cognitive conflict described in J. Piaget's theory, as well as the inherently social nature of the development of higher mental functions.

The data we have obtained allows us to discuss the question of the sources of development based on emotional and semantic conflict. First of all, there is reason to believe that the change in the subject of the task arising in the conditions of social interactions creates prerequisites for the change in the subject of action. This change is connected with the emergence of a fundamentally new task for children to search for the mode of action itself. The necessity of its solution triggers a new motivation that encourages children to organize joint actions and to search for a solution together. Following this motivation, participants discuss the emerging constraints and design the necessary exchanges, strengthening communication and modeling the ways of possible interactions.

Under these conditions, a common *emotional and semantic field* is formed, based on the participants' experience of new possibilities and understanding of the meanings of their actions. The role of emerging experiences in the development of activity, as it is known, was specifically noted by A.N. Leontiev, who wrote: "These forms of experience are forms of reflection of the subject's attitude to the motive <...> This realized relation of the subject of action to its motive is the meaning of action; the form of experience (consciousness) of the meaning of action is

Table

Types of Children's Communities Arising in the Conditions of the Joint Solution of Educational Problems (by the Example of Solving a Class of Problems on the Equality of Moments of Forces)

Type of Community (Modes of Interaction)	Processes of Communication and Mutual Understanding that Characterize the Joint Search for a Way to Solve a Problem
1. <i>Pre-cooperative</i> There is no interaction between participants. Children are not included in the joint search for a way to solve the problem	Processes of communication and the exchange of actions aimed at finding a joint way of solving the problem do not occur. There is no mutual understanding
2. <i>Pseudo-cooperative</i> Interaction between participants is substituted by the action of one of the participants. In some cases, the problem is solved by one of the participants (individually)	Communication between participants does not affect the content of the problem. There is no understanding of the possibilities of the other participant's action and exchange of actions, which determine the search for a joint solution.
3. <i>Cooperative (organizational)</i> The resulting joint action relies on the interaction of the participants based on simple cooperation in the operations performed. Children search for a solution to a problem in reliance on the possibilities of individual actions without analyzing the method of interaction itself. The problem is solved	Participants' mutual understanding of individual action possibilities and the exchange of actions are conditioned by the search for a joint way of solving the problem. At the same time, communication is not oriented towards the search for a joint solution. Analyzing the way of interaction does not become the goal of joint action. It is important for the participants to solve the problem, but not to understand how to organize interaction for the correct solution
4. <i>Meta-cooperative (reflective-analytical)</i> The subject of special analysis of participants is the mode of interaction itself, which makes its transformation and correct problem solving possible. Based on the inclusion of individual actions in the joint action and the exchange of actions, the problem is solved	Communication is aimed at discussing the possibilities of including individual actions in the joint action. The search for the correct solution of the problem is transformed for the participants into a task of the interaction and determination of a joint method of solution. Mutual understanding is mediated by the search for a way of interaction based on understanding the possibilities of individual actions in joint action. The inclusion of individual actions in joint action becomes the main goal of interaction. The preconditions for new relationships are created, and as a result — for the emergence of a new, in terms of goals and objectives, social situation.



Fig. 9. Emotional and Semantic Conflict as a Mechanism of the Change of Social Situation

the consciousness of its purpose ... A change in the meaning of action is always a change in its motivation" [9, p. 48–49]. Our research has shown that activity in social situations created on the basis of emotional and semantic conflict unfolds due to new meanings and attitudes to the performance of their own actions and actions of other participants through the experience of these meanings, their understanding and mutual understanding. With the emergence of a new motivation for the child, other opportunities arise and, consequently, other boundaries for individual actions, thanks to which children tend to plan scenarios for solving problems, make meaningful agreements among themselves about real interactions, and design new ways of working together.

The obtained data allows us to consider the role of social interactions and social relationships in children's development in learning, to discuss the problem of designing an educational space as a space of developing child-adult communities, and, in fact, to redefine the requirements for a modern school [see, for example: 23].

A School That Must Teach to Think: Vygotsky's school ∞ Piaget's school

In general, the analysis of the problem of learning and development in the context of social interactions, presented in the two major scientific theories of L.S. Vygotsky and J. Piaget, allows us to discuss the issue of the modern school as a developmental school in the most general way. The reason for such a discussion are the views of the two outstanding scientists on the sources and mechanisms of human development, in particular, the notion that actions with objects and social interactions are interrelated, and that the effective transfer of knowledge and concepts is mediated by forms of joint-collective activity. It is legitimate to speak of both simi-

larities and differences in the respective approaches. Piaget's school of action and the space of mastering various forms of experience is an alternative to L.S. Vygotsky's school based on the developing forms of child-adult communities and activities. The following lists of characteristics of the two schools reflect this difference in general terms.

1. A school that "teaches to think" (basic definitions for the Piaget School project).

- A school of action (a space for active transformation and construction).

- A school of mastering different forms of experience (exercise – physical experience – logical and mathematical experience).

- A school of intellectual development (forms of thinking activity), which ensures the process of decentration of children's thinking and the formation of intellectual structures (schemes/models/groupings).

- A school of cooperation, based on role exchange, cooperation and collaboration in solving problems and tasks (starting from the level of concrete operations).

2. A school that "teaches to think" (basic definitions for the Vygotsky School project).

- A school based on developing forms of child-adult communities and activities.

- A school for the realization of age-related opportunities and the development of motivation ("school of ages").

- A school based on the modern (cultural) means of organizing communication and activity (object and content environment, "smart digital environment", etc.).

- A school for the development of abilities:

- To interact and cooperate;

- For communication and understanding (mutual understanding).

- A school that ensures the development of reflexive forms of consciousness (from social-collective to

individual through the formation of sign and semantic contexts).

The requirements to the models of the two types of schools presented in the most general form, based on the scientific provisions of the two leading theories of hu-

man development, should be taken into account when designing modern educational spaces and creating an effective means of organizing the joint activities of children and adults that promote children's development in learning.

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Evald Ilyenkov on the Freedom of the Will

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Evald Ilyenkov's works explore the issue of free will within the framework of activity theory. According to him, the concept of freedom is linked to the general activity of living beings in the external world and to the purposeful nature of this activity. Human freedom, or the 'freedom of the will', is treated as acting in accordance with the "purpose of the species", that is, the interests of human society. The will is a psychological function that subordinates an individual's activity to the goals and norms of social life. Alternative doctrines postulate free will as an immediate "fact of consciousness", discovered through introspection and underlying human activity. This is where traditional empirical psychology intersects with the physiological doctrine of the unconditional reflex of freedom. Ilyenkov regards such a conception of free will as a "psychological illusion" and examines the implications of this illusion in the classic experiments of academician Ivan Pavlov. The article offers a cultural-historical perspective on the development of the human mind as a process of increasing free will: the emancipation of mental activity from the captivity of natural affects through the use of cultural tools and man's rational understanding of the world and himself.

Keywords: freedom, will, "thinking body", "reflex of freedom", "psychological physiology", Spinoza, Vygotsky, Ivan Pavlov.

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Э.В. Ильенков о свободе воли

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В работах Э.В. Ильенкова проблема свободы воли решается в традициях деятельностной психологии. Понятие свободы вообще он связывает с универсальностью движения живых существ во внешнем мире и с целесообразным характером их деятельности. Человеческая свобода, или «свобода воли», трактуется им как действие в соответствии с «целями рода», т. е. интересами человеческого общества. Воля есть психологическая функция подчинения деятельности индивида целям и нормам общественной жизни. В альтернативных учениях свобода воли постулируется как непосредственно данный «факт сознания», открываемый интроспекцией и лежащий в основе человеческой деятельности. В этом пункте с традиционной эмпирической психологией смыкается физиологическое учение о безусловном рефлексе свободы. Ильенков расценивает такое понимание свободной воли как «психологическую иллюзию», показывая, какими последствиями эта иллюзия оборачивается в классических опытах академика И.П. Павлова. В заключение статьи формулируется культурно-исторический взгляд на эволюцию человеческой психики как процесс возрастания свободы воли: освобождение психической деятельности из плена природных аффектов с помощью культурных орудий и разумного познания человеком мира и самого себя.

Ключевые слова: свобода, воля, «мыслящее тело», «рефлекс свободы», «психологическая физиология», Б. Спиноза, Л.С. Выготский, И.П. Павлов.

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Introduction

Philosophy has bequeathed many forms of thought to other sciences, including the concept of freedom in its various semantic registers. Lev Vygotsky decided to make this notion the capstone of cultural-historical psychology: “*The central problem of all psychology: Freedom... The grandiose picture of personality development: the path to freedom. To revive Spinozism in Marxist psychology*” [3, pp. 255–256].

Evald Ilyenkov wanted the same. In the last years of his life he tried to draw a thread from Spinoza’s philosophy into Marxist psychology, and this thread was the notion of free will. Oddly enough, Ilyenkov ignored Vygotsky’s teachings on human freedom and his understanding of the will, the “volitional functions”, although he wrote about “the superiority of Vygotsky’s school over any other scheme for explaining the psyche” [9, pp. 69–75]. He was obviously referring to the “activity” branch of the school.

For our part, we shall try to evaluate Ilyenkov’s solution of the problem of free will in comparison with Vygotsky’s solution. Let us compare these two courses in “Marxist Psychology”. Since both considered themselves Spinozists, it makes sense to turn to the common source of their reflections — Spinoza’s *Ethics*.

I. “The Kingdom of the Will”: Freedom and Labour

Ilyenkov, like Vygotsky, begins with the Stoic definition of freedom as recognised necessity. This formula of freedom is often attributed to Spinoza, although it is not found in his writings. On the first page of his *Ethics*, Spinoza provides a different definition: “That thing is called *free* which exists from the necessity of its nature alone, and is determined to act by itself alone” [13, p. 9].

As we can see, there is no question here of the *recognition* of necessity. Spinoza considers *every thing* to be free, whether animate or inanimate, rational or not, to the extent that it is determined to act by itself, i.e. it acts by virtue of internal, not external causes. Freedom

= self-activity. It is not limited to the realm of reason or “recognised necessity”. Necessity itself is either “free” or “compelled”¹. Any action that contributes to the preservation of the being of a thing, arising from its inner nature, is a free action or “free necessity” (*libera necessitas*). On the other hand, “compelled necessity” (*coacta necessitas*) makes a thing a puppet of external causes and circumstances that are hostile to its nature. Man becomes a slave to the “passions”, passive affects that cloud the mind and destroy his life.

Another thing is the highest *human* freedom, or the freedom of the *will*. Here we cannot do without rational cognition, for “the will and the reason are one and the same” [13, p. 80]. Thus spoke Spinoza. “Recognised necessity” (with the obligatory specification: *free, inner* necessity) is a valid definition for *free will*, but not suitable for freedom in general.

According to Vygotsky, volitional action arises from a rational mastery of one’s behaviour, from the taming of affects by concepts. The thesis of genuine Spinozism: “Volition is a concept that has become an affect” [3, p. 562]. The motive for volitional action is *active* affect, such as rational desire, reasonable pleasure, feelings of beauty, friendship, generosity, etc., rather than “blind” affect — impulsive, instinctive desire. “Rational” for Vygotsky means “cultural”, created by humans themselves, through human labour. Hence the conclusion: “The will, i.e. mastery of one’s own processes of behaviour, is born out of labour and is the psychological basis of labour... Labour is the realm of the will” [5, c. 100, 167]. This is already Marxism, not Spinoza, of course.

Ilyenkov does not relate the concept of will to the problem of the collision of reason and affect, to which three of the five parts of the *Ethics* are devoted. As if unaware of this concrete psychological doctrine, Ilyenkov focuses exclusively on Spinoza’s *theory of cognition* and its significance for activity psychology.

Ilyenkov views the problem of free will through the prism of two opposing positions: Descartes and Fichte versus Spinoza. The former separate will from reason and regard it as a fact of consciousness, an innate attribute of the *I*. In Fichte’s case, the whole world (both external nature and the *I*) is first created by *Tathandlung*

¹ Spinoza makes this distinction in a letter to G. Schuller (October 1674).

(the deed-action) of free will and then comprehended by reason. Free will is postulated as a fact discovered in “contemplation of the *I*”, introspection. “The appearance of freedom is an immediate fact of consciousness and by no means a consequence of any other thought”, Fichte insists [14, p. 88]. As for his general notion of freedom, it is defined as “self-determination” to action, in full agreement with Spinoza’s definition quoted above.

From the notion of the free *I* Fichte deduces the existence of the external world, the *Not-I*, and subsequently, from their interaction, all further definitions of consciousness and the world, subjective and objective reality. In contrast, Spinoza deduces consciousness with all its contents from the body’s locomotor activity. Interpreted in this way, Spinoza becomes a forerunner of the activity theory of “internalisation” (Vygotsky preferred the term *vrashchivanie*, “ingrowing”).

“Here you have to choose: *either* Fichte *or* Spinoza. Either first ‘internalisation’ of external actions in the external space (Spinoza), or from the very beginning *exteriorisation of the whole ‘external’ world* from a priori conditions laid down *inside* (it is indifferent whether they are called ‘brain’ or ‘soul’, cerebral structures or existentsia)” [9, p. 75].

Ilyenkov describes the mechanics of the internalisation of external action in Essay Two of *Dialectical Logic*. Spinoza’s “thinking thing” (*res cogitans*)² is here interpreted as a “thinking body” — thereby making Spinoza a materialist. What remains to be understood is how the body generates thoughts, ideas, in the process of its movement.

Many materialists to this day attribute this function to the grey matter of the brain. Ilyenkov’s Spinoza solves the problem differently: to understand the process of thinking, it is necessary to investigate the nature of the body’s movement in the external world, in the circle of other bodies.

“*Man, as the thinking body, constructs his movement according to the shape of any other body... The thinking body goes freely round any obstacle of the most complicated form*” [6, p. 34]³. This is what freedom is: it is the ability of the body to round obstacles and construct its movement according to the shape of any body encountered in the external world. Such freedom is given to the “thinking body” by Nature (or, what is the same, by God). You just have to develop this gift of freedom in your body.

Vygotsky reads exactly the opposite truth from Spinoza: “*NB!* On Spinoza. According to the laws of nature, man is not a free being: People are not born free... Free-

dom does not lie in the plain; it is not accessible and within easy reach for everyone. It lies not at the beginning but at the end of a person’s path. It is inaccessible to the child. It is not located in the depths but in the summits of the mind” [3, p. 435]. Vygotsky calls his doctrine of the man’s ascent to freedom “height” psychology.

In the last lines of his *Ethics*, Spinoza says how difficult the path to freedom is for human beings and how rarely they find it. “Still, it can be found”. Such freedom is not given to us by nature, as in Rousseau — “man is born free” — or in the academician Pavlov with his “reflex of freedom”. *Human* freedom is acquired from nature through *work*, hardly and dropwise...

Realising the scheme of its own movement along the contours of external bodies, the “thinking body” thereby forms an “adequate idea” of these contours, Ilyenkov continues. In his opinion, this is how the materialist Spinoza depicted the process of thinking, and this is the *highest* form of thinking, “intuitive knowledge”.

Indeed, in the *Ethics* there is something similar to the described scheme of “internalisation” of movements. According to this scheme, *sensory images* arise in every living body, not only in a human being. It is the *lowest* form of thinking — imagination — that makes its judgements basing on sensory images. Every single idea of the imagination is inadequate. It conveys the spatial contours of external bodies, but is incapable of adequately expressing cause-and-effect relationships and the laws of nature. The spatial contour of a body only partly expresses its own, internal nature; partly it expresses the nature of many external bodies acting upon that thing. Therefore, the recognition of the spatial properties of a thing (the idea of imagination) can only give a “vague, confused” knowledge of the nature of that thing.

Active movement in accordance with the geometry of the external world is the principle of action of our natural organs of touch and sight. This is the working scheme of *sensory perception*, in which there is nothing specifically human, created by labour, cultural, i.e. nothing “ideal” in Ilyenkov’s sense. Every animal is capable of copying spatial forms, storing them in its memory and using them for orientation.

There is undoubtedly a certain degree of *freedom* in moving along the contours of external bodies, a freedom in both the physical and psychological sense, but Spinoza had a much deeper and more intelligent concept of *thinking*.

Criticising the materialists — “those who think that ideas consist in images which are formed in us from encounters with bodies” (this is the idea Ilyenkov attrib-

² Spinoza inherited this term from Descartes, who defined the *mind* (*mens, ego*) as *res cogitans*, in contrast to the body as *res extensa*, the “extended thing”. Descartes was criticised by the materialist Hobbes, who argued that *res cogitans* is the body. In this debate Spinoza took Descartes’ side, but with one fundamental reservation: the mind and the body, for all their difference, are not two different things; they are two different *modes of action* of one thing — the human being. Still, the thinking takes place in his *mind* and not in his body.

³ The italics in “free” are mine. — A.M.

uted to Spinoza himself) – the author of the *Ethics* urged that the sensory images of bodies should not be confused with the ideas of thought. “An idea (since it is a mode of thinking) consists neither in the image of anything, nor in words. For the essence of words and of images is constituted only by corporeal motions, which do not at all involve the concept of thought” [13, p. 81].

It is doubly wrong to take sensual images as *adequate* ideas. The latter express the laws of nature and the causes of things “under a species of eternity”, and not some changeable, spatio-temporal contours of bodies.

Ilyenkov himself believed that the correct definition of man was that given by Benjamin Franklin and endorsed by Marx: “Man is a being that produces tools of labour”. But what about the “thinking body”? Such a ‘somatic’ definition of man is as far from Marxism as the moon. It is undoubtedly materialistic, but there are different kinds of materialism. Marx’s “practical materialism” (and with it the whole cultural-historical psychology) is based on the understanding of man as the subject and effect of social labour. The definition of a “thinking body” is no more theoretically valuable than “a biped without feathers”. Both definitions abstract *from the essence* of man, from his social and labour nature.

The human organism becomes an organ of thought when it is included in the vital activity of society, becoming a part of the world of culture. Thinking is a cultural function of the individual, understood as a micro-society, as my and your personal “ensemble of social relations” (Marx).

To form an idea, it is not enough to move along the contours of external bodies. This is not a sufficient condition. Until the body begins to work, Ilyenkov taught, there can be no thinking, no adequate ideas and, in general, no ideal. At the very end of the essay, he corrects his Spinoza’s error on behalf of Marx: the real subject of thought is the *process of labour*, not the physical body. “Labour – the process of changing nature by the action of social man – is the ‘subject’ to which ‘thinking’ belongs as a ‘predicate’” [6, p. 54].

As we can see, the Marxist Ilyenkov understood the matter more correctly and more deeply than the ‘Spinoza’ he painted. Those who regard this figure as Ilyenkov’s alter ego lose the opportunity to understand both Ilyenkov himself and Spinoza’s work – not to mention the cultural-historical theory of thought and freedom.

II. Freedom as “Awareness of the Purpose of the Species”

Freedom in man, unlike in animals, consists not so much in moving along ready-made contours as in break-

ing them and giving other, cultural contours to external bodies. Ilyenkov made the fact of the practical “anthropomorphisation of nature” by the human labour the basis of his doctrine of free will. Man changes the external world according to his own purposes, and all his higher mental functions and ideas arise as components and reflections of this purposeful object-oriented activity.

Acting according to purpose has always been considered a distinctive feature of free will, and Ilyenkov remains faithful to this principle. He endeavours to make the notion of purpose more concrete. After all, it is hard to deny that animals and plants have purposeful arrangements of their bodies and that their life processes are purposeful. So what is the specificity of human purposes?

In this point Ilyenkov turns to Kant for help. No direct answer can be found in Spinoza’s writings: he moved the very notion of purpose was from the realm of intellect (which thinks things strictly logically, *sub specie aeternitatis*) to the realm of empirical and inadequate knowledge – imagination. Purposefulness, as Ilyenkov wittily pointed out, is transformed by Spinoza into wholefulness⁴, i.e. the causal conditionality of the parts by the whole to which they belong.

The idea of “wholefulness” may well be concretised and developed in a cultural-historical spirit if we take *society* as the ‘purpose whole’ and understand human life as a wave and a particle of “social being”. The activity of each person is conditioned by society, by the social relations in which he is included *as a human being* (and not as a biological organism or a physical-chemical ‘laboratory’, as any natural being is). The entire set of such relations, from the family to humanity as a whole, was called “species” (*Gattung*) in German philosophy.

For Kant, according to Ilyenkov, “freedom coincides with the right awareness of the purpose of the species or with the idea of the purpose of the species as an end in itself... Therefore, each individual person only then and only there acts as a Man, when and where he consciously, i.e. freely, perfects his own species” [7, p. 72].

This statement has become a postulate of cultural-historical psychology. Vygotsky calls the “higher psychological functions” those which the individual owes not to his organic body, but to his ‘species’. This term refers only and exclusively to those functions that serve the purposes-interests of the ‘whole’, the human community, in which the personality is formed and all our vital activity takes place, from the moment of birth to death.

The inclusion of the child, his or her object-oriented activity and physical life, in the cultural “species-life” (*das Gattungsleben*) initiates the process of liberation of the individual from the power of natural forces and elements, both those that oppose him in the external world and those that are embedded in his own body, namely

⁴ In Russian, there is a play on words here: *tselesoobraznost* – *tselosoobraznost*. The words *tsel'* (purpose, goal) и *tseloye* (whole) are cognate.

affective reactions and innate behavioural programmes. Vygotsky calls this process “cultural development”, while “will” is the psychological function through which it is realised.

Society provides the child with the means of cultural development, signs, which at the same time serve as stimuli for mastering his behaviour. Through signs, the child, with the help of adults, in co-operation with others, takes control of his organic needs, drives and affects. Like all higher psyche, the will is a social function. Initially, the will is dictated to the child by other people, by society in their person. My freedom begins with obedience to others and is essentially the *coercion of the self* into a cultural behaviour and way of life.

“In this sense Blondel rightly says that the roots of the will must be sought in the social life of man, and that in its real function the will is obedience rather than freedom. It is this ability to direct one’s behaviour in accordance with social stimuli that manifests itself in the development of the will” [5, p. 166].

Traditional psychology placed the will in a common row with other mental functions, such as attention, memory, speech, etc. Vygotsky treats the will as a form of implementation and regulation of all functions and behaviour as a whole⁵. Sometimes he speaks of will as a “stage” in the development of psychological functions, and for different functions this stage occurs at different times — when a child or adolescent becomes aware of his functions and masters them more or less freely. Elsewhere, two “genetic stages” are distinguished in the development of the will itself: the initial, “hypobulic” stage and the higher stage of “purposive will”. The difference between the two lies in the nature of the purposes. In the first stage, the will serves affective life and draws its energy directly from affects (pain, hunger, fear and rage, etc.). “In primitive psychic life, will and affect are identical”, Vygotsky quotes Ernst Kretschmer [4, p. 403]. In the second stage, already in adolescence, the source of the will becomes thinking in concepts, which replaces thinking in complexes. As Vygotsky shows in detail, when the function of forming concepts is disrupted (e.g., in cases of aphasia or hysteria), the purposive will inevitably disintegrates.

Ilyenkov begins with the study of free will in abstraction from the “social situation of development”, in the naturalistic system of coordinates “thinking body — external world”. In this system he searches for the primary ‘germ cell’ of freedom, and this cell turns out to be the purposeful action of an individual, carried out by him in accordance with the “cumulative world necessity”, which appears in the form of a purpose.

“The action which overcomes the slavish dependence

on the *nearest* (random singular) circumstances, conditions, is an *elementary act of freedom*, the action according to the *purpose* (conscious need)... The will is the ‘stronger’ (the ‘freer’) the clearer is the idea of the whole set of circumstances — both immediate and remote — within which the activity (whole set of actions) is carried out. This is Spinoza of the purest water” [9, p. 73].

But Ilyenkov would not have been the purest Marxist if he had been satisfied with the flat coordinate system “thinking body — external world”. He adds a third axis — the social one: in the form of purpose, “not ‘my’ (individual-egoistic) need is expressed, but a universal (collectively determined) need that has become *mine, personal*”. Therefore, freedom of will is a collective, social-historical feature of human activity. An individual does not possess such freedom from birth, but acquires it to the extent that he becomes a subject of “common need”; and his will is free precisely to the extent that his way of acting corresponds to the ideal goals and norms of social life. Ilyenkov calls this amendment to his Spinoza “the deciphering (concretisation) in Marxism of the concept of the *thinking body*” [9, p. 75]. The place of the moving body is taken by the “ensemble of social relations”, the personality...

It seems to me, however, that it is hardly legitimate to regard cultural-historical psychology in general and the doctrine of free will in particular, as a “deciphering” of the naturalistic concept of a “thinking body” endowed with the “freedom to round obstacles” in the surrounding space. Although such an ability is certainly a necessary natural *prerequisite* for cultural development — just as having an upper limb with a large number of mechanical degrees of freedom and, preferably, five fingers is a prerequisite for sewing or playing the piano.

III. The Illusion of Freedom and the “Psychological Physiology”

Among the notes and drafts on psychology in Ilyenkov’s personal archives there is a highly interesting one that links the problem of free will to the famous experiments of Ivan Pavlov.

As is well known, the academic Pavlov considered the desire for freedom, along with “slavish obedience”, to be an unconditional reflex inherent in both humans and animals. He studied this “physiological reaction” in dogs, experimenting with the position of the restraint and the strength of the body fixation, first trying to suppress the “freedom reflex”, then — to revive it. Finally, he tried to find out what happened when it collided with the food reflex in an unusually freedom-loving mongrel [12].

⁵ The concept of will as a “regulative factor of mental life” was developed earlier by Mikhail Basov [see: 1]. Vygotsky mentions Basov’s study of the will in his notebook of 1931 [3, p. 244].

Ilyenkov finds an inner affinity between this seemingly materialistic position of Pavlov and the subjective-idealistic attitude of Fichte. In both cases, free will is taken as an *unconditional* fact. Freedom is postulated “as something which is not only inexplicable, but which generally underlies ‘explanation’ of all other phenomena of consciousness” (in Fichte) or of various forms of behaviour (in Pavlov). “Spinozism certainly obliges us to treat the freedom of will, *understood in this way*, as a pure psychological illusion, behind which there is always an *unconscious cause*” [9, p. 70]. What is this cause? “The real activity of the thinking body”, answers Ilyenkov.

Freedom of will is an illusion if the will is considered as something different from the mind, as a special function or ‘ability of the soul’ to control our body and direct our mind. Such freedom would in fact be pure arbitrariness or willfulness. Behind this illusion there is always a slavish submission to stereotypes, to facts and circumstances which we do not understand. They force us to perform actions which, because we do not know their causes, are perceived as acts of ‘free will’.

In science, such arbitrariness, a wilful break with the logic of things, is doubly harmful. Ilyenkov regards the experiments that made Pavlov famous as an example. They “establish a completely unnatural (perverted) connection between meat and... a light bulb”. In fact, these experiments only prove that “*there is no real connection*, neither within the organism nor in the environment... That is why the connection can be established absolutely *any way — purely arbitrarily*, without any physiological or ‘environmental’ logic; and therefore the connection between meat and light bulb is a matter of arbitrary decision, ‘free will’, i.e. ‘psyche’ in its subjective-idealistic, introspectionist interpretation” [8, pp. 277–278]. So here again, without suspecting it, Pavlov extends his hand in support of Fichte and ‘empirical psychology’.

In Pavlov’s experiments, the dog acts as an *object* of external stimuli, not as a *subject* of search and orientation activity, which Ilyenkov considers to be “psychical” in the true sense of the word. The subject of activity here is “Pavlov’s psyche, not the dog’s psyche, for the latter is switched off by the conditions of the experiment together with the ‘spontaneous movement’ of the dog’s body, which is immovably tied to the restraint device” [8, p. 279]. By depriving the dog of its freedom to move, Pavlov thereby deprived himself of any possibility of understanding *its* psyche.

Purposeful, and in this sense “free”, is only and exclusively the behaviour of Pavlov himself. It is *his* actions that condition the animal’s behaviour, so that the reflex arc closes not in the animal’s brain, but *between* it and Pavlov’s brain.

The whole of so-called “Pavlovian psychology” is, in this light, a kind of introspection. The dog’s body acts as a ‘mirror’ in which the scientist observes the acts of *his*

‘free will’ — the neurodynamic connections he has arbitrarily created in the laboratory animal’s brain.

To prevent the dog’s own psyche from interfering with the process of introspection, it must at least be immobilised. Pavlov wanted to take away the dog’s ability to perceive anything other than the stimuli he presented to it — food, metronome tones and flashes of light. For this purpose, the Tower of Silence was built, “where Pavlov’s ‘free will’ is the supreme law” [8, p. 279].

Behind the walls of the tower, every mental connection and every conditioned reflex that realises it are determined by *objective conditions of activity*, i.e. by active contacts between a living being and the object of its need.

The psyche is only necessary when the innate programmes of vital activity, imprinted in the genome and brain structures, are not sufficient to satisfy the need, and therefore an active effort is required to establish the necessary connection between the organism and the external world. For example, breathing does not usually require mental work, but hunting does not do without it.

At the time of Ilyenkov, a similar criticism against Pavlov was being made by Konrad Lorenz, the founder of ethology. While observing semi-wild goats in the foothills of Armenia, in a prisoner-of-war camp, he suddenly realised that a conditioned stimulus acquires biological, evolutionary significance only if it is in a real causal relationship with an unconditional stimulus. Pavlov deliberately severed this link and replaced it with an anthropogenic ersatz. The peculiarities of the behaviour of “social canids” were also ignored.

“I do not wish in any way to diminish the importance of Pavlov’s experiments”, Lorenz diplomatically stipulates, but when we analytically “*cut out a piece of the system*” (of the animal’s behaviour), as Pavlov did, we should not assume that “the system now consists of only one isolated part and that this one part is already sufficient to understand all the properties of the system as a whole” [10, p. 320]. Conditioned reflexes are the indispensable component of behaviour, but by far not the only one, and it is by no means the only one that determines the character of a complex psychological system. Meanwhile, most of its components are “switched off” when a dog is “tied up in a leather harness that barely allows him to move” [ibid.]. Without *freedom of movement*, the normal functioning of the psyche is impossible.

Even earlier, before the war, Nikolai Bernstein was thinking along the same lines, but from the point of view of the physiology of nervous activity. He pointed out the fact that the fixation of the dog in the harness leads to a loss of plasticity in the central nervous system: it becomes “tight on switching” (in a highly developed animal!) and “so easily susceptible to hypnotic and neurotic morbid reactions. Is this really *higher* neural activity here? Is it a normal activity?” [2, p. 252].

Reflexes must be seen in the context of the “whole situation”, which includes the external world, life experience, available ekphoria (activated memories), and the mass of external and internal sensations at a given moment. “I think that the persistent soporific effect of conditioned-reflex experiments on dogs is most likely explained... by the deadening, hypnotising effect of the unnatural and to them indifferent environment of these experiments”, Bernstein concludes [2, p. 210].

So, a philosopher, a biologist and a physiologist, each in his own way, came to the same conclusion: Pavlov’s experiments distorted the object of psychological study. The psyche is a derivative of the active, free movement of the body in the external world. With the cessation of the *free self-movement* of the body, the psyche inevitably dies out.

Ilyenkov’s reflections on Pavlov’s experiments are crowned by the ‘Spinozist’ statement that mental activity and higher nervous activity are forms of manifestation and realisation of external object-oriented activity. He defines the system of conditioned reflexes as “an internalised... complex of *schemes of external activity*, relegated to the level of automatism” [8, p. 277].

What is the relationship between these two activity forms (Spinoza would say “modes”)? Are they equal and symmetrical, like magnetic poles, or do physiological and psychical, reflex and search, automatic and free activities form two different levels of movement — the lower and the higher? In Ilyenkov’s works this problem is not explicitly discussed, but he is clearly inclined to the second solution. Let us recall his words about the activity “relegated to the level of automatism”. The arguments in favour of such a solution can be found in a report by Vygotsky.

In 1931, the famous American scientist Carl S. Lashley came to the Soviet Union, and the Society of Materialist Psychoneurologists invited Vygotsky to participate in the debate on Lashley’s lecture. At the end of his speech⁶, Vygotsky shared his vision of the main line of development of modern psychoneurology. If Wilhelm Wundt sought to build up a “physiological psychology”, we are now witnessing the emergence of a “psychological physiology”, whose purpose is “to reveal the physiologi-

cal organisation of complex living psychological formations”. In doing so, the physiologist should “proceed directly from the data discovered in psychology” and only secondarily from the data of the physiology of nervous activity (this sounds like a reproach to the schools of Pavlov and Bekhterev, to which most of the listeners, “materialist psychoneurologists”, belonged).

Vygotsky draws a parallel with biochemistry, in which a chemist solves the problems of biology by orienting himself to the modern doctrines of the living nature, i.e. on the theory of a higher form of natural development than the world of chemical reactions. Apparently, Vygotsky sees the relationship between body and mind, physiology and psychology in the same way. This is the relationship between two levels of development in living nature, the lower and the higher. The mental ‘floor’ is higher already for the simple reason that it arises later and not otherwise than on a physiological basis, but not vice versa.

Those who wish to understand the *process of development* from the lower to the higher must look at this process ‘from the top down’. The anatomy of the psyche is the key to understanding the functioning of the higher nervous system. This, we believe, is how the credo of “psychological physiology”⁷ could be formulated.

Conclusion

In his time, Hegel characterised world history as “progress in the consciousness of freedom”; Marx then presented the history of society as an ascent through the stages of economic formations to the “kingdom of freedom” (*Reich der Freiheit*). Nothing prevents us from extending the same principle of freedom to the evolution of the world as a whole. Each new, higher step on the evolutionary ladder, from the elementary particle to the community of intelligent beings, multiplies the number of degrees of freedom of movement many times over. The evolution of the human mind is the process of its liberation from the “bondage of passions” by means of cultural tools and the improvement of reason, or, what is the same, the process of increasing our freedom of will.

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⁶ The transcript of L.S. Vygotsky’s speech, personally edited by him, is kept in the Archive of the Russian Academy of Sciences. The editorial board of the journal “Cultural-Historical Psychology” plans to publish it in No. 3 for 2024.

⁷ In the future, this line of research was followed by Aleksander Luria, who also borrowed the term “psychological physiology”. He associated the first attempts of its creation in our country with the works of Nikolai Bernstein and Pyotr Anokhin [see: 11].

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ЭМПИРИЧЕСКИЕ ИССЛЕДОВАНИЯ

Constructive Functions of Dreams: From a Theoretical Model to an Empirical Validation Part 2

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The second part of the article presents an empirical investigation of the hypotheses concerning the positive functions of dreaming set forth in the first part of the article. Study 1 describes the development and validation of the Constructive dreaming Inventory (CDI). The bifactor four-factor ESEM model showed good agreement with empirical data: the questionnaire includes the Overall Constructive Dreaming Index and four specific scales (Dream Presence, Dream Value, Dream Absorption, and Belief in one’s Dream). CDI showed good evidence of structural and convergent validity and sufficiently high scale reliability ($\alpha > 0.76$) for research purposes. In study 2, we tested hypotheses about the correlation of the constructive dreaming (CD) intensity with a range of indicators of positive functioning. We discovered that CD has moderate connections with mental health and well-being, personal autonomy and self-determination, balanced time perspective, eudaimonic motives, and a more positive prognosis of one’s ability to reach one’s personal goals. The hypothesis about the positive associations of CD with the predominance of intrinsic aspirations over extrinsic ones was not proven. Nevertheless, the results suggested that dreams and dreaming play an important role in emotional and motivational regulation of mental activity.

Keywords: dream, dreaming, constructive dreaming, functions of dreams, self-regulation, self-determination, psychological well-being, personality growth.

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Конструктивные функции мечты: от теоретической модели к эмпирической валидации. Часть 2

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Вторая часть статьи посвящена эмпирической проверке предположений о позитивном характере мечтания, обоснованных в первой части статьи. Исследование 1 описывает процедуру создания и апробации методики «Опросник конструктивного мечтания». Бифакторная четырехфакторная модель ESEM показала хорошее соответствие эмпирическим данным: опросник оценивает общий показатель конструктивного мечтания и четыре частные шкалы (Наличие мечты, Польза мечты, Поглощенность мечтой и Вера в мечту). Методика показала приемлемые психометрические показатели: хорошую структурную и конструктивную валидность и достаточно высокие показатели надежности шкал ($\alpha > 0,76$) для исследовательских целей. В исследовании 2 проверялись гипотезы о связи выраженности конструктивного мечтания (КМ) с показателями саморегуляции, самодетерминации и уровнем психологического благополучия личности. Были показаны умеренные связи КМ с личностной автономией, переживанием осмысленности жизни, сбалансированной временной перспективой, выраженностью эвдемонических мотивов, более позитивным прогнозом относительно возможности достичь собственные цели уровнем психологического благополучия личности. Гипотеза о положительной связи КМ и преобладания внутренних стремлений личности над внешними не подтвердилась. Полученные результаты позволили сделать вывод о важной роли мечты в эмоциональной и мотивационной регуляции психической деятельности.

Ключевые слова: мечта, процесс мечтания, конструктивное мечтание, функции мечты, саморегуляция, самодетерминация, психологическое благополучие, развитие личности.

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Introduction

Until recently, the phenomena of daydream and daydreaming have hardly been in the focus of empirical science. On the one hand, the difficulty of studying these phenomena is connected with their transience and subjective insignificance (reveries). On the other hand, the reason is their very personal content (“dream of all life”), which is often hidden from other people. In the last 30 years there has been a surge of research on daydream and daydreaming. The study of positive constructive daydreaming has shown a number of positive functions of daydream and daydreaming in the regulation of mental

activity [22]. However, most empirical work has been conducted on English-speaking samples, whereas there are very few studies of daydream belonging to the Russian-language environment.

The second part of this article is devoted to empirical testing of hypotheses about the adaptive nature of daydream and constructive daydreaming, which we put forward on the basis of the theoretical model presented in the first part of the paper [7]. We draw your attention to the fact that daydream and constructive daydreaming are directed into the future, they are positively and emotionally colored and have value for the individual [1; 7]. Based on the cultural-activity approach to understand-

ing daydream and the results of daydreaming research conducted within the framework of cognitive psychology and motivational psychology, we assume that the constructive nature of daydreaming and the presence of daydream are associated with indicators of effective self-regulation and self-determination: dispositional autonomy of the personality, a more positive outlook on the achievability of one's own goals, and a balanced time perspective. We also assume that the constructive nature of daydreaming is related to the indicators of motivational sphere development (eudaimonic motivation and predominance of internal goals over external ones) and acts as one of the manifestations of personal maturity.

To test the research hypotheses about daydream and constructive daydreaming, we set the task of creating and testing a Russian-language inventory for studying daydream and constructive daydreaming. It is essential to take the cultural context into account, as the understanding and representation of daydream and daydreaming shows significant cultural and linguistic differences (see the first part of the article).

The study of positive properties of daydream and constructive daydreaming consisted of two series. The first series of the study is devoted to the development and validation of the Constructive Daydreaming Inventory (CDI), and the second is focused on the study of positive properties of constructive daydreaming. Statistical processing of data was carried out in the Jamovi 1.6.23.0 and MPlus 8.8 programs.

Research 1

The purpose of the first series of the study was to develop and validate the Constructive Daydreaming Inventory (CDI).

Methods

Two samples were used in the study. The first sample was used for the primary analysis of the factor structure of the Inventory and included 304 people, of whom 84% were women aged 17 to 79 years ($M = 34.0$; $SD = 9.81$). The second sample, that was used for cross-validation of the obtained structure, included 359 individuals, of whom 86.5% were women aged 18 to 68 ($M = 36.4$; $SD = 10.7$). Respondents were users of social media and psychology websites and participated in the online survey on an anonymous and voluntary basis.

The instruments that were used in Study 1 are as follows.

1. Constructive Daydreaming Inventory (CDI). The first version of the methodology included 43 original statements developed on the basis of theoretical analysis of the concepts of 'daydreaming' and 'constructive daydreaming'. The content of the Inventory items comprised 4 groups (daydream presence, daydream absorp-

tion, daydream value and daydream belief) and were assessed on a 5-point Likert scale.

2. Imaginal Process Inventory, Short Form (SIPI [11]) (first sample only, $N = 285$). The SIPI was chosen to test the construct validity of the CDI methodology. The short version of the Inventory included 45 statements assessing 3 daydreaming styles: positive constructive daydreaming (it is characterized by a positive attitude toward daydreams, their positive emotional coloring, future orientation, and problem-solving orientation), guilty-dysphoric daydreaming (it is associated with feelings of guilt, anxiety, fear of failure, or aggression), and poor attentional control (tendency to boredom, wandering thoughts, and difficulty concentrating). We translated the inventory into the Russian language (the stimulus material is available at <https://osf.io/rck-wv>), the translation was checked and clarified in a group discussion with the assistance of bilingual experts.

3. Emotional coloring of daydream ("When I dream, I feel..."). Respondents were asked to evaluate the expression of 8 emotions (joy, fear, inspiration, elation, sadness, confidence, shame, disappointment) on a 5-point Likert scale.

Results and Discussion

Structure and reliability of CDI scales

The structure of CDI was studied in 3 stages. At the first stage (sample 1, $N = 304$), Ward's hierarchical cluster analysis (metric is Pearson correlation coefficient, inverse statements are inverted) and exploratory factor analysis (EFA) were used. Four relatively homogeneous groups of statements were obtained that fit well with the theoretical model: Daydream Presence, Daydream Value, Daydream Absorption, and Daydream Belief. Following EFA and reliability analysis, 11 items with low factor loadings were removed and a final set of 32 statements was obtained (stimulus material is available at: <https://osf.io/jwqfp>). Both second and third stages of Inventory development were devoted to testing the four-factor structure of the CDI on the second ($N = 359$) and composite ($N = 663$) samples. Exploratory structural equation modeling (ESEM) was used, and the Inventory items were treated as ordinal (WLSMV statistics [16; 20]).

The performance of the four-factor model on both samples indicated an acceptable, but not excellent, fit to the original data (Table 1). Given that constructive daydreaming is a single phenomenon, we also tested a bifactor ESEM model with four private factors and one common factor. The model showed good and excellent fits to the empirical data on the second and pooled samples, respectively, and comparable parameter estimates (Table 2). All methodology items had statistically significant loadings on the Overall Constructive Daydreaming Index (OCDI). Almost all items had statistically reliable theoretically expected loadings on private factors that exceeded cross-loadings, with a few exceptions. Item 3's loadings on the factor of Daydream Value were weak,

but given the content of the statement and the results of reliability analyses, we retained this item as part of the original scale. Two items, 9 and 23, had cross-loadings comparable to those of the main scales. However, based on the same considerations, we retained these items as part of the original scales.

Cronbach's alpha coefficient was used to assess the internal consistency of the CDI scales. Reliability indices for both samples were comparable and indicated acceptable and high reliability of the Inventory scales (0.72 and above). The reliability of the scales for sample 2 is presented in Table 3.

Table 1

Indicators of Structural Models of CDI and SIPI Methodologies

Inventory	Sample	Model	χ^2 (df)	CFI	RMSEA[90% CI]	SRMR
CDI	Sample 2 (N=359)	4-factor model	749.72 (374)	0.934	0.053 [0.047; 0.058]	0.042
		Bifactor model	600.61 (346)	0.955	0.045 [0.039; 0.051]	0.035
	Pooled Sample (N=663)	4-factor model	1252.92 (374)	0.919	0.060 [0.056; 0.063]	0.039
		Bifactor model	913.64 (346)	0.948	0.050 [0.046; 0.054]	0.032
SIPI	Sample 1 (N=285)	3-factor model	2248.01 (858)	0.781	0.075 [0.072; 0.079]	0.073
		3-factor model + cov.	1278.33 (801)	0.923	0.046 [0.041 0.051]	0.054

Legend: df – number of degrees of freedom χ^2 ; CFI – comparative Bentler agreement index; RMSEA – root of mean square error of approximation with 90% confidence interval; SRMR – standardized root mean residual.

Table 2

Factor Loadings of the ESEM Bifactor Model of the CDI on the Pooled Sample (N = 663)

Item, No.	OCDI	Daydream Value	Daydream Absorption	Daydream Belief	Daydream Presence
01	0.44	0.38	-0.03	0.43	0.03
02	0.62	0.43	-0.29	0.03	-0.05
03	0.56	0.06	-0.09	-0.26	0.11
04	0.45	0.52	0.05	0.33	0.07
05	0.30	0.45	0.20	0.02	0.24
06	0.57	0.36	-0.35	-0.15	-0.09
07	0.19	0.61	0.20	0.27	0.15
08	0.34	0.47	0.03	0.25	0.04
09	0.47	0.37	-0.40	-0.1	-0.16
10	0.38	0.24	-0.07	-0.21	0.17
11	0.27	-0.00	0.35	-0.14	-0.02
12	0.22	-0.11	0.47	-0.16	0.23
13	0.40	-0.12	0.47	-0.12	-0.25
14	0.21	-0.26	0.63	-0.17	0.15
15	0.46	0.01	0.46	-0.12	0.06
16	0.25	-0.07	0.49	0.04	0.33
17	0.41	-0.11	0.66	-0.11	-0.15
18	0.54	0.06	0.32	-0.03	0.16
19	0.28	-0.08	0.66	-0.13	-0.05
20	0.38	0.01	-0.34	0.51	-0.16
21	0.40	0.06	-0.04	0.36	0.08
22	0.39	0.43	0.09	0.47	0.02
23	0.31	-0.07	-0.47	0.40	-0.16
24	0.48	0.03	-0.13	0.58	-0.01
25	0.43	0.08	-0.35	0.41	-0.09
26	0.56	-0.02	-0.15	0.57	0.00
27	0.53	0.06	0.15	-0.03	0.36
28	0.42	0.13	0.12	0.03	0.36
29	0.66	0.12	-0.09	-0.22	0.38
30	0.66	0.01	0.05	-0.14	0.51
31	0.57	0.26	-0.08	0.27	0.28
32	0.46	0.04	0.42	-0.11	0.51

Legend: factor loadings corresponding to the theoretical model are in bold type.

Structure and reliability of the SIPI scales

To test the structural validity of the SIPI, a 3-factor ESEM model was used, with the addition of covariance between statements belonging to the same facet, according to the theoretical model [12]. The model showed a good fit to the data; all factor loadings of items (data available at: <https://osf.io/a2jm6>) were statistically significant and exceeded modulo 0.3, and exceeded cross-loadings except for two items (30 and 35). In order to preserve the equivalence of the English version, and given the limited sample size and the results of the reliability analysis, according to which these statements did not reduce the reliability of the overall measures, it was decided to keep these items as part of the original scales. The Cronbach's alpha coefficient for each of the 3 scales of the inventory was 0.84, indicating high internal consistency.

Convergent and discriminant validity of the CDI

To assess the convergent and discriminant validity of the CDI methodology, a correlation analysis of the relationships between the SIPI and CDI scales was conducted (Table 3). The SIPI Positive Constructive Daydreaming scale was positively correlated both with the OCDI and all other scales of the CDI. At the same time, the correlations of the OCDI scales with guilty-dysphoric daydreaming and poor attentional control were inverse or weak, and were not significant for the SIPI, in line with theoretical expectations.

Additionally, a correlation analysis of the relationships of methodology scales with the frequency of negative and positive emotions during daydreaming was conducted (8 statements formed 2 theoretically expected factors). The expression of positive emotions was positively correlated with all CDI scales and the SIPI positive constructive daydreaming scale, while the expression of negative emotions showed the opposite pattern of relationships.

To further examine the total variance of the CDI scales and the SIPI positive constructive daydreaming scale, multiple linear regression analyses were conducted with the 4 CDI scales as predictors of the SIPI positive constructive daydreaming (dependent variable). All 4 CDI scales were significant ($p < 0.05$) positive predictors of positive constructive daydreaming and explained 61% of the variance (beta coefficients were 0.36 for having a daydream, 0.32 for believing in a daydream, 0.25 for valueing from daydream, and 0.11 for daydream absorption). Thus, all 4 CDI scales can be considered components of a single construct, which meaningfully corresponds to positive constructive daydreaming in the SIPI model.

Thus, as a result of study 1, a new diagnostic tool, the Constructive Daydreaming Inventory, was developed to assess the expression of the General Indicator of Constructive Daydreaming and its four characteristics: Daydream Presence, Daydream Absence, Daydream Absorption, Daydream Value, and Daydream Belief. The methodology demonstrates good structural validity and sufficiently high scale reliability for research purposes. Construct validity is supported by theoretically predictable relationships with SIPI scores and positive and negative emotionality during daydreaming. However, further confirmation of construct validity using additional methodologies is needed. The SIPI Inventory translated into Russian can also be used in Russian-language psychological research and counseling practice.

Research 2

The main purpose of the second research was to examine the relationships of constructive daydreaming with indicators of various aspects of positive personality functioning.

Table 3

Correlations of CDI, SIPI and Daydream Emotionality Methodology Scales

Scales CDI, SIPI	OCDI	Day-dream Value	Day-dream Belief	Day-dream Presence	Daydream Absorption	PCD	GDD	PAC	PE	NE
OCDI	($\alpha=0.87$)									
DV	0.81***	($\alpha=0.78$)								
DB	0.62***	0.50***	($\alpha=0.81$)							
DP	0.80***	0.61***	0.31***	($\alpha=0.77$)						
D Absorb.	0.60***	0.17**	-0.00	0.40***	($\alpha=0.83$)					
PCD	0.76***	0.66***	0.57***	0.66***	0.30***	($\alpha=0.84$)				
GDD	-0.03	-0.18**	-0.17**	-0.02	0.25***	-0.12*	($\alpha=0.84$)			
PAC	-0.06	-0.13*	-0.39***	-0.00	0.28***	-0.26***	0.43***	($\alpha=0.84$)		
PE	0.44***	0.34***	0.42***	0.34***	0.16**	0.49***	-0.05	-0.18**	($\alpha=0.82$)	
NE	-0.13*	-0.18**	-0.28***	-0.08	0.12*	-0.20***	0.34***	0.22***	-0.31***	($\alpha=0.71$)

Legend: OCDI – Overall Constructive Daydreaming Index; DV – Daydream Value; DB – Daydream Belief; DP – Daydream Presence; D Absorb. – Daydream Absorption; PCD – Positive Constructive Daydreaming; GDD – Guilty-Dysphoric Daydreaming; PAC – Poor Attentional Control; PE – Positive Emotionality; NE – Negative Emotionality; “*” – $p < .05$; “**” – $p < .01$; “***” – $p < .001$.

Methods

The study involved 359 participants, anonymous volunteers recruited through social networks and websites of psychological topics (86% women, age of subjects is from 18 to 72 years, average age is 37 years).

In order to reduce respondent burden, the instruments were divided into blocks: after completing the CDI Inventory and psychological well-being scales, one of the two additional blocks was randomly selected. The sample size, taking into account missing data, is given for each methodology in Table 5.

Constructive Daydreaming Inventory (E.N. Osin, N.B. Kedrova, P.A. Egorova) (N = 359). The inventory also included additional items of the daydreaming frequency and temporal daydreaming relevance.

The Mental Health Continuum, Short Form (MHC), C. Keyes, validated in Russian by E.N. Osin and D.A. Leontiev [8].

Self-Determination Scale (SDS) by K. Sheldon [21], modified by E.N. Osin [18].

Aspiration Index, T. Kasser [13], adapted by T.O. Gordeeva and E.N. Osin.

Hedonic and Eudaimonic Motives for Activities-Revised (HEMA-R), revised by V. Huta [13], adapted by Osin et al [19].

Positive Time Use Inventory (PTUI) by E.N. Osin and I. Bonivel [17].

Zimbardo Time Perspective Inventory (ZTPI), F. Zimbardo, adapted by A. Syrtsova et al [9]. Based on the indicators of 5 methodology scales, the deviation from balanced time perspective (DBTP) indicator was calculated [24]. Balanced Time Perspective (BTP) describes the ability to flexibly and effectively switch between psychological past, present, and future in response to external demands and is an important adaptation mechanism affecting the level of psychological well-being [see details: 24; 25]. As a basis for calculating the DBTP indicator we used percentile scores calculated according to A. Syrtsova’s research [6], the final formula is presented below:

$$DBTP = \sqrt{((PP - 4.48)^2 + (PN - 1.79)^2 + (PH - 3.99)^2 + (PF - 1.83)^2 + (FU - 4.00)^2)}$$

Results and Discussion

To investigate the positive properties of constructive daydreaming, Pearson correlation coefficients were calculated for the scales of the 7 inventories (see Table 5).

Daydreaming frequency (Table 4) was theoretically predictably positively related to all scales of the Inventory, including the OCDI. OCDI was significantly related to daydreaming about the present and the future, as well as to the prevalence of daydreaming about the future compared to daydreaming about the past. This means that constructive daydreaming is more characterized by the future directionality of daydream, which is consistent with both previous studies [15; 22] and a theoretical model for the study of daydream and constructive daydreaming [7]. The direction of daydreaming into the past had a negative relationship with the scale of daydream absorption, which differs from the data of J. Smallwood, according to which it is daydreams about the past that are accompanied by “getting stuck” in daydreams [23].

As shown in Table 5, the Daydream Presence, Daydream Value, Daydream Belief, and OCDI scales were positively related to the perceived choice and authentic self-expression scales. The daydream absorption scale was negatively related to the authenticity scale. This means that constructive daydreaming, which is characterized by the daydream presence, belief in daydream value and possibility of its realization, is associated with the feeling of having choices in life and experiencing the correspondence of life choices to the values of the individual. At the same time, excessive daydream absorption and withdrawal into daydream are characteristic of people with a low experience of authenticity.

The importance of intrinsic aspirations is positively correlated with OCDI and with the scales of Daydream Presence, Daydream Value, and Daydream Belief, and weakly with the Daydream Absorption scale. The probability of achieving intrinsic aspirations is positively related to all scales of the Inventory except the Daydream Absorption scale. The OCDI, Daydream Value and Daydream Belief scales were also found to be positively related to both the importance and probability of achieving all intrinsic aspirations. The Daydream Absorption scale showed positive correlations only with the prob-

Table 4

Correlations of the Scales of Constructive Daydreaming, Daydreaming Frequency, and Temporal Daydreaming Relevance

CDI/ Daydreaming Frequency and Temporal Daydreaming Relevance	Daydreaming Frequency	Daydreams of the Past	Daydreams of the Present	Daydreams of the Future	Daydreams of the Future/Past
OCDI	0.53***	0.05	0.21***	0.30***	0.20*
Daydream Value	0.29***	0.13*	0.19***	0.28***	0.25***
Daydream Absorption	0.42***	-0.23***	0.08	0.05	-0.13*
Daydream Belief	0.15**	0.25***	0.15**	0.28***	0.32***
Daydream Presence	0.65***	0.06	0.19***	0.29***	0.20***

Legend. OCDI – Overall Constructive Daydreaming Index; “*”, p < .05; “**”, p < .01; “***”, p < .001. The parameters “Daydreaming Frequency”, “Daydreams of the Past/Present/Future” are presented by 1 question.

Table 5

Correlations of CDI, Mental Health Continuum, Self-Determination Scale by K. Sheldon, Aspirations Index, HEMA-R, Time Perspective Inventory by F. Zi, Positive Time Use Inventory

Inventory	Scale	Overall Constructive Daydreaming Index	Daydream Value	Daydream Absorption	Daydream Belief	Daydream Presence
Mental Health Continuum: overall score (N = 306)		0.32***	0.31***	-0.05	0.50***	0.24***
Self-Determination Scale by K. Sheldon (N = 307)	Perceived Choice	0.27***	0.29***	-0.10	0.41***	0.25***
	Authentic Self-Expression	0.20***	0.27***	-0.23***	0.47***	0.18**
Aspiration Index (N = 296)	Intrinsic Aspiration Importance	0.32***	0.29***	0.13*	0.27***	0.25***
	Health	0.13*	0.11*	0.04	0.14*	0.09
	Personal Growth	0.26***	0.29***	0.04	0.26***	0.19**
	Love and Affection	0.18**	0.16**	0.06	0.18**	0.10
	Service to Society	0.27***	0.19**	0.16**	0.18**	0.23***
	Probability of Achieving Intrinsic Aspirations	0.33***	0.32***	-0.11	0.50***	0.30***
	Wealth	0.16**	0.15*	-0.08	0.32***	0.10
	Personal Growth	0.28***	0.31***	0.17**	0.49***	0.25***
	Love and Affection	0.26***	0.26***	-0.11	0.43***	0.23***
	Community	0.26***	0.20**	0.02	0.30***	0.24***
	Extrinsic Aspiration Importance	0.15**	0.02	0.18**	0.03	0.17**
	Wealth	0.05	0.00	0.06	0.01	0.06
	External Attractiveness	0.17**	0.06	0.19**	0.06	0.15**
	Fame	0.15**	-0.00	0.20***	0.02	0.19***
	Probability of Achieving Extrinsic Aspirations	0.29***	0.21***	0.03	0.37**	0.24***
	Wealth	0.25***	0.21***	-0.04	0.38***	0.19**
	External Attractiveness	0.20**	0.15*	0.03	0.23***	0.19**
	Fame	0.27***	0.17**	0.07	0.31***	0.24***
	Relative Intrinsic to Extrinsic Value Orientations Index (RIEVO Index)	0.05	0.15*	-0.10	0.13*	-0.01
	HEMA-R (N = 132)	Hedonistic Motives	0.24**	0.26**	0.11	0.13
Eudaimonic Motives		0.33***	0.30***	0.01	0.40***	0.30***
Time Perspective Inventory by F. Zimbardo (N = 112)	Hedonistic Present	0.33***	0.19	0.26**	0.21*	0.21*
	Positive Past	0.14	0.05	0.13	0.08	0.13
	Fatalistic Present	-0.25**	-0.29**	0.22*	-0.43***	-0.26**
	Negative Past	-0.23*	-0.28**	0.28**	-0.53***	-0.20*
	Future Orientation	-0.17	-0.07	-0.23*	-0.02	-0.12
	DBTP (Deviation from Balanced Time Perspective)	-0.34***	-0.31***	0.12	-0.50***	-0.30**
Positive Time Use Inventory: overall (N = 253)		0.25***	0.29***	-0.22***	0.50***	0.27***

Legend: "*" – p < .05; "**" – p < .01; "***" – p < .001.

ability of achieving personal growth aspirations and the importance of serving the community.

The importance of extrinsic aspirations has positive correlations with the total factor of constructive daydreaming, scales of Daydream Absorption and Daydream Presence. At the same time, in contrast to the importance of intrinsic aspirations, correlations with the scales of Daydream Value and Daydream Belief are not significant. Rate of the probability of achieving extrinsic aspirations was positively related to the

Overall Constructive Daydreaming Index, Daydream Presence, Daydream Value, and Daydream Belief. Wealth aspiration was not related to either the total factor or the individual CDI scales. The importance of aspirations for fame and external attractiveness were positively related to the Daydream Absorption and Daydream Presence scales. Assessing the probability of achieving specific extrinsic aspirations was positively related to the OCDI and all CDI scales except the Daydream Absorption scale.

The Relative Intrinsic to Extrinsic Value Orientations Index (RIEVO) was calculated as the difference between the average importance of three intrinsic aspirations (except health) and three extrinsic aspirations. The index was found to be unrelated to OCDI, but positive relationships were obtained for the Daydream Value and Daydream Belief scales. The results do not support the hypothesized relationship between the expression of constructive daydreaming and the predominance of internal goals over external goals. However, these results suggest that daydream and daydreaming have different functions in the structure of extrinsic and intrinsic motivation. The importance of extrinsic aspirations that is associated with the daydream presence and daydream absorption does not necessarily imply a perception of daydream value, the possibility of its realization, and the positive impact of daydream on an individual's life. While the importance of intrinsic aspirations is related to the belief in daydream value and driving force of daydream and implies the realization of aspirations and values important to the individual.

Hedonistic motives, aimed at obtaining pleasure and comfort, are positively correlated with the Daydream Value scale and weakly with the Daydream Presence scale. The expression of eudaimonic motives is positively correlated with the Daydream Value, Daydream Presence and Daydream Belief scales. Thus, eudaimonic motivation is related to the incentive nature of daydreaming. OCDI was found to be related to both types of motivation. The obtained data support the assumption of a close relationship between the nature of daydreaming and the value-motivational sphere of personality [14; 15; 22]. Both hedonic and eudaimonic motivations are accompanied by daydreaming, but the goals and the result of daydreaming in these cases may be different: daydreaming generated by hedonic motivation may fulfill the function of emotional regulation, whereas daydreaming associated with eudaimonic motivation may also motivate to action.

The scales of Time Perspective Inventory by F. Zimbardo predictably correlate with the CDI. The obtained data suggest that people inclined to fatalism and fixed on the negative past are characterized, on the one hand, by the absence of daydream about the future, belief in the feasibility and usefulness of daydreaming and, on the other hand, by withdrawal into fantasies. This is probably accompanied also by a poorly developed perspective of the future, since inner psychic activity is directed toward the present and the past. At the same time, the hedonistic present is associated more with daydream absorption and probably with daydreaming aimed at emotional regulation and pleasure in the short term. The index of deviation from a balanced time perspective was negatively related to OCDI and to the Daydream Presence, Daydream Value, and Daydream Belief scales. This supports the hypothesis that constructive daydreaming is related

to a balanced time perspective which is the ability to address events and experiences relating to the psychological past, present, and future in a flexible and effective manner. However, moderate connections suggest that constructive daydreaming is not reducible to balanced time perspective or future perspective. In theoretical terms, unlike a time perspective expressing the psychological future of the individual, a constructive daydream is not necessarily realistic; it is rather an option of the best possible future.

The total score of positive time use showed a positive relationship with OCDI and with the Daydream Presence, Daydream Value, and Daydream Belief scales and negative with the Daydream Absorption scale. The results support the hypothesis of the relationship between constructive daydreaming and satisfaction with time use.

The overall level of psychological well-being was positively correlated with both the OCDI and the Daydream Presence, Daydream Value, and Daydream Belief scales. The effect size was strongest for the correlation with the Daydream Belief scale. The data confirm the hypothesis about the relationship between constructive daydreaming and psychological well-being of personality.

General discussion and conclusions

The purpose of the present work was to study the adaptive properties of daydream and constructive daydreaming and their role in the regulation of mental activity and behavior, taking into account the cultural context and linguistic environment. We assumed that singling out constructive daydreaming as a special type of daydreaming about the future would allow a more differentiated approach to the study of daydream and daydreaming, as well as help to resolve a number of theoretical and empirical contradictions accumulated in the study of this topic [7]

In Research 1, the Constructive Daydreaming Inventory with good psychometric indicators was created and tested on a Russian sample. The inventory assesses the expression of the general indicator and four characteristics of constructive daydreaming and can be used for research purposes. The content of the CDI methodology scales is close to the content of the positive constructive daydreaming scale in the SIPI methodology [11; 22]. At the same time, when creating the Russian-language tool, we included in the Inventory the statements reflecting the peculiarities of understanding daydream and daydreaming in the Russian-language environment, such as the idea of daydream value and belief in its positive influence on a person's fate [10]. The data on the daydreaming frequency confirmed the high prevalence of daydreaming, being consistent with the data which we had obtained in English-speaking samples [1; 14; 22, etc.].

The results of the second empirical study confirmed the main part of our hypotheses which is as follows: daydream and constructive daydreaming are adaptive; they fulfill a number of positive functions in the regulation of mental activity.

1. Constructive daydreaming is associated with greater autonomy, belief in one's abilities, experience of meaningfulness of life and authenticity of choices. The results are consistent with the hypothesis that daydream and constructive daydreaming support the experience of subjectivity and authorship of one's life, and the development of the ability to daydream helps to create one's own, unique life path project.

2. The hypothesis about the relationship between constructive daydreaming and the prevalence of internal goals over external goals has not been confirmed, but the findings show that the propensity for constructive daydreaming is related to the importance of internal goals and aspirations, the realization of which contributes to psychological well-being.

3. Individuals inclined to constructive daydreaming are characterized by high expression of eudaimonic motives, i.e. motives related to personal growth and development, overcoming and search for meaning. These results seem very important to us, as they refute the idea of daydream and daydreaming only as mechanisms of stress reduction and emotional release. Based on the findings, we can assume that daydreaming and constructive daydreaming, on the contrary, increase tension, as they create new, complex tasks with high subjective significance.

4. Constructive daydreaming is associated with a balanced time perspective, as well as effective and meaningful use of time. It is consistent with the proposition that daydream and daydreaming imagery integrate the most important aspects of past experiences, present events, and desired futures, enabling one to avoid fixation on a

single time period and to engage all temporal domains of experience more effectively and flexibly.

5. Finally, constructive daydreaming is associated with a higher level of psychological well-being, which confirms the hypothesis about the adaptive nature of constructive daydreaming, one of the main functions of which is to create and develop the perspective of the desired future.

In the context of the cultural-historical approach, constructive daydreaming can be associated with the concept of experience, which eliminates the discrepancy between consciousness and existence [2] and is directed mainly into the future. Such daydreaming is most characteristic of adolescence, the social situation of development of which involves building a perspective of the future and mastering the inner world [1]. However, daydreaming can also play an important role in other ages, supporting the solution of age-related tasks [7]. Investigating the ontogenesis of daydreaming is an important topic for future research. Also, a more detailed analysis of daydream as a cultural phenomenon in the context of Russian literature and culture looks like an interesting task.

The findings confirm the main provisions of the developed theoretical model of daydream and constructive daydreaming as an adaptive phenomenon important for the regulation of mental activity. The conducted empirical study, along with the results that we described in two other works [4; 5], allows us to make the assumption that the presence of daydream and constructive daydreaming can be criteria of personal maturity. We plan to test this hypothesis, as well as to study the direction of causal relationships between constructive daydreaming and other indicators of positive personality functioning, and to further validate the CDI and SIPI Inventories in future studies.

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DISCUSSIONS AND DICOURSES
ДИСКУССИИ И ДИСКУРСЫ

A Human Through the Prism of Jointness. The Possibility of a General Psychology

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The paper raises the question of the possibility of creating a general psychological field of research. The condition for the beginning of such research is a sufficiently complete general model of psychological phenomena. The assumption is made that the work of identifying suitable psychological universals has already been done as a part of cultural-historical psychology. We summarised the investigations, starting with L.S. Vygotsky's idea of a psychological "unit". With the help of some modern theories, the assumption is substantiated that meaning is a feeling of jointness, the essence of the human in man. As an example we took the "integral unit of the human life world" construction in the F.E. Vasilyuk's school and its transformation into a scheme of jointness. By analysing F.E. Vasilyuk's notion of "experience", the activity-dialogical model of jointness is extrapolated and filled with "meaning". This model is proposed as a suitable tool for generalising psychological knowledge. An assumption is made about resonance as a fundamental mechanism of jointness formation. In this paper we describe the properties of the prism of jointness and question its sufficiency for the beginning of general psychological research.

Keywords: jointness, meaning, resonance, functional domain, general psychology, cultural-historical psychology, lifeworld, experience, activity, relations, mindset, shared intentionality.

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Человек сквозь призму совместности, или О возможности общей психологии

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В работе поднимается вопрос о возможности создания общепсихологической области исследований. Условие для начала таких исследований — достаточно полная общая модель психологических явлений. Делается предположение, что работа по выделению подходящих психологических универсалий уже проведена в русле культурно-исторической психологии. Кратко обозначается пройденный путь, начиная с идеи Л.С. Выготского о психологической «единице». С помощью некоторых современных теорий обосновывается предположение о том, что смысл — это чувство совместности, суть человеческого в человеке. Приводится история построения «интегральной единицы жизненного мира человека» в школе Ф.Е. Василюка, превращения ее в схему совместности. При помощи

анализа понятия «переживание» Ф.Е. Василюка экстраполируется и наполняется «смыслом» деятельностно-диалогическая модель совместности. Эта модель предлагается в качестве подходящего инструмента обобщения психологического знания. Делается предположение о резонансе как об основополагающем механизме формирования совместности. Описываются свойства призмы совместности. Аргументируется ее достаточность для начала общепсихологических исследований.

Ключевые слова: совместность, смысл, резонанс, функциональный домен, общая психология, культурно-историческая психология, жизненный мир, переживание, деятельность, отношения, установка, совместная интенциональность.

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Introduction

“There is a time to scatter stones and a time to gather stones together” – said Solomon [2, p. 829]. Even L.S. Vygotsky searched for a psychological “unit” around which a general psychological field of research should emerge [9, p. 172]. However, for almost a hundred years psychology has been scattering stones in different directions, and, often, quite similar stones. For example, the concepts of “archetype”, “introject”, “role”, “subpersonality” have different theoretical origins and are used in different contexts. At the same time, we are talking about some phenomenological characters that typically manifest themselves periodically in human behaviour and consciousness. They can coincide with the “Self” or be opposed to it, but they are always in a relationship with the “Self”, and can also be projected onto a real Other [1]. If these concepts are so close, what is the common psychological phenomenon underlying them? What systemic value does it have for psychology? How can we transform eclectic psychological knowledge into a relatively coherent system to get closer to an answer? We have become accustomed to accepting such questions as almost rhetorical. Perhaps it is time to ask them again in earnest. Discussing a general model of psychological phenomena can be a starting point for finding meaningful answers.

However, before attempting to construct such a generalised system of psychological ideas, it is necessary to determine what criteria it should meet in order to bring us closer to overcoming the historical crisis described by L.S. Vygotsky [9, p. 291] and the methodological split in psychology analysed by F.E. Vasilyuk [3, p. 89].

Firstly, such a model should sufficiently generalise psychological knowledge and remove contradictions between the main psychological oppositions, such as affect and intellect, consciousness and unconsciousness, apex and deep mechanisms. That is, the ontology of the generalised model should reconcile phenomenological,

behavioural, social, cultural, biological and other views on the nature of the mental. It should create such a common field on which the proximity and complementarity of existing psychological views are highlighted.

Also, the general psychological model should remove the contradictions between theory and practice, should be psychotechnical, be, in the words of F.E. Vasilyuk, “the philosophy of practice” [9, p. 291; 26; 3, p. 79]. The psychotechnical model should be born out of psychological practice – formed by research participants in the process of joint understanding of the object. In this process the central method of cognition should be matched with such a subject, for which this very method is the optimal method of research [3, p. 89]. In this case natural-scientific methodology does not lose its positions, but becomes part of the process of research into “the culture of consciousness”, and psychology itself becomes “understanding-active-humanitarian” [3, p. 101].

It is important that the language used to describe a model of psychological phenomena be so general and, at the same time, filled with concrete sensory background that its application would be natural to a wide variety of areas of knowledge about a human and would not cause inconvenience in practice.

To make an attempt to build such a model, let us turn to the background of cultural-historical psychology. It seems that the work on identifying suitable psychological universals has already been conducted in the direction outlined by L.S. Vygotsky.

The joint “meaning field” as the basis of the human in a human

In order to describe the core idea of this work on the nature of the meaning field, let us turn to the central point of L.S. Vygotsky’s theory. The law of development formulated by him states: “Any function in the child’s cultural development appears on the stage

twice, in two plans, first social, then psychological, first between people, as an intersychic category, then within the child, as an intrapsychic category” [10, p. 145]. The usual understanding of this law can be formulated in the following way: a child becoming a human is a result of interaction with other people, by transferring accumulated knowledge to him or her, by mastering cultural means of handling his or her natural mental functions, their internalisation. However, this understanding overlooks one essential question — what happens to the very experience of interaction with another person, *does joint activity become the same psychological function as the knowledge and the skills that are transferred in this process?*¹ Let us attempt to answer this question from within the approach.

L.S. Vygotsky postulates: “Consciousness as a whole has a meaning structure” [9, p. 165, 15]. L.S. Vygotsky’s meaning or meaning field has many definitions, including: “system of meanings”, “semantic field”, arising “internal independent field” [8, p. 463]. According to E.Yu. Zavershneva, “meaning field” in L.S. Vygotsky’s theory embodies the principle of unity of affect and intellect, expresses “the plan of generalisation, which mediates a human attitude to the world” [12, p. 125]. In these definitions, meaning is given the role of a fabric that forms consciousness, but there is no indication of its communicative nature. Nevertheless, A.R. Luria notes: “socio-communicative significance”, or ‘meaning’, is the main unit of communication (based on the perception of what exactly the speaker wants to say and what motives stimulate him to speak)” [20, c. 44]. Later, as a result of extensive theoretical research, D.A. Leontiev singled out two fundamental properties of meaning [19]. One is intentionality, that is, goal-orientation; the other is contextuality, that is, the dependence on circumstances, on context, which is “not reducible to the context of individual consciousness” [19, p. 376]. “A personality meaning, unlike a biological meaning, cannot be considered as a purely individual formation, because the activity that generates it is not purely individual” [19, p. 377]. From this description we can assume the presence of a communicative component of the content, the dialogical correlation, in the meaning field. Generalizing, we can say that meaning is generated in activity, structures the consciousness, has a dynamic orientation on the goal and contextual, dialogical, correlation. In some modern theories based on the cultural-historical approach, there is even more obvious dialogical turn in understanding the nature of meaning.

M. Tomasello, in his concept of “shared intentionality” [27] highlights the key differences between human behaviour and other primates. He believes that the basic

human trait is the ability for cooperative communication. The development of cooperative activity in phylo- and ontogenesis begins with recursive interaction between individuals, in which they establish mutual eye contact and use pointing gestures to focus joint attention on the goal of interaction. Such universal actions acquire their concrete meaning only in the context of the participants’ interaction history. And in the process of developing cooperative communication, due to people’s active use of means of synchronisation, cyclic “recursive mind reading” of intentions and thoughts [27, c. 96], a “*common conceptual ground*” [27] is created and a special activity — speech — is developed. “The ability to create a common semantic context (shared attention, shared background, shared cultural perceptions) represents an absolutely integral dimension of human communication, including language communication” [27, c. 29]. Thus, at the behavioural level, interaction with the Other acts as a condition and a means of developing the essentially human in a person, the ability to share intentions *through the formation of a common meaning context*.

Another example of modern theory is taken from the field of educational psychology. A. Schwartz develops the concept of “intercorporeal dynamic functional system” [33] on the material of mathematical learning, studying the educational process in which a student-teacher pair successively passes through “micro-zones of proximal development” [33]. She substantiates theoretically and experimentally that bodily resonance and intercorporeal coordination arise in interaction between people, that there is an unconscious “intentional synthesis” at multiple levels: speech, posture, gestures, actions, up to inter-brain synchronisation. “There are no literal neuronal connections between the brains, however, environmental affordances and task constraints give rise to the coupling of brain activities” into a dynamic system [33, p. 9]. “Importantly for educational concerns, the object itself, as a sensory-motor perceptual entity, transforms during the teaching-learning process, in the sense that it is approached differently and thus acquires new meaning.” [33, c. 30]. Thus, interaction between people is not just a necessary condition for the phylogenetic and ontogenetic development of a human at the behavioural level, but *it is a situation of formation at the pre-conscious physiological level of the “intercorporeal functional system”, which comprises and transmits the content of cultural background*.

Let us consider another theory of ontogenetic human development. O.S. Nikolskaya [24, p. 173] in her concept of four levels of affective organisation of consciousness and behaviour proceeds from the postulate that the de-

¹ For example, A.N. Leontiev’s experiment in order to study mediated memory is not a study of memory as an independent natural function, but rather “a joint activity of two people – the experimenter and the subject, rolled into the ability of one of them (the subject) to reproduce a series of words in a given special situation” [6, c. 55].

velopment of the affective sphere is a link between human mental life and its biological basis. Vital “adaptive meanings” are seen both as a natural biological need and as a phenomenon encapsulating the properties of human consciousness. Their transformation into cultural forms of affective experience is possible only in interaction with an adult. At each of the four levels of affective organisation, the child develops in close connection with the adult’s established system of adaptive meanings. And the first form of the infant’s affective experience becomes “pra-we” [11, p. 305]. This is a state of passive perception of the Other in which the adult acts as an “impersonal form for adaptation” that provides safety. “Pra-we” is experienced by the infant as a physical extension of its own body that can directly affect the object it desires. Thus, at the affective level, *the first, properly human, form of consciousness and behaviour is precisely the experience of confluence with the Other. And so on, the child’s relationship with the world continues to be built solely through the experience of interaction with Others.*

In turn, F.E. Vasilyuk [5], identifying the general invariants of psychotherapeutic practice, came to the model of psychotherapy chronotope. In this model, the basic necessary elements of experiencing a critical situation, *overcoming the meaninglessness*, are the client (I), the psychotherapist (You), the problem (the matter of interaction) and the mutually expected result (the goal of interaction). And even when the psychotherapist is physically absent, psychotherapy is possible, because “an internal character is actualised, which takes on the performance of this function” [5, p. 30]. In this process, the client overcomes “the situation of impossibility” and acquires new meanings. Thus, the general phenomenology of psychological changes in the process of psychotherapy, the acquisition of meaningfulness, also points to the special value for direct participation of the Other, either a real person or their psychological function, in this process.

Based on the theories presented, we can conclude that perception of the world through the prism of the affective sphere of the “significant other” [14], preconscious physiological synchronisation and coordination in the learning process, creation of a common context in the process of joint activity [17] and acquisition of individual meanings in interaction — all these processes describe the formation of a meaning field. The acquisition of meaning enables an individual to master natural functions through cultural background, to act in a socially contextualised way and to find solutions in complex life situations. That is, *interaction with the Other is not only necessary for the transmission of cultural background, but the common meaning field formed in this interaction plays a crucial role in the development of the human psyche proper.*

And, if, at the modern turn of development of the cultural-historical approach, we supplement the scheme of “integral psychological unit of the life world”, which was built by F.E. Vasilyuk [3, p. 64], with this

representation, we can find a generalised systemic value of many psychological phenomena, starting with the concepts of “meaning”, “experience” and “joint activity”.

Activity-dialogical model of jointness

In his time, L.S. Vygotsky set the task of searching for a unit of the mental, which would include all the properties of the whole and become the central category of a unified system of concepts around which general psychology could be built [6, p. 112]. As such a central category, he considered the concept of meaning [9] or meaning field [8].

Other obvious candidates for the central category in the Soviet period of cultural-historical psychology were D.N. Uznadze’s concepts of “mindset” [28], V.N. Myasishchev’s “relations” [23], and A.N. Leontiev’s “activity” [18]. Later, F.E. Vasilyuk, on the basis of the synthesis of these three “central categories” described the general scheme of the “integral unit of the life world” [3, p. 64]. In the works of F.E. Vasilyuk’s disciple, E.V. Mishina, the “unit” was described as a phenomenon of interpersonal interaction completeness and received its name — “jointness” [22]. This phenomenon is experienced as “a state of unity, mutual understanding, solidarity, emotional resonance and single-mindedness” [22, p. 47]. In his turn, F.E. Vasilyuk developed another version of the central category of psychology — the concept of “experience” [7]. Let us look at F.E. Vasilyuk’s scheme of “unit” taking into account the categories of “experience” and “jointness”.

In the scheme of the “integral unit” of 1986, the categories “mindset”, “relations” and “activity” form a contour connecting three basic elements — the Individual, the Other and the Thing (Fig. 1) [3, p. 64]. As a result of methodological analysis, F.E. Vasilyuk came to the necessity to add a fourth category — “communication” — to the three categories (Table). The result was an holistic system of “integral unit”. It was considered by F.E. Vasilyuk in the “ontology of the life world” developed by S.L. Rubinstein. From this point of view, psyche is a fusion of the subjective world and objective human life, an integral “unity of state and circumstances” in any life situation [3, p. 71]. The scheme summarises many concepts similar to M. Tomasello’s concept of “shared intentionality” which were developed in the cultural-historical direction, such as A.V. Petrovsky’s “jointly distributed matter activity” [25; 17] and V.P. Zinchenko’s “cumulative action” [6, p. 71; 13].

“In the scheme, one of the vertices of the triangle symbolises an individual (И), the second — a thing (В), the third — another individual (Др). Each individual and thing are connected by an activity (Д), within which the individual acts as a subject (С) and the thing — as a matter (И) or object (О). The vector within the body of activ-

ity directed from the subject to the object symbolises the mindset (*У*). Two individuals are bound together by communication (*Об*), within which they appear to each other as You (*Ты*) and I (*Я*). The vector within communication directed from I to You means relations (*От*)." [3, с. 76] Later, applying the "integral unit" to the field of psychological help, F.E. Vasilyuk discovered the practical necessity to consider it as an event phenomenon having its unique configuration at each moment of time. For this purpose, a temporal dimension appeared in the structure of the therapeutic situation in the form of a vector directed towards the goal of interaction [5]. However, this scheme has not been developed in detail. In E.V. Mishina's thesis, the phenomenology of "jointness" is thought within the framework of activity-dialogical ontology, which was formed in Soviet psychology as a result of the discussion about the status of the concept of "communication" in A.N. Leontiev's theory of activity [21, p. 111]. Here the structural scheme also potentially has dynamics in time, but the subject of research is still the state of maximum development of the phenomenon of interpersonal communication, the state of "jointness".

Let us reflect the appearance of the time dimension in the modified scheme of "unit" (Fig. 2). In the new model, from a phenomenological point of view, the subjects of the dialogue – I and You – enter into interaction. The object of their joint activity is the "Matter". Jointness is a phenomenon "which is formed not in one point, but in the whole field of interpersonal interaction, and is affecting all its elements and connections" [22, p. 47]. This

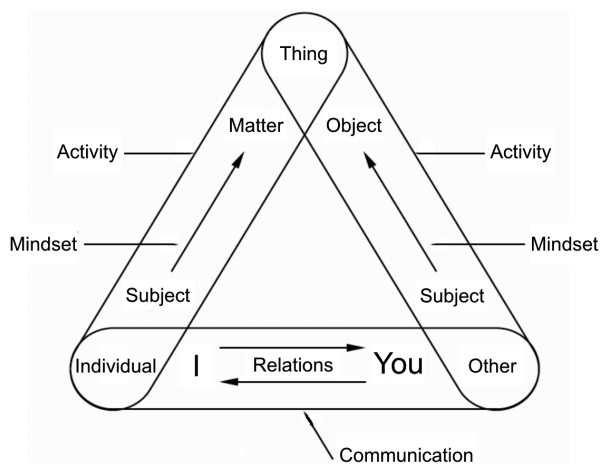


Fig. 1. F.E. Vasilyuk's scheme of the "integral unit"

phenomenon arises in the process of joint activity oriented to the common goal of interaction.

At this point it is necessary to deviate from the initial scheme of "jointness" and to specify the following. No matter how complete mutual understanding and emotional resonance are in interaction with the Other, in this process there is always room for differences in the mindsets of the participants, in their perceptions of the relations, in their understanding of the matter, goal and process of joint activity. Let us leave room for this mismatch in the scheme in order to reflect phenomenological processes more precisely.

The concepts of "relations" and "mindset" also require a special discussion.

Relations, as defined by V.N. Myasishchev, are any relations with the surrounding world, subject-object relations with both objects and people, which are formed exclusively in relationships between people [23, p. 13]. Relationships are a "holistic system of connections", "conscious, selective, experience-based psychological connection" [23, p. 21] (Fig. 3). Thus, relations are an individual system of perception of the world, a concept close to the modern notion of cognitive structures [31].

Mindset, according to D.N. Uznadze's definition, is a "holistic state of the subject", a state of "dynamic certainty", the subject's "orientation" towards a certain activity [28, p. 11]. Thus, the mindset describes the vector of processes of an integral subject, its purpose, intention, readiness to act. In this sense, each of the subjects of jointness has its own mindset, and the synchronisation of these mindsets in the course of joint activity gives rise to "shared intentionality" [27] (Fig. 4).

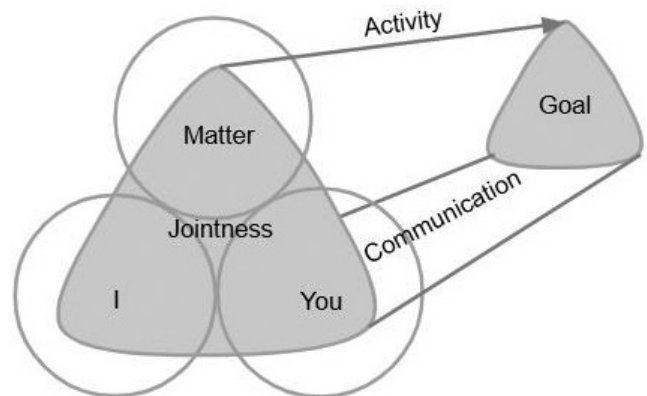


Fig. 2. The basis of the activity-dialogical model of jointness

Table

Typology of psychological "units" of the life world

HUMAN LIFE IN THE WORLD		HUMAN LIFE	
		Human being (as a dynamic structure)	Life (as an actual process)
WORLD	Object World	1. MINDSET	2. ACTIVITY
	People's world	3. RELATIONS	4. COMMUNICATION

In his scheme of “unit” F.E. Vasilyuk classified mindset and relations as structural-dynamic characteristics. Now we can make a clarification and consider relations as current structural connections between all elements of a situation, and mindsets as vectors of dynamic orientation of participants arising in this situation.

In this way, the activity-dialogical model of the “unit of the life world” begins to manifest itself. From the behavioural point of view, this model describes joint activity; from the phenomenological point of view – the experience of jointness; from the historical point of view – the formation and transmission of cultural experience; from the physiological point of view – an intercorporeal dynamic functional system.

The elements of jointness, I, You, Matter, Goal, appear here as names of whole functional domains of psychological phenomena, each of which necessarily has its representation at every moment of time in any human activity, as well as the relations connecting them, directing mindsets, communication and activity. The general field of jointness means synchronisation and coordination of participants, describes the ongoing process in which cyclic physiological synchronisation, empathy, mutual understanding, and cooperation take place.

Thanks to such synchronization, the participants’ individual processes are mutually reinforced according to the principle of resonance, “dialogical resonance” [29, p. 92]. Just as a swing increases its oscillatory motion as a result of someone’s pushing in the direction of its movement, or sound waves, partially coinciding in their oscillatory frequencies, mutually increase their amplitude. In a broad sense, resonance is “the phenomenon of a sharp increase in a dynamic system’s response to an external influence” [30]. Thus, *resonance is a key catalyst of the joint process of people, which allows us to assimilate the experience of jointness, to coordinate joint activity, feeling its meaning, and, as a result, to maintain our individual activity for a long time.*

Two “experiences” in F.E. Vasilyuk’s theory and the generation of meaning

Let’s see how the central concept of F.E. Vasilyuk’s works fits into this model. Experiencing is the activity of overcoming a critical situation [7]. It is “internally dialogical” [6, p. 143]. “...The turbulent inner element² of experience, so to speak, is not quite an element, it became what it is, and as it is, in a given person, not by itself – *he himself and significant others* took an active part in its formation” (emphasis ours) [6, p. 117]. “Experience” has two embodiments – active and felt ones, “experience-work” and “experience-feeling”. Activity experience is genetically primary in relation to felt experience. The latter develops as a result of mastering the cultural means of consolation, that is, as a result of doing the experience-work of overcoming meaninglessness. After the work is done, meaningful activity arises and experience-feeling “pacifies, comforts, restrains all tense life relations, while one of them is realised in activity” [6, p. 117]. How can this be understood? When an infant cries for the first time after birth, it does so instinctively. But by getting its needs met with the help of an adult, by calming down, it gains its first experience of cultural coping with a discomforting state. The infant makes an activity, an active experience that leads to safety. In this way, the infant has the cultural experience of transforming the felt experience, which helps him to cope with similar states in the future.

The organisation of the experience becomes more complex with age. When a person finds themselves in a critical situation, they are overwhelmed by strong feelings and experience a state of impossibility. They may switch to other jointnesses, work, other activities in order to dull the acuteness of the experience. But when the pain subsides a little, a person needs the Other, who will

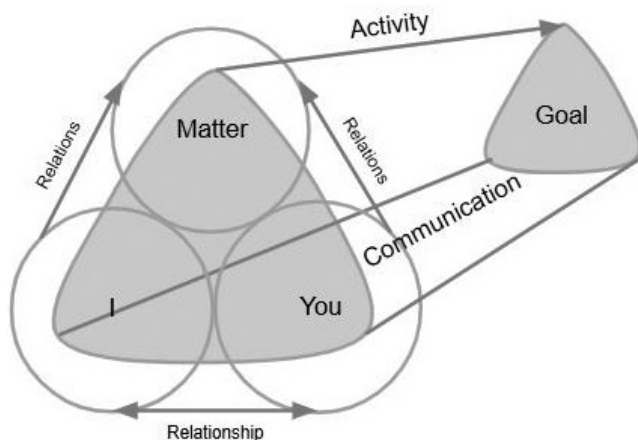


Fig. 3. Relations and relationships in the jointness model

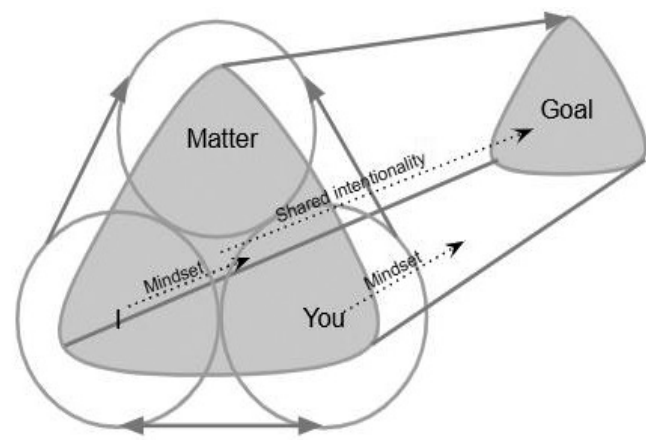


Fig. 4. Mindset and shared intentionality in the jointness model

² Element as environment, weather or substance.

help to look at the critical situation from the outside, to experience it, to weave a new “meaning fabric” [19, p. 441]. In this communication with the Other, everything personally significant, everything painful, everything unresolved which a person has access to is raised, and the search for meanings is conducted in the farthest corners of their life world. This process requires a high degree of inclusion of participants in the here-and-now (Fig. 5). When, as a result of working together, the “meaning fabric” is woven and the skill of transforming an acute felt experience into a more bearable state is formed, this skill recedes to the periphery of consciousness and the meaningful activity formed becomes the central process (Fig. 6).

Let us summarise what has been said above. Experiencing is a cultured process of coping with meaninglessness. It is carried out at any moment of time, either voluntarily or involuntarily. The meaning generated in the experience-work structures human activity. We can say that the meaning fabric connects the mindsets of the participants, the characteristics of the object and the means of influence on it, necessary to achieve a common goal, into a common meaning field. The formed meaningful activity contains in itself, in a generalised form, the jointnesses that gave rise to it and expresses the essence of individual cultural experience applicable to the current situation.

The participation of the Other in the generation of meaning is not a mere formality, but a probable cause of people’s ability to perform prolonged and complex directed behaviour, to carry out activity. This becomes possible through resonance and coordination with the Other, real or assumed. Therefore, *meaning can be seen as the name of a human feeling – the feeling of jointness*³. Thus, from a theoretical point of view, the meaning fabric forms a dynamic model of the “integral unit

of the life world”, while in practice it links individual phenomena of the life world into a holistic directed process of activity.

Properties of the jointness prism

To review in general the capabilities of the proposed jointness model, let us describe some of its properties derived from the reasoning above.

Ontology of inclusion

The meeting of phenomenological and behavioural, structural and processual, activity and dialogical, biological and cultural aspects of the psyche in the dynamic model of jointness invites the description of an ontology that takes all these aspects into account. Such work has yet to be done, but it is already possible to designate such a comprehensive view as an ontology of inclusion. That is, an ontology where no aspect of the human psychological life, which we can observe from different angles and understand from different perspectives, can be excluded from consideration because it plays its unique role in the psychological process.

Pervasive sharingness

Consideration of the prism of jointness as a functional unit of the psychic implies that all human activity contains in itself a reference to the Other. A human is always in mutual relations. In every action, in behaviour and in thinking, a human is guided, usually unconsciously, by the feeling of the Other’s sharingness and their experience of joint activity and has in mind interaction with a generalised or concrete Other. And even when they experience a critical situation, they are looking for meaning in it, which means they are looking for a new approach,

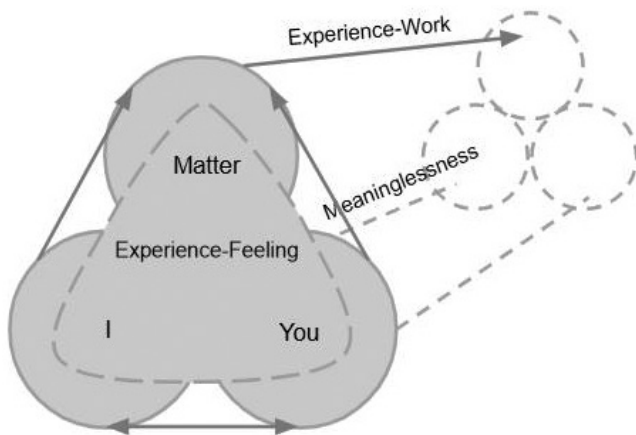


Fig. 5. Formation of sensory experience

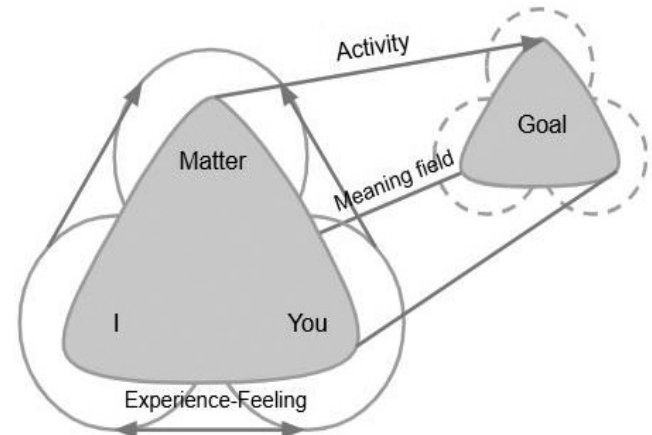


Fig. 6. Meaningful activity

² There is no certainty that meaning-making is an exclusively human ability. Perhaps dolphins and other animals can also experience resonance with each other. However, here we consider such a high degree of development of the meaning sphere, which is inherent only to humans.

perspective, context of activity, new jointness. From this point of view, loneliness is the experience of the lack of the Other's participation, the unsatisfaction of the human need for sharingness.

Jointness as a means of generalisation

It turns out that every new jointness is formed in the process of expanding the resonance between the participants in aspects ranging from physiological processes to cultural. Similar features of their personal processes come into resonance. Similar features of their personal processes come into resonance. In this way, features of the situation that the people interacting perceive as common are manifested. These common features are reinforced in perception, become a common "figure" [32] for the participants and thus partially blur the differences, pushing them into the "ground" [32]. In fact, during the formation of jointness, each time there is a metaposition in relation to the object of interaction, detachment from it, generalisation of its properties. Thus, we can say that resonance forms a generalising semantic field. This point of view is consistent with the ideas of L.S. Vygotsky, who argued that "generalisation and communication are two sides of the same coin" [16].

The polyphonicity of jointness

The experience of other jointnesses serves as a model for the formation of jointness. In almost every element of joint activity, we can find references to the life stories of the participants and discover their components. The new process is based on previous experiences of relationships, but their new combination gives a new quality of feeling, a new meaning. In this way, a voluminous polyphonic [1] process is formed that goes far beyond the formally labelled joint activity.

In addition, complexly organised activity and thinking require switching between different contexts, and thus between different jointnesses. The means and ways of such switches have yet to be explored. A possible way was outlined in the concept of "stratigraphy of consciousness" by F.E. Vasilyuk, in particular, in the concept of "transition operator" [4].

Functionality of jointness domains

Each element of the jointness model is in practice a functional domain, that is, the name of the function that is realised in different situations by different psychological phenomena.

Thus, "I" is something with which the subject associates, identifies themselves in a given situation. For example, one's own body, a name or any thing ("mine"), an episode of personal history, or a social group can all fulfil an I-Function at some point.

"You" is the person with whom the subject is currently in a relationship. Whether it is a parent, a group of classmates, an archetypal image of a big dog, an eco-

nomie crisis or a subpersonality. All this can personify in some situation the interlocutor, fulfil the function of the Other, the You-Function.

"Matter" is what is currently being addressed or acted upon externally or internally. Whether it is a toy in the sandbox, an image treading on a piece of paper under a pencil, or a family relationship discussed in psychotherapy. Anything that becomes the focus of joint attention or consciousness begins to fulfil the Object-Function.

The Goal-Function of an activity can also be fulfilled by any feeling, image of what is desired, or reference point for the activity. The function of building "relations" between concepts, forming "mindsets", organising and carrying out "activities" can also be performed by any natural phenomenon or cultural tool. Each of them can fulfil both separate functions and many functions at once. And the most important of such tools is a language.

A meaning-function is any phenomenon that involves jointness, namely resonance and coordination of participants at any level of processes, physiological, speech, activity, cultural. For example, it could be: a baby rocking situation; a single word spoken in a context shared with the listener; a logical inference made in the process of reasoning alone; an intention to go to university; a family Christmas ritual; a business model; a simple meme picture — in other words, anything that can be identified as a cultural unit of activity.

General psychological completeness of the prism of jointness

In order to assess whether the resulting activity-dialogical model is universal enough for general psychology, let us see how it meets the criteria highlighted earlier.

The functional nature of the domains of jointness allows us to describe psychological phenomena in a wide variety of situations by focusing on those aspects of the process that are important in the current research context. Such situations can be both socio-cultural and group processes, both interpersonal and intrapersonal phenomena. In addition, the concept of "meaning", according to D.A. Leontiev, removes "the oppositions of affect and intellect, inner and outer world, deep and apex mechanisms, consciousness and unconsciousness" [19, p. 441]. That is, we can say that *the prism of jointness unites functional elements into a common system in a way that describes psychological processes at the meta-level.*

The prism of jointness also claims to resolve the methodological gap in psychology, as it emerged at the intersection of cultural-historical tradition and humanistic psychotherapy, in the process of dialogue between academic psychology and psychological practice in the context of "Understanding Psychotherapy". F.E. Vasilyuk's theory of experience, as well as P.Y. Galperin's theory of formation of mental actions, forms psychological practice

proper, generates “the theory of work with the psyche”, philosophy of practice [6, p. 54]. In this, psychological practice proper, *dialogue is the very method that reveals its central subject — jointness*. It is also the most adequate general psychological method for the study of *jointness as a phenomenon of interpersonal resonance and coordination*.

I, You, Matter, Relations, Mindset (Intension), Experience, Goal, Meaning, Activity — all these categories describe psychological processes in such a general way that they are understandable both in a scientific context and at the everyday level. For translating the languages of psychological fields, this generality opens up new possibilities: by correlating concepts from different approaches with domains of jointness, it is possible to start a dialogue about their systemic interconnectedness.

Conclusions

And so, the prism of jointness describes the formation and transmission of cultural experience in the process of joint activity. As a result of correlating the many concepts

developed in detail in cultural-historical psychology over almost a century of history, it becomes possible to construct a system that encompasses a wide range of phenomena of psychology. This system includes the phenomenological, behavioural, biological and socio-cultural sides of their manifestations. Understanding the system of jointness functional domains can help to correlate related concepts used in different psychological theories, which can, in turn, clarify the model. The study of the dynamics of the jointness development can give a qualitative increase in the understanding of mental processes.

Undoubtedly, for the sake of finding common ground, such a view reduces many essential differences between psychological approaches, but it also achieves the necessary level of generalisable abstraction which, when applied to each individual field of study, can be filled in with the necessary details. And, if we assume that psychology and psychological practice are working with a single phenomenon called “Human”, then we must finally find the level of generalisation that will allow us to gather eclectic psychological ideas into a coherent whole.

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HISTORY OF SCIENCE
ИСТОРИЯ НАУКИ

The Usage of the Rorschach Test in the 20–30s in the USSR

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The present article addresses and structures the history of the application of the Rorschach test during the period of 1923 to 1936 in the Soviet Union. Hermann Rorschach visited the Russian Empire three times and was familiar with Russian psychoanalysts. His test was published in 1921 in Switzerland. By 1923 was published I.N. Dyakov's article with the description of the test. The Rorschach test was used with children with normal development, gifted children and those with various deviations in paedology, clinical psychology and psychiatry. It was used for studying the personality of a perpetrator and for examining individuals who had committed a crime. A.E. Petrova very well described the application of the test she used in studying a "primitive" psyche of children and adult perpetrators, and of patients with schizophrenia and epilepsy. L.S. Vygotsky valued highly A.E. Petrova's works and cited them in his lectures. The Rorschach test was also included in the series of tests for studying a perpetrator's personality, it was employed in the psychiatric examination to study the personality of the offender and the crime, it was also used in Serbsky State Scientific Institute for Social and Forensic Psychiatry. In 1936, after the publication of the resolution of the Central Committee of the Soviet Union Communist Party on the paedological perversions in the system of the People's Commissariats for Education, the usage of the test discontinued.

Keywords: the history of psychology, psychodiagnosis, paedology, the history of juristic psychology, the Rorschach test.

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Из истории использования теста Роршаха в 20—30-е годы в СССР

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В статье рассматривается и структурируется история применения теста Роршаха с 1923 по 1936 г. в Советском Союзе. Герман Роршах три раза посетил Российскую империю и был знаком с русскими психоаналитиками, его тест был издан в 1921 г. в Швейцарии и уже в 1923 г. появляется первая статья И.Н. Дьякова с описанием теста. Тест Роршаха применялся в педологии у детей с нормальным развитием, одаренных и с различными отклонениями, в клинической психологии и психиатрии, а также в рамках изучения личности преступника и экспертизе лиц, совершивших правонарушение. Наибольшее количество публикаций с использованием теста можно найти у А.Е. Петровой, которая использовала его при изучении «примитивной» психики у детей и взрослых преступников, а также у больных шизофренией и эпилепсией. Работы А.Е. Петровой высоко оценивались Л.С. Выготским и цитировались в его лекциях. Также тест Роршаха входил в батарею методик для исследования личности преступника и использовался в психиатрической экспертизе в кабинете изучения личности преступника и преступления и в научно-исследовательском институте судебной психиатрии имени В.П. Сербского. В 1936 г. после издания постановления ЦК ВКП(б) о педологических извращениях в системе Наркомпросов использование теста прекращается.

Ключевые слова: история психологии, психодиагностика, педология, история юридической психологии, тест Роршаха.

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Introduction

The first scientific papers about the usage of the Rorschach test in the USSR are believed to date back to the 1960s and 70s and are associated with the works of M.Z. Dukarevich, B.G. Kravtsov, I.I. Belaya, B.I. Bely, Yu.S. Savenko, N.N. Stanishevskaya, I.G. Bespalko, L.F. Burlachuk, V.M. Bleikher and others. However, some publications find brief mentions of the usage of the test in the 1920s [3].

The present study has systematized the information about the usage of the test in the early years of the Soviet psychology. The Rorschach test was used in the USSR already in 1923, although it was published in Switzerland only two years earlier. The test was used in the paedological work, forensic examination, clinical psychology and in the study of the “primitive” psyche.

Unfortunately, a number of articles and books published or stated as manuscripts in the 1920s have not reached our days. Some of them were prohibited and destroyed due to the change in the attitude towards the

issue and the author. We don't have a complete picture of the usage of the Rorschach test. Yet, we can see the aspects, in which the test was used, and outline the range of tasks for its application.

Investigations based on the Rorschach test were tragically interrupted in the Soviet Union after 1936 due to the prohibition of paedology, and most of them were forgotten, and their authors, as well.

Proceedings on the usage of the Rorschach test in the 1920s have been collected in the stocks of the Russian State Library, the Russian National Library, Yeltsin Presidential Library and the State Archive of the Russian Federation.

Hermann Rorschach and Russia

Hermann Rorschach (1884—1922) begins showing interest in the Russian literature and culture since his student years. Then he communicates with political emigrants from the Russian Empire, studies the Russian lan-

guage and reads F.M. Dostoevsky and L.N. Tolstoy [19]. In 1906 H. Rorschach makes a short trip to the Russian Empire. He gets much more acquainted with the Russian culture and literature, and also begins studying the papers of Russian psychiatrists.

In 1910, H. Rorschach marries Olga Shtempelin (1878–1961), who studied with him at the University. A few months before the wedding, in 1909, H. Rorschach goes to Kazan for two months to meet the bride's family. During his stay in the Russian Empire, H. Rorschach practices as a doctor, visits not only Kazan but Chelyabinsk, Ufa and Kurgan. During the second trip, H. Rorschach meets N.A. Vyubov (1869–1920) and Yu.V. Kanabikh (1872–1939) who were into psychotherapy and psychoanalysis, just like him [25].

During 1912–1913, H. Rorschach translated and published a series of articles from the journal "Psychotherapy Review of the Issues of Mental Treatment and Applied Psychology" in the journal "Internationale Zeitschrift für ztliche Psychoanalyse". Those articles were written by Russian psychiatrists and psychoanalysts.

Owing to his contacts with Russian psychoanalysts, H. Rorschach comes to Russia for the third time in December 1913, and gets a job as a psychotherapist at the Kryukovo sanatorium near Moscow. The sanatorium was specializing in the treatment of different borderline states and neuroses and was mainly intended for the representatives of the nobility and artists [25]. Rorschach takes an active part in meetings of psychiatric societies and in the scientific conferences. In 1914, he is the only foreign member of the editorial board of the journal "Issues of Psychiatry and Neurology named after S.S. Korsakov". He posts an article in it about the development of psychiatry in Switzerland. In the summer of 1914, H. Rorschach finishes his work in Kryukovo and returns to Switzerland. However, his connection with Russian psychoanalysts does not end. One must not exclude that after the publication of the book "Psychodiagnostik: Methodik und Ergebnisse eines wahrnehmungsdiagnostischen Experiments" in 1921, several copies of that book with tables were sent to Russian colleagues.

The first translation of "Psychodiagnosis" by I.N. Dyakov

After the revolution of 1917, a sharp transition from the study of philosophical problems and subjective reactions to a more applied direction occurred in the Soviet Union. Its main purpose was the education of the new Soviet man. New applied fields of paedology and psychotechniques emerged and developed rapidly [24]. Paedology was the science about the development of the child and the possibilities of influencing him. Paedology was the interdisciplinary field which psychologists, educators, psychiatrists, neurologists, anthropologists, sociologists, physiologists and pedologists were engaged in. The psychotechnique (from Ger. psychotechnik) was a set of tools and methods aimed at applying psychology to solving practical questions in labour psychology,

professional selection, to ensuring comfortable working conditions, psychohygiene and psychology of influence.

With the rise of paedology in the early 1920s, scientists consider and apply all the available Soviet and foreign test methods to study personality and its cognitive functions which could be useful in paedology and psychotechniques. In 1923, psychologist I.N. Dyakov (1891–1937) published an article "Psychodiagnosis" in the second issue of "Paedological Journal". The article gave a brief description of H. Rorschach's methodology, features of its coding and interpretation, and addresses its applied aspects and possibilities of usage in working with children [12].

Ivan Dyakov was a student of G.I. Chelpanov. In 1915, he graduated from the philosophical department of the Faculty of History and Philology of the Moscow University. He remained at the university to prepare for the professorship, which he was awarded in 1919. In the same year, Dyakov became a teacher and then a professor at the Don Pedagogical Institute. In the same year, he returned to Moscow and became a senior researcher at the Institute of Scientific Philosophy of the First Moscow State University, the head of Pedagogical Courses at the Main Directorate of Vocational Education, and a senior research fellow and a full member of the Central Pedological Institute (1921–1923) [22].

The "psychodiagnosis" of H. Rorschach and his method attracted I.N. Dyakov, and he made a report "The method of psychodiagnosis into paedology" at the paedological section of the Second All-Russian Psychoneurological Congress in 1924 [21]. Most probably, Dyakov's studies based on the Rorschach test were intended for the book "The Tests of the Paedological Department of the Institute of School Methods" which was written together with N.A. Buchholz and A.M. Shubert in 1926 [22]. However, the book was either not published, or has not survived to our time. The scientific interests of I.N. Dyakov began changing after 1925, and he was more engaged in psychotechniques. In August, 1937, I.N. Dyakov was arrested on charges of participating in a counterrevolutionary terrorist Cossack organisation and preparing terrorist attacks against the leaders of the All-Union Communist Party (of Bolsheviks) and the Soviet government. A month later, he was sentenced to death.

The study of different types of personality by A.E. Petrova

The greatest number of extant proceedings including the Rorschach test in studying types of personality could be found in the works of scientist Anna Petrova (1880–1972(?)) who studied at the Imperial Moscow University and passed the examinations for Master's degree at the same time as I.N. Dyakov. In the 1920s, A.E. Petrova used the Rorschach test on different groups and gave a detailed translation of the instruction for applying the test in her monograph [16].

Anna E. Petrova was born in Moscow on 20th March, 1880, in the family of an official, received a home education. During 1903–1904, she studied at the Sorbonne

University, where she became interested in psychology, visited the lectures by P. Janet and A. Binet. In 1904, she worked in Zurich under the guidance of G. Stoerring and developed her interest in the field of the experimental psychology and psychopathology. In 1906, she entered the Imperial Moscow University as a third-party student at the philosophical department of the Faculty of History and Philology. In 1912, she graduated and remained at the university to prepare for the master's degree. In 1919, she passed all the examinations and began teaching as an associate professor until the faculty was disbanded in 1922 [9, pp. 1–15].

In 1921, in parallel with teaching, A.E. Petrova started engaging in the scientific work and became a research psychologist at the State Scientific Institute of Children's Healthcare of the People's Commissariat of Health of the USSR. As a research psychologist, she participated in the study of the personality of the criminal and the crime. She also worked as a psychologist in the psychiatric clinic of the 1st Moscow State University.

As a research psychologist, A.E. Petrova was interested in studying the personality of an individual and the typologisation of personality. She used different methods tasks from the collection of A.N. Bernstein, the atlas by F.E. Rybakov, the method of free associations, the techniques of A. Binet, the H. Ebbinghaus test, and the Rorschach test since 1923. A.E. Petrova attributed the Rorschach test to the methods which were primarily aimed at the study of fantasy, because she believed that psychodiagnosis of one's personality by one minimal mental trait (perception) is impossible [16].

A.E. Petrova applied the typology of E. Kraepelin (1856–1926) and the theory of primitive mentality of L. Levi-Bruhl (1857–1939), describing cases of "primitives" on the basis of the patterns of the test performance and features of the constitution. She worked with street children (including juvenile delinquents), different groups of prisoners and patients from the clinic (mainly with schizophrenia and epilepsy). She was collecting the research data from 1921 to 1926 and published a number of articles and a monograph "The Elementary Method of the Psychological Examination: for Psychologists, Psychiatrists, Criminologists and Educator" [16].

The application of the Rorschach test in the study of children-primitives

During the first years after the revolution, civil war and famine in the Soviet Union, many children lost their parents and moved from rural areas to cities to survive, arose the problem of child homelessness. Getting into the city, children found themselves on the streets, often fell into criminal communities, engaged in thieving and robbing, begging and prostitution, and took part in gambling and the sale of drugs [11]. Under those conditions, paedology set itself the purpose of helping street children, namely, providing medical and psychological aid, education and re-socialisation [5]. Beginning from 1922, the systems of institutions for the re-education of children was under development: juvenile reception

centers, medical observation centers, detention centers, orphanages and labour communes. That system also included the Moscow Psychoneurological and Paedological Sanatorium School.

A.E. Petrova's work "Children-Primitives" describes a longitudinal study she made from 1921 to 1925, the children are under observation were periodically tested, educated and treated at the Sanatorium School.

A.E. Petrova divides her individuals into two types according to the level of their cultural development: "a primitive" and "a non-primitive" (the child brought up in a rich cultural environment, and receiving education). "A primitive" means a normal psyche but not developed to the limits of the capabilities – that psyche is the basis for the development within the cultural and individual experience, while an abnormal psyche can under no circumstances follow that development path [14]. The child with a primitive psyche lags in the development of intelligence from the peer, has a less disease insight, a more practical thinking, a poorly developed abstract thinking, a poor imagination, a poor vocabulary, a poor knowledge of the surrounding world and an increased ego-centrism as well as the line between the real and the magical in his perception can also be blurred. It is important to learn to differentiate the psyche of the primitive from the psyche of the child with developmental delays and mental disorders in order to specify a further correctional and pedagogical work and to ensure the work of the sanatorium school.

The first described research using the Rorschach test was fulfilled with a primitive-child with an artistically gifted psyche [16]. The study showed a positive impact of the children's stay in the sanatorium school on the development of their mental functions (in the tests with ink spots, increased the number of images) and the overall development. In addition, children showed the fragility of mental functions and their rapid regression in case of falling back into an unfavourable environment.

Mentions of the Rorschach test in L.S. Vygotsky's works

The researchers of L.S. Vygotsky's works indicated that A.E. Petrova's work about children-primitives was repeatedly cited by L.S. Vygotsky and was called by him "an excellent study" [6]. L.S. Vygotsky in his article "The Problem of the Mental Retardation of the Child (the Experience of Constructing a Working Hypothesis)" of the collection "The Mentally Retarded Child", published in 1935, referred to A.E. Petrova's work and wrote about the Rorschach test: "The study of the fantasy of those children, based on the Rorschach test, entirely confirms the poverty of fantasy in the feeble-minded children" [7, p. 18].

In 1960, the unpublished works of L.S. Vygotsky "The Development of Higher Mental Functions" came out. In the section "Lectures on Psychology", L.S. Vygotsky described the experimental work of H. Rorschach in his lecture "Perception and its development in the childhood":

“It is known that Rorschach created a systematic series of such meaningless colourful symmetrical figures that he offered to his actors, and, as you know, Rorschach’s experiments showed that only in the state of dementia, particularly, in the state of epilepsy, the spot could be perceived completely meaninglessly.

It is those cases when we hear actors say that this is just a spot. In the normal state, we see either a lamp, or a lake, or a cloud, etc. Our comprehension changes but the tendency to seeing a spot meaningfully is always present with us. That tendency to comprehending any perception is experimentally used by Buehler as a means to analyse the meaningfulness of our developed perception” [8, pp. 248].

The investigations of criminals-primitives based on the Rorschach test

Another important stage in the research of the typology was the study of the primitive psyche in adults. A.E. Petrova considered the cases of criminals as the actors who underwent the psychological examination in her room for the study of the personality of the criminal and the crime.

The room for study of the personality of criminals was organized by the legist M.N. Gernet (1874–1953) in 1923 at the Moscow University. The examination of the personality of criminals was carried out thoroughly, there participated anthropologists, lawyers, psychologists, sociologists, biochemists and psychiatrists [10].

During 1921–1924, until 1936, patients with “psychopathy” were taken as insane or partially insane, and the re-education based on the psychotherapeutic and psychiatric methods was applied to them [25]. That approach brought results, and after passing the clinic, a number of criminals got a job and kept it. The study of the criminal’s personality included an extensive research work on the outpatient basis. Besides, since December 1923, in the Arbat house of detention was organized a clinic for twelve prisoners. There the scientists carried out investigations and the correctional work [23]. V.I. Akkerman (1890–1972) described the studies in the clinic as follows: “The examination of the perpetrator’s personality is carried out by a psychiatrist, psychologist, anthropologist and sociologist ... The psychological examination complements the psychiatric predominant one in the aspect of the examination of intelligent functions by means of different tests (Jacobson-Fernald, Rorschach, etc.)” [1, pp. 207–208].

From 1924 to 1929, they published eight collections of scientific articles. As to most of the collections, A.E. Petrova offered the articles that described cases and gave a detailed psychological analysis of the criminal’s personality; some of the works had mentions of the usage of the Rorschach test.

The first report on the usage of the technique of ink-blots in the examination of the criminal’s personality was made by A.E. Petrova at the weekly meetings of the researchers of the criminal’s personality in 1923. That report was highly evaluated and later became an article in

the collection “The Criminal World of Moscow” in 1924. The article was published under the title “The Case of Mutilating the Husband” [17] and contained a psychological analysis of the accused N., 24 years old (a primitive psyche), in the case of the castration of her husband. The article was about the examination of the criminal by means of ink spots.

A.E. Petrova singled out criminals-primitives into a special group because of the peculiarities of their psyche, a committing the crime was explained due to the general social-pedagogical neglect and an improper environment since childhood. As a rule, of all the types of crimes, the criminals-primitives stole or engaged in banditry; they committed murders “by chance”. A.E. Petrova also noted a slow adaptation of higher mental functions to changes in the environment (it might manifest in the slowdown in thinking), a high impulsivity in actions, the lack of empathy for others (which develops during the correctional work) and a high ego-centrism [15].

In 1927, the book by A.E. Petrova “The Psychological Classification of Personalities. The Elementary Method of the Psychological Examination: for Psychologists, Psychiatrists, Criminologists and Educators” was published. She summarized all the previously obtained data and deduced the typology [16]. The book described the cases from practice and the possibility of studying the features of the psyche of primitives and non-primitives by means of various methods. The author paid a special attention to the type of reaction depending on the constitution of a person; so the types were as follows: plain-emotional, efficient-abstract, intellectual-volitional and some intermediate ones in between. Further works did not pay the attention to tests with ink spots. The techniques might be used but after 1936 there was no mention of them.

After the publication of the book, A.E. Petrova remains working in the penitentiary establishments. From 1927 to 1930, she is the head of the scientific and pedagogical work of the experimental penitentiary department of the State Institute for the Study of the Criminal. From 1929 to 1931, she is the head of the political educational work in the Novinsky department of the First Moscow factory-labour prison. Since 1930, she teaches the higher courses of the correctional labour (The People’s Commissariat for Internal Affairs). Since 1931, A.E. Petrova returns to investigations in the field of clinical psychology. From 1931 to 1944, she leads the psychological work in the psychiatric department of the Central Research State Institute for the Assessment of the Ability to Work and the Employment of Disabled People, holding the position of a senior researcher, and in 1935–1938, she collaborates as a psychologist with the Clinic of Nervous Diseases of the First Moscow Medical Institute. In 1939, A.E. Petrova is awarded the title of PhD in biology without defending her thesis, and in 1944, she defends her doctoral thesis on “The main compensatory factor in the epileptic and schizophrenic processes”. Since July 1944, A.E. Petrova is on retirement for health reasons, and there is no further information about her biography. The date of her death is also unknown [9, pp. 1–15].

The Rorschach test in the forensic psychiatric examination: V.A. Vnukov's works

One of the last mentions of the usage of the Rorschach test in the forensic psychiatric examination may be found in the collection "Psychopathies and Their Forensic and Psychiatric Meanings" published in 1934. The collection sums up a 12-year work of Serbsky State Scientific Institute for Forensic Psychiatry in the field of the study of psychopathy in the forensic expertise and the preventive work in detention centers and psychiatric hospitals. It also becomes the last work of the whole scientific direction. In 1934, general prisons are transferred to the Government Agency of Forced Labour Camps (GULAG) of the People's Commissariat for Internal Affairs of the USSR, and work therapy in the network of prisons became the main method of correction and preventing crimes. The era of the Great Terror began.

The Rorschach test is employed as one of the methods for the psychological testing to describe cases in the introductory article on the forensic and psychiatric examination of psychopathies by Professor V.A. Vnukov (1889-1937) and in the article about adolescent pseudologists by Associate Professor L.S. Yusevich.

Wolf A. Vnukov specialised in the forensic psychiatry and developed the field of the forensic examination and the participation of not only psychiatrists but psychologists, as well. He published his research in the collections on the study of the criminals and crimes. V.A. Vnukov graduated from the Medical Faculty of the Simferopol University in 1922 and specialised in psychiatry. He worked as a psychiatrist at the Second Moscow State Medical University (1924-1925). Since the end of 1925, he was a teacher at the Department of Reflexology at the medical and pedagogical department of the State Institute of Physical Education, a resident physician at the Institute of Forensic Psychiatry (1925-1927), an assistant at the First Moscow State University (1927-1929), and a senior assistant of the First Moscow Medical Institute (1929-1932). In 1932, he became a specialist-doctor of the sanitary department of the Joint State Political Directorate (1932-1934) and a Chairman of the Methodological Bureau which led the pedagogical and scientific work at Serbsky State Scientific Centre for Forensic Psychiatry. At the end of 1933, V.A. Vnukov became the head of the Chair of Forensic Psychiatry and a professor at the First Moscow Medical Institute (since June 1934), and the director of Kramer Moscow Institute of Neuropsychiatric Prevention [18].

Professor V.A. Vnukov's article "The Forensic and Psychiatric Examination of Psychopathies" provided the instance of the examination in 1933 of a 17-year-old girl who was caught stealing and had the tendency to a pathological fantasising. The test was employed to study the criminal's fantasy: "During the Rorschach examination, she gave poor static images" [4, p. 25]. L.S. Yusevich's article "Adolescent Pseudologists" was also about a pathological fantasising in adolescents. It described the phenomenon and cases from the forensic examination, and provided an example of the usage of the Rorschach test in the examination of a 17-year-old boy detained

with forged documents and convicted of fraud; as in the first case, the test "gives very poor images".

At the end of the collection, there is a "dictionary of special terms" compiled by Dr. S.K. Berukshtis: "Rorschach — the examination according to Rorschach. A special method of the psychological examination relating mainly to fantasy and human emotions" [3, p. 174]. That conclusion could be based on the works presented in the collection and ideas about the tests with ink spots in the works of A. Binet and F.E. Rybakov, in which blots are used as a test for the development of fantasy.

As described above, in the forensic practice, the usage of the test ceased after 1934. The Rorschach test was finally excluded from the work of a pedologist and clinical psychologist in 1936 after the publication of the resolution of the Central Committee of the All-Union Communist Party (of Bolsheviks) on 04.07.1936 about paedological perversions in the system of the People's Commissariats for Education.

Before the resolution, the textbook "Practical Work on Experimental Psychology" by psychologist P.S. Lyubimov (1902-1941) was published. It contained a brief description of the Rorschach test and recommendations for its performance; the contents related to the methods of studying imagination [13].

Many books and articles of the 1920s and 1930s were destroyed or were prohibited for readers. At the end of the 60s, Soviet psychologists began using the Rorschach test again but the connection between old and new studies was not found. Those psychologists who worked with the test before 1936 and escaped the repression preferred to remain silent about the usage of the method or publicly condemned it.

Conclusion

Analyzing the works of Soviet psychologists and psychiatrists of the 1920s-1930s, one might assert that they observed the methods published in Europe and US and put them into practice; the translation of the Rorschach test and incentive tables appeared in 1923. The test was widespread and used in the field of paedology, in clinical psychology, psychiatry, in the study of the personality of the criminal and the examination of persons who committed an offense.

The Rorschach test was a part of the sets of diagnostic techniques in the research room for studying the criminal's personality and at Serbsky Scientific Institute of Forensic Psychiatry. It was also described in the textbook on experimental psychology for students. However, Soviet psychologists did not use the Rorschach test as a method for studying personality or the types of perception but used it as a technique for studying imagination.

Due to the features of the era of transition from the NEP to the era of three five-year plans and the Great Terror, this test was used only until 1936. After the publication of the Resolution on paedological perversions in the system of the People's Commissariats for Education, the Rorschach test like other tests was considered to be bourgeois and ideologically wrong. Together with many researchers, it disappeared from the Soviet psychology and psychiatry.

Many books and articles were destroyed or disappeared from the libraries along with the names of the scientists who used the test in their work and were repressed (I.N. Dyakov) or did not overcome the regime for health reasons (V.A. Vnukov). Those researchers

who used the Rorschach test and who managed to survive the period of repressions preferred not to use the prohibited method anymore and not to mention past works with it. Sometimes, they even condemned its use (A.E. Petrova, L.S. Yusevich, G.E. Sukhareva).

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ПАМЯТНЫЕ ДАТЫ
MEMORABLE DATES



Фото РИА «Новости»

К 75-летию А.Г. Асмолова

22 февраля 2024 года психологу, педагогу, антропологу, мыслителю, подвижнику образования Александру Григорьевичу Асмолову исполнилось 75 лет. А.Г. Асмолов — академик РАО, доктор психологических наук, профессор, заведующий кафедрой психологии личности факультета психологии МГУ имени М.В. Ломоносова, директор Школы антропологии будущего РАНХиГС при Президенте РФ. Александр Григорьевич является членом редакционного совета журнала «Культурно-историческая психология».

Используя термин «культурно-историческая психология», мы не всегда задумываемся над вопросом: что же есть «культура» и «история» для психолога? Взгляд А.Г. Асмолова на человека и его личность в оптике историко-эволюционного подхода, который разрабатывается им на протяжении нескольких десятилетий, позволил увидеть в культуре не столько готовый «человеческий капитал», сколько источник «человеческого потенциала», роста человека как личности в непредсказуемо меняющемся мире.

Около 40 лет назад А.Г. Асмолов, по сути, предвосхитил те социально-исторические трансформации, в которые будет вовлечен человек первой трети XXI столетия, которые станут фактом его жизни. Этим он, помимо всего прочего, продемонстрировал прогностические возможности культурно-исторической психологии — «науки будущего», как охарактеризовал ее в 1990-х годах Майкл Коул.

Одним из ведущих творцов «науки будущего» является Александр Григорьевич Асмолов, которого мы от всей души поздравляем с прекрасным юбилеем.

*Редакция и редколлегия
журнала «Культурно-историческая психология»*

Миры и смыслы Александра Асмолова (беседа с ученым)

Публикуемая стенограмма беседы с А.Г. Асмоловым в передаче «Учимся жить», которая была записана 2 года назад, но увидела свет недавно, в преддверии его юбилея на ютуб-канале «Образователи» (видео по ссылке: <https://www.youtube.com/watch?v=bW1pP2c99oM&t=1373s>). Беседу ведет главный редактор канала «Образователи» и электронной газеты «Вести образования» Т.Н. Волошко, выпускница магистратуры МГППУ и соискатель кафедры ЮНЕСКО «Культурно-историческая психология детства МГППУ». В интервью А.Г. Асмолов рассказывает о детстве, юности и первых шагах в психологии, описывает свой самый обычный день, вспоминает встречу со своим учителем Алексеем Николаевичем Леонтьевым и другими учителями, приглашает в миры психологии, искусства, литературы и человеческих отношений.

Ключевые слова: А.Н. Леонтьев, Л.С. Выготский, А.Р. Лурия, смысл, выступление, театр, точка опоры, подросток.

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Alexander Asmolov's Worlds and Meanings (conversation with the scientist)

A transcript of a conversation with A.G. Asmolov in the program “Learning to Live”, which was recorded 2 years ago, but was released recently, on the eve of his anniversary, on the YouTube channel “Enlighteners” (link to the video: <https://www.youtube.com/watch?v=bW1pP2c99oM&t=1373s>). The conversation is conducted by the editor-in-chief of the TV channel “Enlighteners” and the electronic newspaper “Vesti Obrazovaniya” T.N. Voloshko, a graduate of the MGPPU master's degree and a candidate for the UNESCO chair “Cultural and Historical Psychology of Childhood of MGPPU”. And the interview tells about childhood, youth and the first steps in psychology, describes his most ordinary day, recalls a meeting with his teacher Alexey Nikolaevich Leontiev and other teachers, invites him to the worlds of psychology, art, literature and human relations.

Keywords: A.N. Leontiev, L.S. Vygotsky, A.R. Luria, meaning, performance, theater, fulcrum, teenager.

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— С чего, с кого начался Ваш путь в психологию?

Когда я думаю об учителях, я думаю, что моя жизнь благодаря учителям, стала жизнью счастливого человека. Один из моих друзей, Вадим Петровский, талантливый психолог, как-то предложил концепцию, которая называется теорией личностных вкладов. Суть этой концепции состоит в том, что личность представляет собой идеальные вклады других людей. В этом смысле я чувствую себя огромным мешком, куда вкладывались многие и многие личности, которые задавали мне зону ближайшего развития.

Среди них выбирать невероятно трудно, но исторически первая встреча, которая изменила мой жизненный путь, — это встреча с Алексеем Николаевичем Леонтьевым в том мире, в котором я рос. А этот

мир — мир поселка писателей, а этот мир — мир поселка, который назывался Красная Пахра, и аллеи, которая называлась Средняя аллея. С одной стороны, в этой аллее были дачи Твардовского, Гилельса, Рязанова. С другой стороны, дача моего названного старшего брата и учителя по жизни, драматического писателя и мыслителя Владимира Тендрякова. В одной из этих дач снимал несколько комнат психолог Алексей Николаевич Леонтьев.

Первая встреча запечатлелась невероятно. Обычная дорога в подмосковном мире. Вокруг канавы — трава и растут мои любимые цветы, которые называются одуванчики, особенно когда они желтые. И вдруг я увидел, как в одной из канав — я вспоминаю об этом не раз — сидит человек, который один за другим собирает эти одуванчики и внимательно их

рассматривает и укладывает. У него были удивительные, как у пианиста, длинные пальцы и очень впечатляющее, в чём-то мефистотелевское лицо. Собирает цветы для черепахи. «Можно ли вам помочь?» Он говорит. «Вот я уже достаточно собрал». И в руках у него было зеркальце.

«Мне как следует нужно постараться и понять, как она реагирует на это зеркало». И перед лицом черепахи, которая вполне застенчиво высунула свою физиономию из-под своего защитного купола, который потом для меня стал значимым в связи со многими образами Льва Семёновича Выготского, о которых я тогда не знал. Ничего. Смотрит из-пол купола, ей подносят зеркало. «Я хочу понять», — сказал человек, — «как она воспринимает мир». Что она видит? Что она чувствует?

Я стоял удивленный. Этот человек выбивался из этого мира. Мы познакомились. Он представился, Алексей Николаевич Леонтьев. Нужно ли говорить, что я сказал, что я Саша, что наша дача недалеко и живу на даче, где моя семья и писатель Владимир Фёдорович Тендряков. Он начал меня расспрашивать, интересуюсь ли я психологией. И он попал в точку, потому что меня все время интересовало поведение животных. И я сказал: «Знаете, я недавно достал книгу «Человек и дельфин» Лилли, она вышла в 1965–1966 году. Надо же понять, это же за мир рядом с нами». Он сказал: «Очень интересно, Саша, это очень интересно, а чем бы вы хотели заниматься?» А волей судеб у Тендрякова лежала на столе книга Зигмунда Фрейда «Психопатология обывательской жизни».

И я не просто сказал, а ляпнул: «Знаете, надо понять дельфинов, и мне хотелось бы [пауза] заниматься психоанализом дельфинов». Я думаю, что любой серьёзный мыслитель и серьёзный исследователь должен был бы посмотреть на меня сочувственно, подумать о моем убогом видении мира.

Улыбка лишь мельком пробежала по лицу Алексея Николаевича. «У вас невероятно странные ассоциации, — сказал он. — Давайте подумаем, давайте читайте больше книг о поведении животных».

Кто вас учил хоть чему-нибудь в этом плане? Я сказал, что я был на факультете высшей нервной деятельности и был в лаборатории Крушинского, который занимался так называемыми экстраполяционными рефлексамми, исследуя экстраполяцию, видение будущего. Он спросил: «Вас это интересует?» И сказал: «Знаете, главное — понять, как мы заглядываем в будущее. Он сказал, что это и есть одна из главных задач психологии — как мы заглядываем в будущее и как это будущее влияет на нашу жизнь».

— **Расскажите, как проходит день.**

— Все дни похожи и не похожи друг на друга. Но в этих днях, в последнее время, свои константы. Одна из этих констант — раннее пробуждение. Оно связано с тем, что рядом со мной, буквально с кроватью, с подушкой, каждый раз укладывается, чувствуя себя хозяином моей жизни, шоколадный лабрадор по имени Лёва. Где-то в шесть, в шесть тридцать, иногда рань-

ше он начинает в буквальном смысле меня вытаскивать из сна. Он забирается на постель, начинает меня пихать, толкать: «Выходи гулять». Если я сопротивляюсь и так мягко отпихиваю его, он все равно настойчив. Я завидую его упрямству — мне бы такое. Он не оставляет попыток. Если что-то совсем не по нему, он пытается меня за ухо прихватить тихонько и вытащить за ухо... Вот так начинается каждый день. А потом прогулка. И удивляюсь всегда, мог ли я подумать, если отвернуть стрелку времени назад, что для меня будут в радость утренние подарки от моего шоколадного лабрадора по имени Лёва.

А потом, как правило, я ожидаюсь, когда приедет мой друг. Слова «водитель» или «помощник» даже произносить как-то дискомфортно. И мы пускаемся в приключения, двигаясь из подмосковного мира в Москву.

Так начинается день. А после? После каждый раз предсказуемости мало. Всё зависит от того, куда, на какую работу понесет. И каждый раз — экспромт, который связан с проживанием и влюбленностью в психологию и антропологию и, прежде всего, в психологию личности и проблему бессознательного.

Потом встречи с коллегами, они абсолютно непрогнозируемы, потому что миров настолько теперь много. Если вспомнить мою прежнюю жизнь, когда я был ассистентом, доцентом, может быть, сейчас кажется, что жизнь была тогда полна и удивительна, но она имела свой, более четкий, распорядок. Дом, факультет, написание статей. И этот цикл был постоянный в университете. А сейчас аж голову кружит, потому что миры разные.

— **Я слышала, что Алексей Николаевич мог даже самую сложную лекцию прочитать так, что это было очень интересно. Расскажите немножко об этом, какими были его лекции.**

Для меня подлинный мастер общения в аудитории, общения со студентами, общения с разными совершенно людьми — это тот, кто не просто рассказывает, например, об истории психологии или о тех или иных явлениях психологии, которые известны и которые могут лечь на страницы учебников. Нет. Это тот, кто проживает психологию как жизнь. Есть мастера, которые не вспоминают, а перед вами решают задачу и не боятся сказать, что она не решена. Именно поэтому, как Алексей Николаевич Леонтьев, они любят повторять, появляются как бы случайные слова, но их нельзя выбрасывать. И раз десять за лекцию вдруг происходит такая невербалика, такая поза — Алексей Николаевич говорит: «Ну, вы понимаете?» Ну, вы понимаете? Многие из нас кивали, но при этом вряд ли что-либо понимали. Ну, вы понимаете, что невозможно понять мир личности, если мы не будем анализировать жизнь, из которой она произрастает. Но вы понимаете, что личность начинается с поступка или с самой постановки вопросов, самого стиля мышления.

Я бы сказал, неповторимый стиль Леонтьева — это характеристика его индивидуальности. Когда вдруг человек спрашивает: «В чём необходимость

психики?» Бах! И ты задумаешься. Сам вопрос, для чего порождается психика в эволюции жизни, вопрос о необходимости психического, сама постановка этого вопроса — это именно стиль Леонтьева, когда он рассматривает, как в сложнейших потоках эволюции рождаются разные формы психического в жизни животных и человека. Поэтому Леонтьев блистательный как сравнительный психолог, а сравнительный тот, кто может понять, что стоит за поведением амёбы и что стоит за поведением президента. То есть посмотреть те или иные эволюционные линии поведения.

Когда думаешь о Леонтьеве, хочется говорить стихами. Вот я всегда вспоминаю строки:

*Был старик, застенчивый, как мальчик,
Неуклюжий, робкий патриарх...
Кто за честь природы фехтовальщик?
Ну, конечно, пламенный Ламарк¹.*

И Леонтьев, и блистательный, не побоюсь сто раз повторять это слово, Актер ведения лекций Александр Лурия были как и их друг, иногда говорят — старший, Лев Выготский — они все были фехтовальщики за понимание психики в любом смысле этого слова. Леонтьев был один из них. И когда мы говорили «мы понимаем» или делали понятливые глаза или задумчивые позы, чтобы Алексей Николаевич видел, как мы его слушаем, а он стоял перед нами, мы только понимали, по-сократовски, что мы ничего не понимаем. Но совсем недавно мой коллега, который ныне директор Института психологии Академии наук, Дмитрий Ушаков, подарил мне великолепный образ. Он где-то в 1977—1979 годах был студентом, а я уже был наглым ассистентом. И сейчас, когда мы обсуждали с ним 120-летие Леонтьева, состоявшееся в прошлом году (Алексей Николаевич Леонтьев, для справки, родился в 1903 году, 5 февраля, по нынешнему календарю), он вдруг сказал: «Есть теория Леонтьева, а есть воздействие Леонтьева на всех нас. Леонтьев был интеллектуальным оболъстителем. Это я повторяю не раз: он мастер интеллектуального оболъщения.

...Мераб Мамардашвили — они совершенно разные, но и тут, и там магия погружения в смысл.

— **Ваши лекции помогают огромному количеству людей не потерять надежду, обрести себя, в зависимости от случая, успокоиться, обрести веру. Но также Вы, и это знает довольно близкий к Вам круг людей, помогаете всем по любому звонку, по любой просьбе. Как Вас хватает на это? И чем Вы руководствуетесь? Я знаю, Вы часто повторяете, если не я, то кто же?**

— Самый честный ответ на предельно точный вопрос — чем я руководствуюсь, — не знаю. Я другому не могу. Второй момент. Очень часто я задумываюсь, почему во мне всё корезится называть мое общение со студентами и, тем более, общение в Юту-

бе... лекциями? Это что угодно, только не лекции. Я всегда пытался мягко, кошачьей лапкой поправить великого Яна Амоса Каменского, утверждавшего, что он нам задал урок как монологическую, авторитарную, закрытую форму общения. Он задал нам такую форму общения. Он гений. Я всегда повторяю: даже стало стандартом, что именно к нему относится фраза моего учителя Александра Романовича Лурии о том, что величие ученого определяется тем, насколько он задержал развитие своей науки. В этом смысле с великим дидактом мало кто поспорит. Но я, когда меня спрашивают, куда ты идешь... мой ответ режет слух. Я сегодня выступаю там-то. Для меня вот это слово — *выступать* — это не поза. Я себя поймал, что я этого не рефлексировал.

Потому что, как мне хотелось в детстве выступать, так я и продолжаю. И это главное. Жизнь как «*вступление*» в *другие смыслы* и выступление. И в этом смысле, если угодно, жизнь — как театр, а не театр — как жизнь. Это разные вещи.

Я могу быть беспредельно усталый, возвращаясь к вопросу об отдыхе, но если я вижу смысл того, что я говорю, если я чувствую, что это отзывается, — это самое главное. Это в буквальном смысле дает мне в жизни то, что в одном из фильмов называлось «Секрет Макропулоса»². То есть я тогда сбрасываю годы и еще годы вхожу в другой возраст.

Вот вчера было одно из выступлений, где я, общаясь с многими родителями, пытался понять, кто из них живёт по формуле Януша Корчака «когда я снова стану маленьким». И впадает детство. И получил удивительный ответ. Так вот... ты, сколько бы тебе ни исполнилось лет, понимаешь, что счастье — это незащищенное видение мира. Я когда-то писал, это нигде чётко не показано, что рожденный ребенок первое, что улавливает, — это не слова и не значения, но равнодушно значение. Он видит мир первые годы *мыслями*, а потом они начинают пополняться общепринятыми словами. Вот для меня лекция — это каждый раз попытка открыть смысл. Для меня беспредельно важно, когда это откликается каждый день, каждый раз. И когда я вдруг получаю письмо от студентов выпуска девяносто первого года, а сейчас, напомним, двадцать четвертый, что они мной гордятся, я просто свечусь. У меня начинается приступ нарциссизма.

Или вчера, когда я выступал по просьбе моего бывшего студента, а ныне педагога и, не побоюсь этого определения, трепетного исследователя жизни Артёма Соловейчика, подошла женщина лет 45—50, не буду гадать, и заплакала. Она сказала, что слышит то, что я пытаюсь послать — смыслы. И спросила: «Как это получается?»

...Занимаясь практикой образования, то есть... превращением культурно-исторической психологии Выготского, идеи деятельности Леонтьева в практику образования, я повторял за моим учителем Алексеем

¹ Из стихотворения О. Мандельштама «Ламарк». — Прим. ред.

² Имеется в виду фантастическая пьеса К. Чапека «Средство Макропулоса» на тему рецепта «эликсира молодости» и тайны вечной жизни. — Прим. ред.

Николаевичем Леонтьевым, что психология должна стать не только... действительной, но и действенной наукой. И в этом, когда спорят Выготский в одной комнате, Леонтьев — в другой, — это формальное видение этих двух дискутирующих друг с другом мыслителей... Я вижу переключку смыслов. Лев Семёнович Выготский начинает свою книгу «Исторический смысл психологического кризиса», которую он написал в 1925—1926 годах ушедшего века цитатой из Библии: «Камень, который презрели строители, должен стать во главе угла». Не стал во главу угла. И этим камнем является практическое освоение мира. Это не банальное слово — «практика». А когда Леонтьев говорит «действенное», смысл слов Леонтьева и слов Выготского появляется как симбиоз.

И вот со мной произошло следующее. Одну книгу, которая называется «Культурно-историческая психология: конструирование миров», я сделал с тремя разделами: Психолог, Психопедагог, Психоисторик. Это фокусы жизненных интересов, не познавательных, а жизненных. А сейчас иногда хочешь «рас-смыслить», что ты делаешь... И я, общаясь последние годы, начиная с февраля 21-го [года], вдруг нахожу себя как экзистенциальный антрополог.

И вижу, что не только я могу писать книги, статьи, исследовать, что происходит с разными психологами, не только чувствую психологию, где бы она ни была, будь то психология Бехтерева, Павлова, будь то психология Леонтьева, или Фрейда, или Адлера, — для меня это моя биография.

Вот я говорю студентам: «Вы станете психологами тогда, когда история психологии перестанет быть для вас отстраненной историей, а станет вашей». И тут я использую термин, конструкцию, которую разработала замечательный психолог Вероника Нуркова, — «автобиографическая память». Это то, что не надо вспоминать. И в этой автобиографической памяти мне высвечен этот перелом. Перелом, когда в последние несколько лет я чувствую, что если бы я зашел в комнату, где сидели бы Франкл и Фрейд, оба на «ф», я бы сказал, что я хочу с вами посидеть за столом. А раньше бы я просто только наблюдал затаенно за каждым их словом.

— **Посидеть и поговорить...**

— И даже помолчать. Да, но просто есть право на радость, а есть право на опробование самого себя в другой ценностной позиции. А Франкл — гениальный преобразователь судеб. И Фрейд — по-другому. Я сейчас не беру бездонную разницу между ними, но они содействовали людям, подчеркиваю, не поддерживали, а содействовали в выборе, не насиловали выбором.

...Психолог не мастер изнасилования личности своим собственным выбором. Это приглашение к выбору себя.

И когда я вдруг увидел свое еще одно призвание, я возвращаюсь к своим строкам молодости: «Не при-

мирить мне двух послов — слова без смысла, смысл без слов». У меня психология как действительная и действенная абсолютно неведомым образом соединились.

— **У Вас уникальное ведение встреч с совершенно разной аудиторией. Вы очень артистичны, о ваших презентациях слагают легенды, все просят эти презентации. Как сложился такой стиль ведения? Понимаю, что повлияли учителя, вдохновили. Расскажите об этом. Или это Ваше естество, которое вырывается наружу и Вы просто по-другому не можете? Вы ходите по сцене, Вы обращаетесь к зрителям, зрители могут смеяться, задумываться, может наступить какая-то долгая тишина...**

— Я часто долго раскачиваюсь... какое-то время перед тем, как нырнуть в поток общения. И впервые сейчас в ответ на заданный вопрос у меня выскочила, высветилась в сознании странная вещь. Я благодарен своему комплексу неполноценности. Как мы помним, есть теория комплекса неполноценности великого Адлера, того, кто шел по пути Фрейда и бросил ему перчатку и кого, как и Юнга, Фрейд отлучил как своих учеников. Теория комплекса неполноценности Адлера говорит, что у нас есть неполноценность по многим моментам, и эта неполноценность — драйвер, двигатель развития. Мне помогает это сейчас понять некоторые рассказы, которые я помню от своих близких.

Мне было пять лет. И что-то странное со мной происходило, когда я в одном из подмосковных мест — они были разные, то Софрино, то Красково — ...увидел сцену. Меня тянуло на сцену. Меня держали за одежду. Один раз я вырвался из одежды, остался только в нижней, но вот так карабкался на сцену. Почему это происходило, я не могу сказать. До сих пор помню красковскую сцену, на которую выскочил в трусах и стал громко читать в возрасте пяти лет почему-то Маяковского... «серпастый, молоткастый советский паспорт» и так далее. Меня стащили со сцены. Это было правильно. Меня в символическом смысле не раз стаскивали со сцены. В первый классе, в шестом, в восьмом. Но мне всегда хотелось актерствовать. И для меня это была органика моей жизни...

Я любил всё, связанное с историей и литературой, и довольно в тяжелых отношениях был с точными науками, кроме биологии. Биологию просто пожирал благодаря книгам Игоря Акимушкина, Брэма и многим, многим другим. Но вот вопрос, который задал, высветил в сознании еще некоторые эпизоды.

...Почти как в фильме «Старик Хоттабыч», который любил смотреть в те годы: когда герой этого фильма, Волька, говорит Хоттабычу в ответ на его подарок каких-то красочных, уникальных зданий: «Это мне не надо, подари это лучше РОНО³». «А кто такое РОНО? — спрашивает, в версии Лагина, Хоттабыч. — Я не хочу никакому РОНО. Я хочу тебе, о, Волька! Ты меня спас».

³ Районный отдел народного образования. — Прим. ред.

Было сказано, что в школу придет РОНО. И когда это было сказано, учительница, которая вела математику, заволновалась, она была очень крупная, она обожала математику, она жила математикой и к таким странным, неуспешно отстраненным ребятам, как я, относилась как подлинный влюбленный человек к тем, кто не любит то, что любит она, с невероятной настороженностью или отстраненностью. И директор поставил перед ней задачу. Надо сделать так, чтобы ваш урок сиял в нашей школе. А как быть? И директор, который вел обществоведение, которого я очень любил, сказал: «Саша, ты можешь подумать?». Я говорю: «Конечно». «В математике» — он внимательно посмотрел на меня. Я сказал: «Ну да, у меня сейчас три двойки, и они стоят в журнале. А как сделать так, чтобы было интересно?». И я тогда сделал, по Вознесенскому, спектакль об искусственном интеллекте и о роботах и читал стихи... а те, кто умел играть, на гитаре играли... Спектакль назывался... (это был девятый класс, это был 1964—1965 год. Могу сейчас ошибиться) «Хочу стать человеком!». И когда всё это было, — стихи, искусственный интеллект, жизнь как способ существования белковых тел, программирование, информатика, — я жил на сцене. Театр стал тем, что является для меня жизнью. Я увлекся, но весь мир Леонтьева — актерский мир.

По-своему и мир театра вошел в мою жизнь и не уходил из него. И поэтому «Психология искусства» Выготского для меня не пустые слова. Начать с искусства. О нем писал гениальный, опять не боюсь этого слова, всеохватный Всеволод Иванов, лингвист, труды которого по семиотике многим известны, имя которого стало рядом с именем великого Юрия Михайловича Лотмана — Московско-Тартуская семиотическая школа. Не как школа, а как движение свободной мысли. Он в предисловии к Выготскому пишет (цитирую одного из наших американских коллег): Открытие Выготским роли знака в жизни человека — это то же самое, больше даже, чем открытие Уотсоном и Криком двойной спирали. Это великое открытие, которое меняет мир. Я пришел к этой мысли, чтобы сказать, что мы в кабинете Выготского, мы в мире Выготского, в мире, в котором сверхновый взрыв делает свой космос. Космос Выготского, космос Леонтьева, космос Лурии, космос моих учителей. Пусть сознание течет. Я всегда также вспоминаю, что один еще из учителей, детский психолог, психолог развития Александр Владимирович Запорожец стартовал перед тем, как прийти к Выготскому, Леонтьеву, Лурии и войти в их семью, научную семью, как клоун в цирке⁴. Это здорово, когда в юности ты становишься мастером воображения. Театр — это мастерское воображение.

— Александр Григорьевич, помните, в прошлом нашем интервью, пару лет назад оно у нас состоя-

лось, я зачитывала Вам ассоциации знакомых мне и Вам людей при упоминании Вашего имени (мы в то время касались в основном профессиональной деятельности): харизма, психология, личность, интеллигентия, преадаптивность, вариативность, вовлеченность и вовлечение, гуманность, толерантность, ФГОС, инфодемия, культура, достоинство. А сегодня я спросила Ваших близких людей, какое Ваше человеческое качество они считают необыкновенным, особенным. Вам интересно узнать, что они сказали?

— Безусловно. И так же интересно всегда. Каждый раз про близких людей.

*Жизнь — от корки и до корки
Перечитанная мной.
Поневоле станешь зорким
В этой мути ледяной.*

*По намеку, силуэту
Узнаю друзей во мгле.
Право, в этом нет секрета
На бесхитростной земле.*

Эти слова мастера трагического жанра и великого специалиста по социальному горю Варлама Шаламова очень точны. Друзей узнаешь. И когда было обронено слово «близкие» — [их тоже узнаешь каждый раз]. Жизнь — это пребывание себя в других, как любит говорить мой друг Вадик Петровский.

— Александр Григорьевич, когда Вы находитесь на сцене, на Ваших выступлениях, — а у Вас их очень много и совершенно разная аудитория, — видите ли Вы лица, выбираете ли Вы кого-то в качестве адресата и кого Вы особенно рады видеть среди Вашей аудитории?

— Прежде всего, очень точная характеристика: для меня аудитория — это сцена... Я не читаю лекцию, я выступаю. А раз я выступаю, значит, я смотрю, с кем я могу идентифицироваться. Я очень болезненно реагирую, когда я теряю аудиторию. Я понимаю в эту секунду, что я должен сделать в буквальном смысле трюк под куполом Московского университета, а не под куполом цирка. И я этот трюк делаю. Я вижу, если лица отсутствуют, тогда смотрю на глаза. Ты в другой реальности, как мне сделать, чтобы я тебя завоевал? Но потому ли это, что я хочу потешить свое эго? Конечно, я тешу свое эго, без этого не обходится. Конечно, когда ты выступаешь, в лекции могут быть и нарциссистические моменты, и это присутствует. Я не буду устанавливать баланс, чего больше, но мне хочется замотивировать, вдохновить проблематикой, любовью к тому, о чем я говорю, и заставить человека *нырнуть в смыслы*. Подчеркиваю, не в значении, как бы сказал Алексей Николаевич Леонтьев, а в личностные смыслы, чтобы любая проблема, о которой мы говорим, хоть в какой-то мере задела

⁴ Позднее он стал актером в театре Леся Курбаса, который затем интересовался успехами начинающего психолога А.В. Запорожца под началом Л.С. Выготского, выходя из театрального круга. Курбас и Выготский были знакомы друг с другом. В своих воспоминаниях А.В. Запорожец отмечал, что его интерес к детству, к ролевой игре ребенка уходит корнями в театральную юность. — *Прим. ред.*

его мотивы. Поэтому Лев Семёнович Выготский заканчивал седьмую главу книги «Мышление и речь», которая по своей полифоничности — одна из самых мощных вещей в психологии, я не цитирую точно, я перевираю, но в моем вранье смысл сохраняется: «За дождем слов и облаками мыслей открывается ветер мотивов»⁵. А за мотивами открывается жизнь.

Вот этот момент невероятно важен для понимания сложных коммуникаций в школе Выготского и идущего в диалогах с ним, но не зеркалящего его, Алексея Николаевича Леонтьева. Леонтьев говорит, смотрите на эти строки. Все думают, что у Выготского слово — микрокосмос сознания, и всё замкнуто в слове, но ведь он говорит: сначала за этим выступит жизнь. Леонтьев играет в полемике с Выготским. В Библии сказано, и думают, что у Выготского это так: «Вначале было слово», — но после этого за облаками мышления — ветер мотивов, а за ними — жизнь. Значит, вначале было дело... Я сто раз повторяю, Леонтьев играет, они игрушки с Выготским. Вначале было... Слово? Нет. Вначале было дело, а потом вот такое движение... И в этом всё дело! Когда акцент смысловой, что дело рождает образ, и надо это дело сделать, надо произвести это действие, сценическое действие, и искры вылетят, но за ними мотивы.

Я уже не раз это говорил. Для меня лекция — это салочки смыслов и мотивации. Я хочу осалить, я хочу догнать даже того, кто отворачивается. Мне иногда это невероятно трудно. Я сам в злобе на себя, когда я понимаю, что я кому-то равнодушен. Я весь скорееживаюсь и пульсирую, когда вижу, как равнодушны ко мне другие. Булгаковская формула, брошенная в «Мастере и Маргарите»: «не замечайте талантливых людей, и они вымрут сами», — беспредельно точна.

Друзья об А.Г. Асмолове (Т.Н. Волошко зачитывает):

«АГА — это свет, мудрость, человечность, преданность, достоинство, этика, нравственность, мораль, забота, покровительство, чувственность. АГА — это индивидуальность и уникальность».

«Чистая душа. Достоинство, конкретика, последовательность, нерасхождение взглядов с делом, храбрость, сердечное мышление. Умение вдохновлять и заряжать любовью разные аудитории».

А.Г. Асмолов: Удивительный термин «сердечное мышление».

«Даритель во всех смыслах. Это ключевое в Личности — то, что без пафоса позволяет писать с большой буквы и Даритель, и Личность. Даритель — это больше, чем самый великий дар. Это твой дар плюс дар делиться им с другими, которые тоже становятся причастными к Большому через дар».

В культуре мы причащаемся, приобщаемся только через дары творить науку, искусство, просто повседневные отношения, в которых сохранен дар — быть

Личностью. Личности многие, а дар быть Личностью — это АГА.

«Как личность я куда крупнее своего таланта» (Сальвадор Дали). Талант всегда в долгу перед личностью, он у нее занимает. Не талант иссякает, личность угасает. И Манделштам как будто бы об АГА сказал. «Я и садовник, я же и цветок. И в этом мире я не одинок». Потому что мир — это я и мой сад, в который приглашаю других. Девиз АГА — создавать и отдавать. Один корень разных слов.»

«Ага — это бесконечная энергия, обаяние и огромное сердце».

— Для меня это такая... это поразительная теплота. Жизнь — это в том числе ответственность перед теми, кто в тебя влюблен.

А то, что прочитано, это сказано теми, с которыми у меня любовь, как общая система кровообращения. Вот так я мог бы сказать. Холодного когнитивизма здесь нет. Это люди, которые меня чувствуют, а это для меня очень важно. Знаешь, я вдруг подумал, что у меня есть и неожиданные друзья, которых я не могу идентифицировать, но по тексту это точно друзья.

— **Я поискала, что о Вас пишут родители. Причем это — как будто бы к нашей встрече. Я обратила внимание на один пост на тему «Культура полезности и культура достоинства». Мамы моих лет, чуть моложе, рассуждают о том, как точно говорит академик Асмолов об этом. Но как говорить об этом с подрастающим поколением, еще не студентами? Кстати, у Вас бакалавры есть тоже? Вчерашние школьники, получается.**

— Вот завтра у меня будет первая лекция в 10.30, «Психология личности», второй курс. Они еще совершенно юные. Как? Вы говорите об этом тем же языком, что и со взрослыми людьми. Как, например, родителям говорить с ребенком на эту тему? С ребенком надо не говорить, а совместно жить. И совсем недавно один из моих замечательных знакомых Алексей Каспржак просил принять участие в фильме. И когда он делал этот фильм, вдруг он меня испугал вместе со своей супругой, сказав, что они хотят снять, как я общаюсь с четырёх-, пяти- и семилетними людьми, детьми. Я специально говорю: людьми. Страх охватил меня. И когда с ними надо было говорить о цифровизации, о гаджетах и так далее, я понял, что я должен у них поучиться. Мы вместе взяли гаджет, я сел, это всё заснято, и я попросил их помочь. И когда мы вместе делали дело и я учился, мы стали чувствовать друг друга. А прийти, сказать ребенку, вот то-то и то-то ты должен понять, это, может быть, и нормальный у кого-то путь, но для меня этот путь был бы, наверное, труден. Поэтому очень непросто общаться с подростками, но с четырёх-пятiletками для меня намного сложнее.

⁵ «Если мы сравнили выше мысль с нависшим облаком, проливающимся дождем слов, то мотивацию мысли мы должны были бы, если продолжить это образное сравнение, уподобить ветру, приводящему в движение облака» (Выготский Л.С. Мышление и речь. Соч. Т. 2. М.: Педагогика, 1982. С. 357). — Прим. ред.

Иначе, говоря языком Выготского и Леонтьева, надо создать воображаемую ситуацию. Надо создать ситуацию, в которой мы вдруг оказались бы не стоящими над ребенком. Взрослый и ребенок. Как-то однажды кто-то из моих коллег, может быть, это был Евгений Суботский, может, кто-то другой сказал, а может, это идет от Запорожца, его блистательных работ о социальных эмоциях⁶ Надо, когда общаешься с ребенком, присесть, чтобы ты смотрел ему в глаза в глаза, а не нависал над ним. Нависающее общение — это общение, которое не встретит понимания и только отторгнуто будет детьми.

— **Что для вас лучший отдых?**

Отдых? К сожалению, я не дружен с этим понятием. Лучший отдых для меня — это когда творишь что-нибудь. Лучший отдых для меня — это когда вдруг просыпаются новые смыслы. Лучший отдых для меня, когда зачарован встречами с теми или иными людьми. Лучший отдых — это открытие людей. Мне говорят: сколько ты живешь, а не перестаешь быстро очаровываться.

Идет череда влюбленностей с первого взгляда. И это могут быть очень разные люди. Мудрые говорят, ты будешь ошибаться, ты будешь неправ. Ты вот сразу говоришь, что человек для тебя так важен. Я переживал это, превращаясь в заложника чужих проблем, которые воспринимаешь как свои.

— **Если не так повезло со взрослыми, которые встретились на пути, с окружением, в котором ты находишься и растешь весь укутанный этим, как помочь подростку найти эту опору? Каждый день мы читаем ужасную новостную сводку, о разных ситуациях, когда, очевидно, подросток оказался одинок в эту секунду и предпринял совершенно чудовищные шаги в отношении самого себя.**

— Точка опоры для подростков меня всегда смущает. Вопрос при всей моей любви к точке опоры. Когда мы говорим о точке опоры в единственном числе, прежде всего о точке опоры для подростков, пойдем, что они вырастают из общения с другими людьми. Я хочу вспомнить Эльконина. Какова ведущая деятельность ребенка в подростковом возрасте? Ведущая деятельность — это интимное личностное общение. Я с удовольствием и вкусом произношу слово «интимное», а не только «личностное». Это общение, в котором рождается самосознание.

Сложные дети — это недолюбленные дети. Я говорил об этом неоднократно. Точка опоры подростка — это те значимые другие, которые любят его, которые ценны для него и для которых ценен он. Вот если мир значимых людей пустеет, возникает экзистенциальный вакуум, как любил говорить Виктор Франкл, тогда подростки скукоживаются, и начинаются кататимы одиночества. Поэтому подростковая субкультура — один из мощнейших двигателей развития личности подростка.

Что такое подростковая истерия? Повторял и еще раз повторяю. Это крик миру: «Заметьте меня! Я есть!». Я существую, вот он я какой. Вспомни Наташу Ростову и ее взросление, описание ее взросления. «Увидьте меня, услышьте меня». Или, как, извини, другой подросток, мне знакомый по самонаблюдению: «Вы поймите, что я редок и реже не бывает». И вот когда об этом подросток — слово «говорить» не подходит — думает, это переживает, важен мир значимых других. Мир удивительных фильмов, в которые он мог бы влюбиться. Мир великолепных спектаклей, в которые он мог бы погрузиться.

В моей судьбе с одним из моих любимых подростков происходили очень тяжелые вещи. Этого подростка звали Гриша Асмолов. Ему было 13—14 лет. Помимо сложности культурного шока в другой стране, в городе по имени Иерусалим, языковые сложности, сложности школы, многие другие сложности, которые как бы могли привести к бегству от реальности и многим сложным вещам. И тут появился мир, театр, который сделал мой однокурсник — Александр Венгер. И в этом мире театра, Гриша ожил и стал совершенно другим. И Женя, как его мама, почувствовала, насколько энергетика личности, силы и перспектив в мире подростка изменилась.

Или учитель. Были учителя, были разные, но когда пришел один учитель, который был помешан на Лотмане и раз за разом группе детей 14 лет рассказывал о Лотмане, возникли горизонты, такие горизонты, которые многим покажутся, может быть, сложными. А на самом деле — такие миры, вхождение в миры вместе с подростковой субкультурой, вхождение в миры вместе с теми взрослыми, которые интересны для подростка. Вот главные точки опоры.

А точка экзистенциальной пустоты — это самые близкие люди, которые перестают быть близкими, хотя даже близки по крови. Если они не интересны себе, то тем самым неинтересно и подростку.

Мир бизнеса, где неожиданно в конце последних лет оказался, чуть не сказал «в конце жизни», но не захотел говорить эту фразу, он мне интересен, и я стараюсь понять его смыслы. Мир образования — еще один мир. И, наконец, для меня всё более значимым в моем смысловом пространстве является возвращение к миру искусства, театра и литературы. Этот мир был волшебный, начиная с 12 лет. А сейчас, когда погружаешься в те или иные спектакли и общаешься с мастерами, сейчас, когда вдруг узнаешь, как я узнал года 3—4 назад петербургский театральный журнал и влюбился в него. И для меня вдруг в этом — невероятная точка опоры.

Однажды Лев Семенович Выготский «бросил» блистательную постановку проблемы «Психология и жизнь». Она у него звучала следующим образом. Насколько разработка проблем психологии помогает решать психологические проблемы человека.

⁶ Развитие социальных эмоций у детей дошкольного возраста: психол. исслед. / Под ред. А.В. Запорожца, Я.З. Неверович. М.: Педагогика, 1986. — *Прим. ред.*

Как бы два разных мира. Проблемы психологии, исследования, познания, мотивации, эмоции, памяти. Но насколько все наши исследования могут помочь человеку решать его психологические проблемы? Кажется бы, простая инверсия — проблемы психологии и психологические проблемы, а за ними — разная вкрапленность в жизнь. И, по сути дела, психология и жизнь — невероятно сложный вопрос, потому что союз «и», как любил повторять Выготский, имеет не только соединительное, но и разъединительное значение...

Я помню, как одна журналистка задала мне вопрос: «Скажите, пожалуйста, вот Вы психолог?» — «Да, я психолог», ответил я. — «Скажите, а Вы везде психолог?» Ее лукавые глаза засветились иронией. Я сказал: «Вы думаете, что когда я люблю, когда я целую, когда я обнимаю, я тоже рефлексирую, как обнял, как поцеловал или как это нужно делать с пси-

хологической точки зрения. Как только я это сделаю, я разорву жизнь и психологию».

Поэтому, когда ты психолог, то несколько вещей ты должен понять, как говорил Леонтьев. Во-первых, необходимость возникновения психики в жизни — это одно. А во-вторых, еще один мотив, который буквально двигает меня последние, лет 30. Ты можешь писать книги о психологии личности, ты можешь писать, исследовать... но тебе так хочется, чтобы твоя психология стала практикой жизни! И вот тогда ты создаешь практическую психологию образования, тогда ты создаешь практическую психологию бизнеса, тогда ты создаешь психологию, которая становится психотерапией...

Ты пришел в психологию, делая разные вещи, но рано или поздно хочется сделать так, чтобы психология конструировала жизнь. И поэтому я всегда говорю, психология — это наука о конструировании жизни.

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OBITUARIES
НЕКРОЛОГИ

In Memory of A.V. Suvorov



Photos from the archive of A.V. Suvorov

A Researcher and Teacher of Generosity
A Word About Alexander V. Suvorov

What a world! Why am I
Stuck in it, irrelevant and ill?
Who needs my poetry?
Who needs me as a researcher?
But perhaps it's not for nothing that they're gathered together
In a deafblind man — all the world's sorrows,
To strengthen the world's goodness,
And so the way ahead is not so bitter...

Alexander Suvorov

On January 26, 2024 at the age of 70, Alexander V. Suvorov, Doctor of Psychology, Professor at the Department of Special Psychology and Rehabilitation of the Faculty of Clinical and Special Psychology of Moscow State University of Psychology & Education, left this world. The deafblind student of psychologist Alexander I. Meshcheryakov, the disciple and spiritual heir of philosopher Evald V. Ilyenkov, he was one of the famous "Zagorsk Four" — four graduates of the boarding school for the deafblind in Zagorsk town, Moscow Region (now Sergiev Posad), who became professional psychologists by enrolling in and graduating from the Psychology Department of Moscow State University. In general, there were no "some of" in the "four", there were personalities, but it was Alexander Suvorov who became its "spirit and soul", as he believed, due to E.V. Ilyenkov's special disposition and closeness to him.

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The relations within the "four" were not always simple, and in the late 1980s, a fierce discussion broke out between "Ilyenkov's boys" (how the "four" were unofficially called) on the results of the "Zagorsk experiment" (the main discussants were A.V. Suvorov and S.A. Sirotkin). But this discussion itself testified to the fact that it was about something more than even the most outstanding experiment (the authors, A.I. Meshcheryakov and I.A. Sokolyansky, were posthumously awarded the State Prize in 1980), which went "out of control", into life, into a normal full-fledged human life, in the form of which it, in fact, took place from the very beginning. E.V. Ilyenkov wrote that deafblindness does not pose any special problem, but only extremely highlights the general problems of becoming a human being.

Quite recently Alexander Suvorov sadly stated: "there is only one duo left of the four. First Yury Lerner died, followed by Sergey Sirotkin, and now Alexander Suvorov. Only Natalya Korneeva is left.

It happened so that A.V. Suvorov left the world between two dates, the anniversaries of the most important people for him in the world: A.I. Meshcheryakov (16.12.2023) and E.V. Ilyenkov (18.02.2024). We will not look for symbolism in this. But it is quite natural that the editors of the "Cultural-Historical Psychology" journal approached him with a proposal to write an article about his outstanding mentors, like-minded friends. A.V. Suvorov accepted the proposal and was ready to take up the work. Alas, we will never read this article ...

His unique texts combined confessionality, philosophical reflections, theoretical and psychological reflection, fruits of moral quests, reflections on life, samples of life experience in extreme conditions of its acquisition and the most ordinary everyday situations (in both) he tried to grasp something essentially common. The unimpaired needed him no less than the deafblind. He always gathered children, teenagers, young people around him. Every summer he went to camps for the fellowship he looked forward to all year round. And felt a little lost until the long-awaited meeting took place. And they were waiting for him. A psychologist they were waiting for, waiting for him as a psychologist and maybe a little more (not to the detriment of the need to meet and communicate with a professional of the highest rank) as a person. Perhaps, this is one of the facets of the peculiarity of the correlation between the professional and personal position of a psychologist.



Alexander V. Suvorov remembered his closest person, his mother only by touch: he became blind at the age of 3, deaf at the age of 9. And mother is an embrace. Embraces became Suvorov's native language. He spoke and wrote as if embracing the listener and the reader. Good books when opened also resemble hugs. Especially in mother's hands. Those who have been in young Alexander's embraces will miss them very much.

Alexander Suvorov as a psychologist, teacher, friend helped other children, teenagers, young people, both deafblind and unimpaired to find it. At times it seemed that he saw and heard more and more subtly than those endowed with sight and hearing. The explanation lies in his great talent, on which he worked tirelessly. Brilliant scientific and scientific publicist articles and books, amazing lectures and magnificent, unforgettable reports, poetry, music — he could not hear it, but he learned to listen to it in his own way and even to play the harmonica, traveling and unceasing communication with a lot of different people, growing into friendship, without which he lost himself. Through it all — an intense search for meaning and happy meaning-making from his youth to his last day (he was engaged in this topic in science as well). He involved everyone he trusted in it, and over the years the circle of those involved expanded. Great talent — in the development of an outstanding gift in the form of those ways of productive life, which he creatively adopted from his educators and teachers. Deafblindness coexisted with his giftedness. But giftedness was not (or was only to a certain extent) a hypercompensation for deafblindness, as Alfred Adler would logically suggest. One cannot deduce everything in psychology from compensatory and defense mechanisms.

Here is what he writes about himself: "I became blind at the age of three, and deaf at the age of nine. It turned out so that since childhood, creativity has become the true meaning of my life. At first, of course, it was precreation, a fantasy play; then the first experiments in poetry, journalism and, finally, science.

Creative motivation reached the level of obsession. Outside of creativity, without creativity, I could not and cannot imagine my existence..."

But it "turns out so" and often "turned out so" for another personality who does not know the boundary between life and creativity. And usually everything starts with "fantasy play" after 3 years, when it appears in a child, being necessary for normal vision and hearing. Including for their development as part of something larger, a personality, which defines the norm, according to L.S. Vygotsky. I think that the scale of Alexander V. Suvorov's talent, if he had been endowed with sight and hearing, would have been no less than with all the originality that deafblindness gave to this talent. But he was not driven by it, but by the motivation of obsession with creativity, addressed to "a planet of people" (Exup ry).

One thoughtful reader of A.V. Suvorov's works (not a psychologist) insightfully wrote in social networks: "I first learned about him from an article in the "Children's Encyclopedia" when I was in elementary school. It was a real shock to me. He seemed to me a kind of Gagarin, who broke out of the limits of sensory darkness to the high orbits of knowledge and communication ... A kind and sympathetic man. Especially striking is the expression of his face, apparently the deepest reserve of thought, interest in life and kindness gave his face lively emotions, usually uncommon to blind people".

And indeed, sometimes it seemed that he was able to see and hear, and not just imagine and speculate on the world that is open to the sighted and hearing. And even to distinguish in it what the sighted and hearing people cannot always do.

Of course, behind the "Gagarin" of psychology stood the "Korolevs" of philosophy, psychology, pedagogy: Alexander I. Meshcheryakov, Evald V. Ilyenkov, Felix T. Mikhailov, Boris M. Bim-Bad, Alvin V. Apraushev (director of the Zagorsk boarding school). With all of them he developed close friendships. But, in the end, the "Gagarin" himself, Alexander V. Suvorov, became a "Korolev". Here we cannot not mention Alexander Suvorov's mother, Maria Tikhonovna, who always encouraged her son's education. She even reprinted for him the abstract of F.T. Mikhailov's dissertation. In their relationship, love and friendship were probably equal.

"Friendship" was one of the key words in Alexander Suvorov's vocabulary. The first book about the "four", published in Alma-Ata in 1974, was called "You Will Find Friends". A.V. Suvorov believed that social relations, local and global, in the ensemble of which people are involved, literally lose their meaning if they are not friendly or at least amicable. Mikhail Prishvin called his writing "an act of friendship with the reader," with the reader, whose existence the writer may not even be aware of. The spirit of friendship with the protagonists and readers permeates A.V. Suvorov's books. Once he complained to his supervisor F.T. Mikhailov about the difficulties in his formative experiments — the friendship with the participants does not develop. Friendship presupposes generosity. Not always an excuse, but at least an explanation based on understanding. And this, in professional form, is already a matter of science.

And the "Zagorsky experiment" was not staged at all to confirm the omnipotence of public education, organized in various forms of activity. The little man in this experiment becomes "big" at the point of independence. When learning to use a spoon (as A.I. Meshcheryakov describes this process), the child's hand in an adult hand, having already mastered under adult "guidance" the general pattern of action, at some point begins to resist in order to create its own pattern with the preserved method of action — sending food into the mouth. A.I. Meshcheryakov urged not to miss this moment, in which the action for the first time is independently filled by the child with cultural meaning. And those effects of self-development of the personality, which were studied by A.V. Suvorov in different ages — are comprehended in the development of this line. An adult who is convinced that each of his actions, by definition, is motivated by high social significance (which sometimes replaces the interests of the cause), therefore, it is difficult to understand and accept the reality of children's self-development and easier to present it as something inevitable, but "incidental", "background", etc. One lacks the friendly generosity to sort it out scientifically.

The outstanding scientist and psychologist Alexander V. Suvorov was a wonderful friend, a man of the greatest soul. A researcher and teacher of generosity.

This is how he will remain in the memory, thoughts and feelings of all who knew, listened and read him. And will come to know, hear and read him.

Editorial Board of the "Cultural-Historical Psychology" journal »



Life and Stagnation

Alexander V. Suvorov

For several years, A.V. Suvorov has been doing mailing lists for like-minded colleagues and friends. Each of the letters is a scientific and journalistic text on philosophical, psychological, pedagogical, and life topics. A.V. Suvorov signed his letters “Hedgehog” — that’s how he called himself, meaning not only prickly, but also the desire to isolate himself for a while, shrink, withdraw into himself from the world, so that he could then turn to him with something important. We bring to your attention his latest essay, or rather, the last revision of the text that he wrote almost a quarter of a century ago. The author reflects on how to overcome universal, collective and individual, personal nonsense as a way of existence. In his opinion, didactics is intended to provide a means of understanding existence.

Keywords: nonsense, meaning, existence, crop production, creation, didactics.

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Жизнь и прозябание

А.В. Суворов

На протяжении нескольких лет А.В. Суворов делал почтовую рассылку для коллег-единомышленников и друзей. Каждое из писем представляет собой научно-публицистический текст на философские, психологические, педагогические, жизненные темы. Свои письма А.В. Суворов подписывал «Ёжик» — так он называл себя сам, имея в виду не только колючесть, но и стремление на время отгородиться, сжаться, уйти в себя от мира, чтобы затем обратиться к нему с чем-то важным. Предлагаем вашему вниманию его последнее эссе, точнее, последнюю редакцию текста, который он написал почти четверть века назад. Автор размышляет о том, как преодолеть всеобщую, коллективную

и индивидуальную, личную бессмыслицу в качестве способа существования. Средства осмысления существования, по его мнению, призвана дать дидактика.

Ключевые слова: бессмыслица, смысл, существование, прозябание, созидание, дидактика.

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There is an increased demand for "heroes" — where there is a shortage of ordinary integrity. "Heroes" are either normal responsible people in an abnormal society, where such members are a tragic minority; or dilettantes, who have to compensate for their low professionalism by overtime; or inhumane types for whom the highest value is not human life, even if it is their own, but "science," "art," or simply an order from their superiors — not a human being, but a "scientific problem," "a creative idea," or "the fulfillment of an order." The cult of the "hero" is militaristic, authoritarian and, strange as it may seem at first glance, anarchist (anarchy as a reaction to coercion, to nonfreedom).

There is too much nonsense, outright chaos in the surrounding reality, especially in Russia. And in the life of individual beings who, by some misunderstanding, claim to be called human beings. There is no life in post-Soviet Russia, it is only survival at all levels, from the homeless to the "oligarch". There is nothing but meaningless pottering in an effort to survive (the term "struggle for survival" sounds, perhaps, too serious).

And in this pottering, in this bottomless quagmire float, long ago torn away from any firmament, islands of truly human — that is, humane! — life. Wonderful, touching in their defenselessness, exceptions to a vile rule. Islands of meaning, doomed, it seems, to soon be swallowed up by the meaningless abyss.

There is enough nonsense in my own life. And then, in church, right after communion, I bore into the light of God strange lines:

*I'm not here. In the shining expanse,
Kneeling on my knees, I'm hanging.
Beneath me there's no support,
But I'm not dragging myself down.
I repent in silence. With a frown of regret
I catch the echoes of vanity.
I watch my neighbors potter about.
I love them mournfully, aloofly.*

Yes, I love them — pottering and fussing, but I love them almost without hope that this swarming and fussing will someday stop, and a meaningful, meaningful life will begin. And I myself, of course, am forced to potter and fuss together with everyone else. That is why my repentant (and squeamishly rejecting pottering and fussing) "Higher Self" was brought to some "shining expanse". I should not fall on my knees in the mud, should I? But there is nowhere else. It remains, as it turns out, to pretend kneeling in the state of weightlessness, hanging between the sky and the swamp. Either my "Higher

Self" kneels down, or simply squeezes my lower limbs in a squeamish manner, even though in my vision the surface of the swamp is a good fifty meters away.... Thanks for it not hanging upside down at least.

I'm tired, comrade gentlemen, it's obvious. It is also obvious that there are very good objective reasons for tired pessimism. Even weighty ones — either crushing skulls, or (obviously, in my case, among others) shaking brains so much that the cortex and subcortex change places. There was and is something to be tired of — all of us. There was and is something to make our brains go out of whack — in all of us.

Justifying the relevance of the psychological problem of the meaning of life, V.E. Chudnovsky stated that after the collapse of the USSR, the population in the post-Soviet space, simply put, went crazy. However, I allow myself to "simply say", because I decided in this text, for the sake of sincerity, to exaggerate to the limit. V.E. Chudnovsky formulated with academic impassivity that there is a change of value orientations. In Soviet times, the "heroic" orientation prevailed; young people were encouraged to have such exaggerated ambitions, which blatantly contradicted more than modest equipment (i.e. real capabilities). They propagandized feats — military, labor, "life" ("all of life is a feat": for example, about Nikolai Ostrovsky, about Olga Skorokhodova)...

Therefore," reflects V.E. Chudnovsky, "maybe now the ancient wisdom/prayer is more appropriate than ever: "My Creator, do not raise me too high, so that it does not hurt too much to fall!" In other words, for the sake of preserving mental health, is it not better to limit ambitions to the simplest and most obvious creative meaning of existence: to plant a tree, to build a house, to raise offspring...

For example, the Strugatsky brothers' works can be considered a reaction to the Soviet "featomania". Almost from the very first works (such as "The Road to Amalthea", "Noon, XXII century") the Strugatsky brothers instill in the reader a simple idea in general: the heroes, as a rule, correct someone's incompetence. If there were less sloppiness, shoddiness, irresponsibility — there would be less need to sacrifice lives in emergency situations, because fewer such situations would arise. There is an increased demand for "heroes" where there is a shortage of ordinary integrity. "Heroes" are either normal responsible people in an abnormal society, where such members are a tragic minority; or dilettantes, who have to compensate for their low professionalism by overtime; or inhumane types, for whom the highest value is not human life, even if it is their own, but "science", "art" or simply an order from their

superiors — not a person, but a "scientific problem", "creative idea" or "fulfillment of an order". The cult of the "hero" is militaristic, authoritarian and, strange as it may seem at first glance, anarchist (anarchy as a reaction to coercion, to nonfreedom).

I strongly agree with Vilen Emmanuilovich: planting a tree, building a house, raising offspring — these are basic *creative* values, they are indisputable. But we have to admit that there are not so many people who are satisfied with these values. There are too many people in the world who want to feel themselves as significant persons on a much larger scale than just family, friends and neighbors. This applies even to the most decrepit old ladies who are convinced that God cares more about them than about their own children and grandchildren. That is the whole meaning of life — to feel needed by somebody... Since, to put it mildly, there are reasons to doubt our need in our relatives and friends, we can only hope that we are needed at least by the Almighty.

After all, a need to God is the scale of one's own significance, neither more nor less. All of us are God's creatures, the smallest of which is not superfluous in God's Vertograd. What else can the "little ones" count on? Thus, the limit of "smallness" coincides with the limit of "significance" (if not "greatness").

Claiming their own significance on a larger scale than their home and its surroundings, I would subdivide them into the following categories. (I hasten to stipulate that I do not take any classifications seriously; it is generally easy to compose classifications; a classification — as a rule, if not any — is not the fact itself, but only a more/less adequate reflection of the fact in the head of a theorist, and (again as a rule) not a first-class one. However, even myself, not pretending to have first-class theoretical thinking and great discoveries, sometimes dabble in classifications, partly as a joke, partly for the sake of clarity).

1. Cynical "Supermen", who recognized the meaninglessness of existence and contemptuously rejected the search for any meaning in anything. Cynicism and a superman's disregard for everyone and everything around them is the basis of all forms of crime and "ordinary" irresponsibility (in ecology, economy, politics...).

2. Self-appointed "gods" who claim the reasonable organization of the surrounding chaos and, consequently, their own reasonableness. But the self-appointed "gods" are convinced of their reasonableness to such an absolute degree that, because of their arrogance, they do not so much organize as exacerbate the chaos. In fact, though, there is probably more true reasonableness the less there is arrogance, called hubris in the Bible....

3. God worshippers who are ready to beg for personal favors from anyone — from Joseph Stalin to Jesus Christ. For them, not much has changed with the collapse of the Soviet system — they just changed an awl for soap, from religion inside out with the stigma of "Scientific Atheism" to one of the long-standing world religions, esoterism, theosophy, etc.

Reasonableness can be broadly defined as the ability to resist nonsense, chaos. It is probably the same ability as Hegel's famous "ability to bear the tension of con-

tradiction". Probably, both materialists and idealists, at least objective ones, will agree in this understanding of rationality. Only for the former, reasonableness is the result of the self-organization of chaos, and man or similar being is the only subject of reasonableness, the one who realizes it. And from the point of view of objective idealism, the subject of reasonableness opposes chaos and comprehends, harmonizes, transforms it into something meaningful — from age. Man (as A.V. Men explains) is similar to the Creator not by his external appearance at all, but by his reasonableness, by his ability to be God's co-author in comprehending and transforming chaos. And by madness — the ability to aggravate chaos — and inordinate pride man is similar to the adversary of God (Satan).

Instead of blowing up a bubble, claiming significance on an impossible scale, it is better, indeed,

to confront nonsense, chaos where we have the greatest opportunity to do so. The basic creative values clearly define this sphere and boil down to the banal recommendation: "Start with yourself".

Yes, start with yourself. Before claiming to clean the Augean stables of the surrounding world, try to clean your own. Of course, it will be more difficult. Comprehend (i.e. *transform*) your misery to the quality of a full-fledged human life.

Comprehend (i.e. educate and nurture) yourself. Minimize the senselessness in one's own existence. To become free from any external predetermining factors — according to V. Frankl, it is the external environment, urges and even heredity — and only by opposing one's will to these factors, to be realized as a human being.

The Nikitins, learning a healthy lifestyle from their children, came, after all, to the conclusion: "what is harmful to children is not useful for adults either." Children can not smoke, so why can adults? Children can not drink alcohol, so why can adults? The Nikitins are surprised: no one out of curiosity will infect themselves with plague or cholera, grab the bare contacts of a high voltage electrical panel, in short, no one will voluntarily cause themselves obvious harm, except for suicide ... — but you can't drag one away from slow-acting poison. Nonsense! It is with the prevention or getting rid of this kind of nonsense, if it is already there, that we must begin to realize our own existence.

And it is not without reason that teenagers, already smoking themselves, grumbled at me when I happened to smoke in front of them: it is okay for us, but it doesn't suit you. When we ourselves are already dirty, we want the most respected person to be cleaner — more sensible! — than we are. We can afford to swear, but do not want to hear anything like that from the most respected person...

Children's cleanliness is compulsory. It would be voluntary if adults were clean. And so, they start dreaming: when I grow up, I'll be able to do everything. Everything meaningless... Dreams of meaninglessness.

And adults, having given up on themselves, also begin to dream that children grow up better — cleaner, more meaningful! — than they are. But why should they?

In the bottomless swamp of nonsense — personal and

universal — there can be no "Acme", i.e. no developmental peaks. Because there is no development. There cannot be any peaks on the path of life where there is no life, but there is stagnation in slavery to nonsense. It is pointless to talk about Acme (as well as about a full human life) if there is no sense — a creative goal, a task. Not knowing where to go, we are meaninglessly treading on the ground. Meaning appears together with the purpose of movement, which, realized by the purpose and the route, turns into a path. And on this path, there can be both peaks and failures.

Adults make sense of children's existence — if they make sense of it at all — sometimes more than their own. Adults care about children's health, for example — if at all — sometimes more than their own. But the most important thing, of course, is to teach children to make sense of their own existence. To help them find a purpose, a route and a path, and thus a life. (In this text, as the reader has probably already noticed, I am contrasting the concept of life not with death, which can have its own meaning, but with the concept of stagnation, which has no meaning by definition).

Didactics can be — and must become — a means of making sense of children's existence (in other words, a means of turning existence into life). In one way or another, by building the educational process, we actively influence the child's orientation in the world around him or her, and the child's search for his or her place in the world. A child can become a winner from childhood, capable of setting bold goals and achieving them, thus reaching the level of Acme. But a child can also become a loser, mired in chaos, or in a criminal case, an avenger for his failures, adding to the chaos. And for every scenario, one didactic or another is responsible. It is not without reason that they sometimes say that no didactics are better than traditional school didactics... And Boris Mikhailovich Bim-Bad is deeply right when he insists that murderers are also educated by someone or something.

Both theorists and didactic practitioners and curriculum developers are involved in the search for a didactic system that would help to make sense of children's existence, to turn it into life, and thus to focus children's life on Acme. It is a question of restructuring curricula in such a way that the content of the educational process is not the chaotic "assimilation of knowledge", but the awareness of the surrounding world and one's place in it. Russian (or German, English, etc.) language becomes the main educational subject, which is used for orientation in the surrounding social, planetary and cosmic reality. First — a conversation on this or that circle of problems (school, home, family, city, country, planet, seasons, solar system...) with the support of the relevant texts, and only in passing — the analysis of various grammatical structures. This approach turns Russian into a basic academic subject, from which all other academic subjects seem to branch off. The relationship between teacher and student is built on the principle of jointly shared dosed activity and cooperation.

The natural ideology of such didactics seems to me Ilyenkov's theory of the formation of a comprehensive,

harmonious personality. This theory is based on the distinction between universal (general) and professional (special) abilities. The main vice of traditional didactics, no matter how it is reformed, is teaching, under the guise of "basics of sciences", countless professional details, in which students are hopelessly drowned. Hence the decline in learning motivation and other things that we all complain about. That is, immersion in meaningless stagnation in response to a meaningless "learning process". Didactics, oriented to the Ilyenkovian understanding of the all-roundness and harmony of the individual, tries to overcome this very vice. And in the end, Ilyenkov's didactics should come to the restructuring of curricula according to the principle: everything special and professional — into electives, and the first place should go to the implementation of the Ilyenkov's famous call "To teach thinking!", as well as — to teach beauty, to teach kindness and to teach the culture of maintaining physical health. Realizing Ilyenkov's philosophy of education, didactics will contribute to the acquisition by children of the meaning of life (the meaning will be to be and remain a human being, i.e. a Reasonable Being), and the focus of life on Acme, on reaching the peak of personal development.

The prevailing nonsense — our personal and of our so-called society as a whole — turns any project of the harmonization (comprehension) of chaos into a beautiful fairy tale. This is how I have to qualify what I myself have been striving for all my professional life. I do not believe that the fairy tale will become reality. I do not believe that ideal sense will triumph over real nonsense. I believe only in the *necessity* of the triumph of fairy tale and meaning. Not in the inevitability, but in the necessity — in the fact that meaning is better than nonsense and one should contribute to its realization as much as possible, no matter how unpromising — or not at all unpromising — it may seem. It is not a matter (for me) of whose side one will take, but whose side I am on, on which side of the front line. Unwilling to reconcile myself to nonsense, deeply disgusted by it, I can only be on the side of sense.

Ilyenkovian didactics implies the removal of the artificial polarity of training and education. In fact, there is one process — nurturing learning, educating upbringing. In the curriculum, much space should be devoted to the problems of human relationships — within society and between society and nature. By improving the curriculum on the basis of the practical experience of its implementation, we can try to practically put and outline ways of solving such a huge problem as the nurturing of humanity and spirituality. This will not be possible without a clear theoretical answer to the question of what humanity and spirituality are — we simply will not know what exactly we are going to nurture.

There is the Children's Movement of Mercy — a movement of healthy and sick children to communicate with each other, for mutual understanding and mutual help. It would be great if didactics, oriented on Ilyenkov's philosophy of education, could somehow be included in the context of this children's movement for humanity, for sense against nonsense.

Let nonsense is spread as widely as you like, but it is impossible to put up with it, — that's why what remains to reduce nonsense in and around oneself with all one's might, making the most sense of, harmonizing first of all one's own activity, one's own life. One can be tired, one can fall into despair, but it is impossible

to come to terms with nonsense, — and what remains is to do everything to make it at least less around you and in you.

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